REGISTRATION DOCUMENT

dated 27 November 2018

of

UBS AG
(a corporation limited by shares established under the laws of Switzerland)

which may also be acting through its Jersey branch:

UBS AG, Jersey Branch
(the Jersey branch of UBS AG)

or through its London branch:

UBS AG, London Branch
(the London branch of UBS AG)

This document has been prepared for the purpose of providing disclosure information with regard to UBS AG (the "**Issuer**") as issuer of debt or derivative securities and constitutes a registration document (the "**Registration Document**") within the meaning of Art. 5 (3) of Directive 2003/71/EC, as amended, in particular by Directive 2010/73/EU, (the "**Prospectus Directive**") and § 12 (1) of the German Securities Prospectus Act (*Wertpapierprospektgesetz* – "**WpPG**") in connection with Art. 14 and Annex XI of the Commission Regulation (EC) No. 809/2004 of 29 April 2004 (the "**Regulation**").

IMPORTANT NOTICES

This Registration Document has been approved by the Federal Financial Services Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht* – "**BaFin**") in accordance with § 13 (1) of the WpPG after completing a review of this document for completeness, including a review of the coherence and comprehensibility of the information provided. This Registration Document as well as any securities notes or (base) prospectuses, either incorporating information from this Registration Document by reference or of which this Registration Document forms part, are available to the public in printed format, free of charge, at the registered offices of the Issuer. In addition, the Registration Document as well as any securities notes or (base) prospectuses, either incorporating information from this Registration Document by reference or of which this Registration Document forms part, are published on the UBS website, at www.ubs.com/keyinvest or any successor address notified by the Issuer to the Securityholders for this purpose by way of publication on www.ubs.com/keyinvest.

No person has been authorised to give any information or to make any representation not contained in or not consistent with this Registration Document, and, if given or made, such information or representation must not be relied upon as having been authorised by the Issuer, or any trustee or any dealer appointed in relation to any issue of debt or derivative securities by the Issuer.

This Registration Document should not be considered as a recommendation by the Issuer, any trustee or any dealer appointed in relation to any issue of debt or derivative securities by the Issuer that any recipient of this Registration Document should purchase any debt or derivative securities issued by the Issuer. Each investor contemplating purchasing debt or derivative securities issued by the Issuer should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the Issuer. No part of this Registration Document constitutes an offer or invitation by or on behalf of the Issuer, any trustee or any dealer appointed in relation to any issue of debt or derivative securities by the Issuer or any of them to any person to subscribe for or to purchase any of the debt or derivative securities issued by the Issuer.

This Registration Document is valid for a period of twelve months from the date of its approval. Neither the delivery of this Registration Document or of any securities notes or (base) prospectuses, either incorporating information from this Registration Document by reference or of which this Registration Document forms part, nor the offering, sale or delivery of any debt or derivative securities shall, in any circumstances, create any implication that there has been no change in the affairs of the Issuer since the date hereof. The contents of this Registration Document will be updated in accordance with the provisions of the Prospectus Directive and the WpPG. Any dealer or trustee appointed in relation to any issue of debt or derivative securities by the Issuer expressly does not undertake to review the financial condition or affairs of the Issuer or its subsidiary undertakings during the life of such securities.

The distribution of this Registration Document and the offer or sale of securities issued by the Issuer may be restricted by law in certain jurisdictions. Persons into whose possession this Registration Document or any securities issued by the Issuer come must inform themselves about, and observe, any such restrictions.

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I. Persons Responsible

UBS AG, having its registered offices at Bahnhofstrasse 45, 8001 Zurich, Switzerland, and Aeschenvorstadt 1, 4051 Basel, Switzerland, accepts responsibility for the information contained in this Registration Document and declares that the information contained in this Registration Document is, to the best of its knowledge, accurate and that no material facts have been omitted.

Where this Registration Document contains information obtained from third parties, such information was reproduced accurately, and to the best knowledge of the Issuer - as far as it is able to ascertain from information provided or published by such third party - no facts have been omitted which would render the reproduced information inaccurate or misleading.

II. Statutory Auditors

Based on article 31 of the articles of association of UBS AG, dated 26 April 2018 ("**Articles of Association**"), UBS AG shareholders elect the auditors for a term of office of one year. At the Annual General Meeting of shareholders ("**AGM**") of 4 May 2016, 2 March 2017 and 26 April 2018, Ernst & Young Ltd., Aeschengraben 9, CH-4002 Basel ("**Ernst & Young**") were elected as auditors for the consolidated and standalone financial statements of UBS AG for a one-year term.

Ernst & Young is a member of EXPERTsuisse, the Swiss Expert Association for Audit, Tax and Fiduciary.

III. Risk Factors

Investing in the debt or derivative securities of the Issuer involves certain issuer-specific risks. Investments in debt or derivative securities of the Issuer should not be made until all these risk factors have been acknowledged and carefully considered. When making decisions relating to investments in the debt or derivative securities of the Issuer, potential investors should consider following risks factors in respect of the Issuer, which may affect the Issuer's ability to fulfil its obligations under its debt or derivative securities and, if necessary, consult their legal, tax, financial or other advisor.

Prospective investors in any debt or derivative securities of the Issuer should read the entire Registration Document and the relevant summary and securities note, base prospectus or other prospectus, either incorporating information from this Registration Document by reference, containing disclosure on certain debt or derivative securities (and where appropriate, the relevant summary note applicable to the relevant debt or derivative securities).

As a global financial services provider, the business activities of UBS AG ("**Issuer**") with its subsidiaries (together, "**UBS AG (consolidated)**" or "**UBS AG Group**"; together with UBS Group AG, which is the holding company of UBS AG, "**UBS Group**" "**Group**", "**UBS**" or "**UBS Group AG (consolidated)**") are affected by certain risks, including those described below, which may affect UBS's ability to execute its strategy or its business activities, financial condition, results of operations and prospects. Because a broad-based international financial services firm such as UBS is inherently exposed to multiple risks many of which become apparent only with the benefit of hindsight, risks of which UBS is not presently aware or which UBS currently does not consider to be material could also adversely affect UBS. The order of presentation of the risk factors below does not indicate the likelihood of their occurrence or the potential magnitude of their consequences.

General insolvency risk

Each investor bears the general risk that the financial situation of the Issuer could deteriorate. The Securities constitute immediate, unsecured and unsubordinated obligations of the Issuer, which, in particular in the case of insolvency of the Issuer, rank *pari passu* with each other and all other current and future unsecured and unsubordinated obligations of the Issuer, with the exception of those that have priority due to mandatory statutory provisions. The obligations of the Issuer created by the Securities are not secured by a system of deposit guarantees or a compensation scheme. In case of an insolvency of the Issuer, Securityholders may, consequently, suffer a **total loss** of their investment in the Securities.

Effect of downgrading of the Issuer's rating

The general assessment of the Issuer's creditworthiness may affect the value of the Securities. This assessment generally depends on the ratings assigned to the Issuer or its affiliated companies by rating agencies such as Standard & Poor's Credit Market Services Europe Limited, Fitch Ratings Limited, Moody's Investors Service, Inc. and Scope Ratings AG. As a result, any downgrading of the Issuer's rating by a rating agency may have a negative impact on the value of the Securities.

Market conditions and fluctuations may have a detrimental effect on UBS's profitability, capital strength, liquidity and funding position

Low and negative interest rates in Switzerland and the eurozone have negatively affected UBS's net interest income: A continuing low or negative interest rate environment may further erode interest margins and adversely affect the net interest income generated by the Personal & Corporate Banking and Global Wealth Management businesses. UBS's performance is also affected by the cost of maintaining the high-quality liquid assets ("**HQLA**") required to cover regulatory outflow assumptions embedded in the liquidity coverage ratio ("**LCR**").

The Swiss National Bank permits Swiss banks to make deposits up to a threshold at zero interest. Any reduction in or limitations on the use of this exemption from the otherwise applicable negative interest rates could exacerbate the effect of negative interest rates in Switzerland. Low and negative interest rates may also affect customer behaviour and hence UBS's overall balance sheet structure. Mitigating actions that UBS has taken, or may take in the future, such as the introduction of selective deposit fees or minimum lending rates, have resulted and may further result in the loss of customer deposits, a key source of funding for UBS, net new money outflows and / or a declining market share in UBS's domestic lending business.

UBS's equity and capital are also affected by changes in interest rates. In particular, the calculation of UBS's Swiss pension plan net defined benefit assets and liabilities is sensitive to the discount rate applied. Any further reduction in interest rates may lower the discount rates and result in pension plan deficits due to the long duration of corresponding liabilities. This would lead to a corresponding reduction in UBS's equity and fully applied common equity tier 1 ("**CET1**") capital.

UBS is subject to risk from currency fluctuations

UBS prepares its consolidated financial statements in Swiss francs. However, a substantial portion of its assets, liabilities, invested assets, revenues and expenses, equity of foreign operations and risk-weighted assets ("**RWA**") are denominated in US dollars, euros, British pounds and in other foreign currencies. Accordingly, changes in foreign exchange rates may adversely affect UBS's profits, balance sheet, including deferred tax assets, and capital, leverage and liquidity ratios. In particular, the portion of UBS's operating income denominated in non-Swiss franc currencies is greater than the portion of operating expenses denominated in non-Swiss franc currencies. Therefore, the appreciation of the Swiss franc against other currencies generally has an adverse effect on UBS's profits, in the absence of any mitigating actions.

In order to hedge UBS's CET1 capital ratio, CET1 capital needs to have foreign currency exposure, leading to currency sensitivity of CET1 capital. As a consequence, it is not possible to simultaneously fully hedge both the amount of capital and the capital ratio. As the proportion of RWA denominated in non-Swiss franc currencies outweighs the capital in these currencies, a significant appreciation of the Swiss franc against these currencies could benefit UBS's capital ratios, while a significant depreciation of the Swiss franc against these currencies could adversely affect its capital ratios.

Substantial changes in the regulation of UBS's businesses may adversely affect its business and UBS's ability to execute its strategic plans

Fundamental changes in the laws and regulations affecting financial institutions can have a material and adverse effect on UBS's business. Following the 2007–2009 financial crisis, regulators and legislators have adopted a wide range of changes to the laws, regulations and supervisory frameworks applicable to banks intended to address the perceived causes of the crisis and to limit the systemic risks posed by major financial institutions. These changes have caused UBS to make significant changes in its businesses and strategy and to move significant operations into subsidiaries to improve resolvability or meet regulatory requirements, resulting in substantial implementation costs, increased UBS's capital and funding costs and reduced operational flexibility. Although many of the regulatory changes have been completed, a number of these changes are being phased in over time or require further rulemaking or

guidance for implementation. Certain changes are still under consideration. There remains significant uncertainty regarding a number of the measures referred to above.

Notwithstanding attempts by regulators to align their efforts, the measures adopted or proposed differ significantly across the major jurisdictions, making it increasingly difficult to manage a global institution like UBS. Swiss regulatory changes with regard to such matters as capital and liquidity have often proceeded more quickly than those in other major jurisdictions, and the requirements for Swiss major international banks are among the strictest of the major financial centers. This could put Swiss banks such as UBS at a disadvantage when they compete with peer financial institutions subject to more lenient regulation or with unregulated non-bank competitors.

Higher capital and total loss-absorbing capacity requirements increase UBS's costs

As an internationally active Swiss systemically relevant bank ("**SRB**"), UBS is subject to capital and total loss-absorbing capacity ("**TLAC**") requirements that are among the most stringent in the world. New Swiss SRB capital requirements impose significantly higher requirements based on RWA and a significantly higher leverage ratio requirement. In addition, UBS is required to maintain minimum levels of TLAC measured based on both RWA and the leverage ratio denominator.

UBS expects increases in its RWA from changes in methodology, add-ons in the calculation of RWA and other changes in 2018 and 2019. Changes to international capital standards for banks recently adopted by the Basel Committee on Banking Supervision are expected to further increase UBS's RWA when the standards are scheduled to become effective in 2022. UBS also expects that it will incur significant costs to implement the proposed changes.

Liquidity and funding

The requirements to maintain an LCR of HQLA to estimated stressed short-term net cash outflows, the proposed requirement to maintain a net stable funding ratio (NSFR), and other similar liquidity and funding requirements UBS is subject to, oblige UBS to maintain high levels of overall liquidity, limit its efforts to optimize interest income and expense, make certain lines of business less attractive and reduce UBS's overall ability to generate profits. Both the LCR and NSFR requirements are intended to ensure that UBS is not overly reliant on short-term funding and that it has sufficient long-term funding for illiquid assets, and the relevant calculations make assumptions about the relative likelihood and amount of outflows of funding and available sources of additional funding in market- and firm-specific stress situations. There can be no assurance that in an actual stress situation UBS's funding outflows would not exceed the assumed amounts. Moreover, many of UBS's subsidiaries must comply with minimum capital, liquidity and similar requirements and as a result UBS Group AG and UBS AG have contributed a significant portion of their capital and provide substantial liquidity to them. These funds are available to meet funding and collateral needs in the relevant jurisdictions, but are generally not readily available for use by the Group as a whole.

Banking structure and activity limitations

UBS has made significant changes in its legal and operational structure to meet legal and regulatory requirements and expectations. For example, UBS has transferred all of its US subsidiaries under a US intermediate holding company to meet US regulatory requirements and substantially all the operations of Personal & Corporate Banking and Wealth Management booked in Switzerland to UBS Switzerland AG to improve resolvability. These changes, particularly the transfer of operations to subsidiaries, such as UBS's US intermediate holding company and UBS Switzerland AG, require significant time and resources to implement and create operational, capital, liquidity, funding and tax inefficiencies. In addition, they may increase UBS's aggregate credit exposure to counterparties as they transact with multiple entities within the UBS Group. UBS's operations in subsidiaries are subject to local capital, liquidity, stable funding, capital planning and stress testing requirements. These requirements have resulted in increased capital and liquidity requirements in affected subsidiaries, which limit UBS's operational flexibility and negatively affect its ability to benefit from synergies between business units and to distribute earnings to the Group.

In the US, UBS has incurred substantial costs for implementing a compliance and monitoring framework in connection with the Volcker Rule under the Dodd-Frank Act. It has also been required to modify its business activities both inside and outside the US to conform to the Volcker Rule's activity limitations. The Volcker Rule may also have a substantial impact on market liquidity and the economics of market-making activities. UBS may incur additional costs in the short term if aspects of the Volcker Rule are repealed or modified. It may become subject to other similar regulations substantively limiting the types of activities in which it may engage or the way it conducts its operations. If adopted as proposed, the rule on single

counterparty risk proposed by the US Federal Reserve Board may affect how UBS conducts its operations in the US, including its use of other financial firms for payments and securities clearing services and as transactional counterparties.

Resolvability and resolution and recovery planning

Under the Swiss too big to fail ("**TBTF**") framework, UBS is required to put in place viable emergency plans to preserve the operation of systemically important functions in the event of a failure. Moreover, under the Swiss TBTF framework and similar regulations in the US, the UK, the EU and other jurisdictions in which it operates, UBS is required to prepare credible recovery and resolution plans detailing the measures that would be taken to recover in the event of a significant adverse event or to wind down the Group or the operations in a host country through resolution or insolvency proceedings. UBS has made changes to the legal structure of the Group to improve the viability of its recovery and resolution plans and may be required in the future to make further changes to UBS's legal structure, operations, or liquidity and funding plans to enable its recovery and resolution plans to meet regulatory expectations. If a recovery or resolution plan that UBS is required to produce in a jurisdiction is determined by the relevant authority to be inadequate or not credible, relevant regulation may permit the authority to place limitations on the scope or size of its business in that jurisdiction, oblige UBS to hold higher amounts of capital or liquidity, or to change UBS's legal structure or business in order to remove the relevant impediments to resolution.

The Swiss Banking Act and implementing ordinances provide FINMA with significant powers to intervene in order to prevent a failure of, or to resolve, a failing financial institution. FINMA has considerable discretion in determining whether, when, or in what manner to exercise such powers. In case of a threatened insolvency, FINMA may impose more onerous requirements on UBS, including restrictions on the payment of dividends and interest. FINMA could also require UBS, directly or indirectly, for example, to alter its legal structure, including by separating lines of business into dedicated entities, with limitations on intra-Group funding and certain guarantees, or to further reduce business risk levels in some manner. FINMA also has the ability to write down or convert into common equity the capital instruments and other liabilities of UBS Group AG, UBS AG and UBS Switzerland AG in connection with a resolution. Refer to "*If UBS experiences financial difficulties, FINMA has the power to open resolution or liquidation proceedings or impose protective measures in relation to UBS Group AG, UBS AG or UBS Switzerland AG, and such proceedings or measures may have a material adverse effect on UBS's shareholders and creditors*" below.

Substantial changes in market regulation have affected and will continue to affect how UBS conducts its business

The revised Markets in Financial Instruments Directive and the associated Regulation ("**MiFID II**" / "**MiFIR**") took effect on 3 January 2018. MiFID II, among other things, introduces substantial new regulation of exchanges and trading venues, including new pre-trade and post-trade transparency requirements, a ban on the practice of using commissions on transactions to compensate for research services and substantial new conduct requirements for financial services firms when dealing with clients. Implementation by the G20 countries of the commitment to require all standardized over-the-counter ("**OTC**") derivative contracts to be traded on exchanges or trading facilities and cleared through central counterparties has had and will continue to have a significant effect on UBS's OTC derivatives business, which is conducted primarily in the Investment Bank. These market changes are likely to reduce the revenue potential of certain lines of business for market participants generally, and UBS may be adversely affected. For example, UBS expects that, as a rule, the shift of OTC derivatives trading to a central clearing model will tend to reduce profit margins in these products and the changes introduced by MiFID II may result in a reduction in commission rates and trading margins. Also, these laws may have a material impact on the market infrastructure that UBS uses, available platforms, collateral management and the way UBS interacts with clients, and may cause UBS to incur material implementation costs. Margin requirements for non-cleared OTC derivatives have required significant changes to collateral agreements with counterparties and UBS's clients' operational processes. In some jurisdictions implementation of these changes is ongoing, while rulemaking and implementation are delayed in others. This may result in market dislocation, disruption of cross-border trading, and concentration of counterparty trading. It also affects UBS's ability to implement the required changes and may limit its ability to transact with clients.

Some of the regulations applicable to UBS AG as a registered swap dealer with the Commodity Futures Trading Commission ("**CFTC**") in the US, and certain regulations that will be applicable when UBS AG registers as a security-based swap dealer with the SEC, apply to UBS AG globally, including those

relating to swap data reporting, record-keeping, compliance and supervision. As a result, in some cases US rules will likely duplicate or conflict with legal requirements applicable to UBS elsewhere, including in Switzerland, and may place UBS at a competitive disadvantage to firms that are not required to register in the US with the SEC or CFTC.

In many instances, UBS provides services on a cross-border basis, and it is therefore sensitive to barriers restricting market access for third-country firms. In particular, efforts in the EU to harmonise the regime for third-country firms to access the European market may have the effect of creating new barriers that adversely affect UBS's ability to conduct business in these jurisdictions from Switzerland. In addition, a number of jurisdictions are increasingly regulating cross-border activities based on determinations of equivalence of home country regulation, substituted compliance or similar principles of comity. A negative determination could limit UBS's access to the market in those jurisdictions and may negatively influence its ability to act as a global firm. In addition, as such determinations are typically applied on a jurisdictional level rather than on an entity level, UBS will generally need to rely on jurisdictions' willingness to collaborate.

If UBS is unable to maintain its capital strength, this may adversely affect its ability to execute its strategy, its client franchise and its competitive position

Maintaining its capital strength is a key component of UBS's strategy. It enables UBS to support the growth of its businesses as well as to meet potential regulatory changes in capital requirements. It reassures UBS's stakeholders, forms the basis for its capital return policy and contributes to its credit ratings. UBS's capital ratios are determined primarily by RWA, eligible capital and leverage ratio denominator ("**LRD**"), all of which may fluctuate based on a number of factors, some of which are outside UBS's control.

UBS's eligible capital may be reduced by losses recognised within net profit or other comprehensive income. Eligible capital may also be reduced for other reasons, including certain reductions in the ratings of securitisation exposures, acquisitions and divestments changing the level of goodwill, adverse currency movements affecting the value of equity, prudential adjustments that may be required due to the valuation uncertainty associated with certain types of positions, and changes in the value of certain pension fund assets and liabilities or in the interest rate and other assumptions used to calculate the changes in UBS's net defined benefit obligation recognised in other comprehensive income.

RWA are driven by UBS's business activities, by changes in the risk profile of its exposures, by changes in its foreign currency exposures and foreign exchange rates and by regulation. For instance, substantial market volatility, a widening of credit spreads, which is a major driver of UBS's value-at-risk, adverse currency movements, increased counterparty risk, deterioration in the economic environment or increased operational risk could result in a rise in RWA. UBS has significantly reduced its market risk and credit risk RWA in recent years. However, increases in operational risk RWA, particularly those arising from litigation, regulatory and similar matters, and regulatory changes in the calculation of RWA and regulatory add-ons to RWA have offset a substantial portion of this reduction. Changes in the calculation of RWA or, as discussed above, the imposition of additional supplemental RWA charges or multipliers applied to certain exposures and other methodology changes, as well as the implementation of the recently adopted changes to international capital standards for banks, could substantially increase UBS's RWA. In addition, UBS may not be successful in its plans to further reduce RWA, either because it is unable to carry out fully the actions it has planned or because other business or regulatory developments or actions counteract the effects of its actions.

The leverage ratio is a balance sheet-driven measure and therefore limits balance sheet-intensive activities, such as lending, more than activities that are less balance sheet intensive, and it may constrain UBS's business activities even if UBS satisfies other risk-based capital requirements. UBS's LRD is driven by, among other things, the level of client activity, including de-posits and loans, foreign exchange rates, interest rates and other market factors. Many of these factors are wholly or partially outside UBS's control.

UBS may not be successful in the ongoing execution of its strategic plans

Over the last six years, UBS has transformed its business to focus on its wealth management businesses and its universal bank in Switzerland, complemented by Asset Management and a significantly smaller Investment Bank; substantially reduced the RWA and LRD usage in UBS's Corporate Center – Non-core and Legacy Portfolio; and made significant cost reductions. UBS has recently provided an update on the execution of its strategy and updated its performance targets and provided guidance on capital and resources. Risk remains that UBS may not succeed in executing its strategy or achieve its performance

targets, or may be delayed in doing so. Market events or other factors may adversely affect UBS's ability to achieve its objectives. Macroeconomic conditions, geopolitical uncertainty, changes to regulatory requirements and the continuing costs of meeting these requirements have prompted UBS to adapt its targets in the past and UBS may need to do so again in the future.

As part of its strategic plans, UBS expects to continue to make significant expenditures on technology and infrastructure to improve its client experience, improve and further enable digital offerings and increase efficiency. There is a risk that UBS's investments in new technology will not fully achieve its objectives or improve its ability to attract and retain customers. In addition, UBS may face competition in providing digitally enabled offerings from both existing competitors and new financial service providers in various portions of the value chain. UBS's ability to develop and implement competitive digitally enabled offerings and processes will be an important factor in its ability to compete.

Moreover, the continued illiquidity and complexity of many of UBS's legacy risk positions remaining in Corporate Center – Non-core and Legacy Portfolio could make it difficult to sell or otherwise exit these positions and there remains a risk that UBS could incur significant losses in doing so.

As part of its strategy, UBS also has programs under way that seek to improve its operating efficiency, in part by controlling its costs. A number of factors could negatively affect its plans. UBS may not be able to identify feasible cost reduction opportunities that are also consistent with its business goals, and cost reductions may be realized later or may be less than UBS anticipates. Higher temporary and permanent regulatory costs and higher business demand than it had originally anticipated have partly offset UBS's cost reductions and delayed the achievement of cost reduction targets in the past, and UBS could continue to be challenged in the execution of its ongoing plans.

Changes in UBS's workforce as a result of outsourcing, nearshoring or offshoring or staff reductions may introduce new operational risks that, if not effectively addressed, could affect UBS's ability to recognise the desired cost and other benefits from such changes or could result in operational losses. Such changes can also lead to expenses recognised in the income statement well in advance of the cost savings intended to be achieved through such workforce strategy, for example, if provisions for real estate lease contracts need to be recognised or when, in connection with the closure or disposal of non-profitable operations, foreign currency translation losses previously recorded in other comprehensive income are reclassified to the income statement.

As UBS implements its effectiveness and efficiency programs, it may also experience unintended consequences, such as the loss or degradation of capabilities that it needs in order to maintain its competitive position, achieve its targeted returns or meet existing or new regulatory requirements and expectations.

Material legal and regulatory risks arise in the conduct of UBS's business

As a global financial services firm operating in more than 50 countries, UBS is subject to many different legal, tax and regulatory regimes, and it is subject to extensive regulatory oversight and exposed to significant liability risk. UBS is subject to a large number of claims, disputes, legal proceedings and government investigations, and it expects that its ongoing business activities will continue to give rise to such matters in the future. The extent of UBS's financial exposure to these and other matters is material and could substantially exceed the level of provisions that UBS has established. UBS is not able to predict the financial and non-financial consequences these matters may have when resolved. Resolution of regulatory proceedings may require UBS to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorisations, and may permit financial market utilities to limit, suspend or terminate UBS's participation in them. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorisations or participations, could have material consequences for UBS.

UBS's settlements with governmental authorities in connection with foreign exchange, LIBOR and benchmark interest rates starkly illustrate the significantly increased level of financial and reputational risk now associated with regulatory matters in major jurisdictions. In connection with investigations related to LIBOR and other benchmark rates and to foreign exchange and precious metals, very large fines and disgorgement amounts were assessed against UBS, and UBS was required to enter guilty pleas, despite its full cooperation with the authorities in the investigations, and despite its receipt of conditional leniency or conditional immunity from antitrust authorities in a number of jurisdictions, including the US and Switzerland.

Ever since its material losses arising from the 2007–2009 financial crisis, UBS has been subject to a very high level of regulatory scrutiny and to certain regulatory measures that constrain its strategic flexibility. While UBS believes that it has remediated the deficiencies that led to those losses as well as to the unauthorised trading incident announced in September 2011, the effects on its reputation and relationships with regulatory authorities of the LIBOR-related settlements of 2012 and settlements with some regulators of matters related to UBS's foreign exchange and precious metals business have resulted in continued scrutiny. UBS is also subject to significant new regulatory requirements, including recovery and resolution planning, US enhanced prudential standards and Comprehensive Capital Analysis and Review ("CCAR"). UBS's implementation of additional regulatory requirements and changes in supervisory standards will likely receive heightened scrutiny from supervisors. If it does not meet supervisory expectations in relation to these or other matters, or has additional supervisory or regulatory issues, UBS would likely be subject to continued regulatory scrutiny as well as measures that might further constrain its strategic flexibility. UBS is in active dialog with its regulators concerning the actions that it is taking to improve its operational risk management, control, anti-money laundering, data management and other frameworks and otherwise seek to meet supervisory expectations, but there can be no assurance that its efforts will have the desired effects. As a result of this history, UBS's level of risk with respect to regulatory enforcement may be greater than that of some of its peers.

Operational risks affect UBS's business

UBS's businesses depend on its ability to process a large number of transactions, many of which are complex, across multiple and diverse markets in different currencies, to comply with requirements of many different legal and regulatory regimes to which UBS is subject and to prevent, or promptly detect and stop, unauthorised, fictitious or fraudulent transactions. UBS also relies on access to, and on the functioning of, systems maintained by third parties, including clearing systems, exchanges, information processors and central counterparties. Any failure of its or third-party systems could have an adverse effect on UBS. UBS's operational risk management and control systems and processes are designed to help ensure that the risks associated with its activities, including those arising from process error, failed execution, misconduct, unauthorised trading, fraud, system failures, financial crime, cyberattacks, breaches of information security, inadequate or ineffective access controls and failure of security and physical protection, are appropriately controlled. If UBS's internal controls fail or prove ineffective in identifying and remedying these risks, UBS could suffer operational failures that might result in material losses, such as the loss from the unauthorised trading incident announced in September 2011.

UBS and other financial services firms have been subject to breaches of security and to cyber- and other forms of attack, some of which are sophisticated and targeted attacks intended to gain access to confidential information or systems, disrupt service or destroy data, including through the introduction of viruses or malware, social engineering, distributed denial of service attacks and other means. These attempts may occur directly, or using equipment or security passwords of UBS's employees, third party service providers or other users. UBS may not be able to anticipate, detect or recognise threats to its systems or data or that its preventative measures may not be effective to prevent an attack or a security breach. In the event a security breach occurs notwithstanding its preventative measures, UBS may not immediately detect a particular breach or attack. Once a particular attack is detected time may be required to investigate and assess the nature and extent of the attack. A successful breach or circumvention of security of UBS's systems or data could have significant negative consequences for UBS, including disruption of its operations, misappropriation of confidential information concerning UBS or its customers, damage to its systems, financial losses for UBS or its customers, violations of data privacy and similar laws, litigation exposure and damage to UBS's reputation.

A major focus of US and other countries' governmental policies relating to financial institutions in recent years has been fighting money laundering and terrorist financing. UBS is required to maintain effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing, and to verify the identity of its clients. It is also subject to laws and regulations related to corrupt and illegal payments to government officials by others, such as the US Foreign Corrupt Practices Act and the UK Bribery Act. UBS has implemented policies, procedures and internal controls that are designed to comply with such laws and regulations. Failure to maintain and implement adequate programs to combat money laundering, terrorist financing or corruption, or any failure of UBS's programs in these areas, could have serious consequences both from legal enforcement action and from damage to UBS's reputation.

As a result of new and changed regulatory requirements and the changes UBS has made in its legal structure to meet regulatory requirements and improve its resolvability, the volume, frequency and complexity of UBS's regulatory and other reporting has significantly increased. Regulators have also

significantly increased expectations for UBS's internal reporting and data aggregation. UBS has incurred and continues to incur significant costs to implement infrastructure to meet these requirements. Failure to timely and accurately meet external reporting requirements or to meet regulatory expectations for internal reporting could result in enforcement action or other adverse consequences for UBS.

Certain types of operational control weaknesses and failures could also adversely affect UBS's ability to prepare and publish accurate and timely financial reports.

In addition, despite the contingency plans UBS has in place, its ability to conduct business may be adversely affected by a disruption in the infrastructure that supports its businesses and the communities in which it is located. This may include a disruption due to natural disasters, pandemics, civil unrest, war or terrorism and involve electrical, communications, transportation or other services used by UBS or third parties with whom it conducts business.

UBS's reputation is critical to the success of its business

UBS's reputation is critical to the success of its strategic plans, business and prospects. Reputational damage is difficult to reverse, and improvements tend to be slow and difficult to measure. UBS's reputation has been adversely affected by its losses during the financial crisis, investigations into its cross-border private banking services, criminal resolutions of LIBOR-related and foreign exchange matters, as well as other matters. UBS believes that reputational damage as a result of these events was an important factor in UBS's loss of clients and client assets across its asset-gathering businesses, and contributed to UBS's loss of and difficulty in attracting staff in the past. Any further reputational damage could have a material adverse effect on UBS's operational results and financial condition and on its ability to achieve its strategic goals and financial targets.

Performance in the financial services industry is affected by market conditions and the macroeconomic climate

UBS's businesses are materially affected by market and economic conditions. Adverse changes in interest rates, credit spreads, securities prices, market volatility and liquidity, foreign exchange rates, commodity prices, and other market fluctuations, as well as changes in investor sentiment, can affect UBS's earnings and ultimately its financial and capital positions.

A market downturn and weak macroeconomic conditions can be precipitated by a number of factors, including geopolitical events, changes in monetary or fiscal policy, trade imbalances, natural disasters, pandemics, civil unrest, acts of violence, war or terrorism. Macroeconomic and political developments can have unpredictable and destabilising effects and, because financial markets are global and highly interconnected, even local and regional events can have widespread impact well beyond the countries in which they occur. Moreover, if individual countries impose restrictions on cross-border payments or other ex-change or capital controls, or change their currency (for example, if one or more countries should leave the eurozone), UBS could suffer losses from enforced default by counterparties, be unable to access its own assets, and / or be impeded in, or prevented from, managing its risks.

UBS could be materially affected if a crisis develops, regionally or globally, as a result of disruptions in emerging markets or developed markets that are susceptible to macroeconomic and political developments, or as a result of the failure of a major market participant. Over time, UBS's strategic plans have become more heavily dependent on its ability to generate growth and revenue in emerging markets, including China, causing UBS to be more exposed to the risks associated with such markets. The binding scenario UBS uses in its combined stress test framework reflects these aspects, and assumes a hard landing in China, leading to severe contagion of Asian and emerging markets economies and at the same time multiple debt restructurings in Europe, related direct losses for European banks and fear of a eurozone breakup severely affecting developed markets such as Switzerland, the UK and the US. Refer to the "Risk measurement" in the “Risk management and control” section of the Annual Report 2017 for more information on stress testing framework.

UBS has material exposures to a number of markets, and the regional balance of its business mix also exposes UBS to risk. UBS's Investment Bank's Equities business, for example, is more heavily weighted to Europe and Asia, and within this business its derivatives business is more heavily weighted to structured products for wealth management clients, in particular with European and Asian underlyings. Turbulence in these markets can therefore affect UBS more than other financial service providers.

A decrease in business and client activity and market volumes, for example, as a result of significant market volatility, adversely affects transaction fees, commissions and margins, particularly in UBS's

wealth management businesses and in the Investment Bank, as UBS experienced in 2016. A market downturn is likely to reduce the volume and valuations of assets that UBS manages on behalf of clients, reducing its asset and performance-based fees, and could also cause a decline in the value of assets that UBS owns and accounts for as investments or trading positions. On the other hand, reduced market liquidity or volatility limits trading opportunities and impedes UBS's ability to manage risks, impacting trading income, and may reduce institutional client activity and therefore transaction and performance-based fees.

Credit risk is an integral part of many of UBS's activities, including lending, underwriting and derivatives activities. Worsening economic conditions and adverse market developments could lead to impairments and defaults on credit exposures and on UBS's trading and investment positions. Losses may be exacerbated by declines in the value of collateral UBS holds. UBS is exposed to credit risk in activities such as its prime brokerage, reverse repurchase and Lombard lending, as the value or liquidity of the assets against which UBS provides financing may decline rapidly. Macroeconomic developments, such as the strength of the Swiss franc and its effect on Swiss exports, the adoption of negative interest rates by the Swiss National Bank or other central banks or any return of crisis conditions within the eurozone or the EU, and the potential implications of the decision in Switzerland to reinstate immigration quotas for EU and European Economic Area citizens, could also adversely affect the Swiss economy, UBS's business in Switzerland in general and, in particular, UBS's Swiss mortgage and corporate loan portfolios.

The aforementioned developments have in the past affected, and could materially affect, the financial performance of business divisions and of UBS as a whole, including through impairment of goodwill and the adjustment of deferred tax asset levels. Refer to “UBS's financial results may be negatively affected by changes to assumptions and valuations, as well as changes to accounting standards” and “The effect of taxes on UBS's financial results is significantly influenced by tax law changes and reassessments of its deferred tax assets” below.

UK withdrawal from the EU

In December 2017, the UK and the remaining EU member states reached an agreement on the separation issues under Phase I of the negotiations for the UK's withdrawal from the EU. As a result, the European Council agreed that “sufficient progress” had been made to allow the negotiations to move to Phase II on transitional arrangements and the future EU-UK relationship. The UK is still expected to leave the EU in March 2019, subject to a possible transition period.

The nature of the UK's future relationship with the EU remains unclear. Any future limitations on providing financial services into the EU from its UK operations could require UBS to make potentially significant changes to its operations in the UK and the EU, and to UBS's legal structure. In the absence of adequate transition relief being agreed and passed into law by the Unit-ed Kingdom and the European Union, UBS currently expects to merge UBS Limited into UBS Europe SE, UBS's German headquartered European bank, prior to the United Kingdom leaving the European Union on 29 March 2019. Clients and other counterparties of UBS Limited would become counterparties of UBS Europe SE through the planned merger of the two entities. However, UBS anticipates that clients of UBS Limited who can be serviced by UBS AG London Branch would generally be migrated to UBS AG, London Branch prior to this merger. UBS further anticipates that some staff would be relocated as a result; the exact number of staff and roles would be determined in due course. The timing and extent of the actions UBS takes may vary considerably depending on regulatory requirements and the nature of any transition or successor agreements with the EU.

UBS may not be successful in implementing changes in its wealth management businesses to meet changing market, regulatory and other conditions

UBS's wealth and asset management businesses operate in an environment of increasing regulatory scrutiny and changing standards with respect to fiduciary and other standards of care and the focus on mitigating or eliminating conflicts of interest between a manager or advisor and the client, which require effective implementation across the global systems and processes of investment managers and other industry participants. For example, the US Department of Labor has adopted a rule expanding the definition of "fiduciary" under the Employee Retirement Income Security Act ("**ERISA**"), which requires UBS to comply with fiduciary standards under ERISA when dealing with certain retirement plans. UBS will likely be required to materially change business processes, policies and the terms on which it interacts with these clients in order to comply with these rules when they become fully effective. In addition, MiFID II imposes new requirements on UBS when providing advisory services to clients in the EU, including new requirements for agreements with clients.

UBS has experienced cross-border outflows over a number of years as a result of heightened focus by fiscal authorities on cross-border investment and fiscal amnesty programs, in anticipation of the implementation in Switzerland of the global automatic exchange of tax information, and as a result of the measures UBS has implemented in response to these changes. Further changes in local tax laws or regulations and their enforcement, the implementation of cross-border tax information exchange regimes, national tax amnesty or enforcement programs or similar actions may affect UBS's clients' ability or willingness to do business with UBS and result in additional cross-border outflows.

In recent years, UBS's Wealth Management net new money inflows have come predominantly from clients in Asia Pacific and in the ultra high net worth segment globally. Over time, inflows from these lower-margin segments and markets have been replacing outflows from higher-margin segments and markets, in particular cross-border clients. This dynamic, combined with changes in client product preferences as a result of which low-margin products account for a larger share of UBS's revenues than in the past, has put downward pressure on Wealth Management's margins.

As the discussion above indicates, UBS is exposed to possible outflows of client assets in its asset-gathering businesses and to changes affecting the profitability of its wealth management businesses. Initiatives that UBS may implement to overcome the effects of changes in the business environment on its profitability, balance sheet and capital positions may not succeed in counteracting those effects and may cause net new money outflows and reductions in client deposits, as happened with UBS's balance sheet and capital optimisation program in 2015. There is no assurance that UBS will be successful in its efforts to offset the adverse effect of these or similar trends and developments.

UBS may be unable to identify or capture revenue or competitive opportunities, or retain and attract qualified employees

The financial services industry is characterised by intense competition, continuous innovation, restrictive, detailed, and sometimes fragmented regulation and ongoing consolidation. UBS faces competition at the level of local markets and individual business lines, and from global financial institutions that are comparable to UBS in their size and breadth. Barriers to entry in individual markets and pricing levels are being eroded by new technology. UBS expects these trends to continue and competition to increase. Its competitive strength and market position could be eroded if UBS is unable to identify market trends and developments, does not respond to them by devising and implementing adequate business strategies, adequately developing or updating its technology, particularly in trading businesses, and its digital channels and tools, or is unable to attract or retain the qualified people needed to carry them out.

The amount and structure of UBS's employee compensation is affected not only by its business results but also by competitive factors and regulatory considerations.

In recent years, in response to the demands of various stakeholders, including regulatory authorities and shareholders, and in order to better align the interests of UBS's staff with those of other stakeholders, UBS has made changes to the terms of compensation awards. Among other things, UBS has introduced individual caps on the proportion of fixed to variable pay for the Group Executive Board ("**GEB**") members, as well as certain other employees. UBS has increased average deferral periods for stock awards, expanded forfeiture provisions and, to a more limited extent, introduced clawback provisions for certain awards linked to business performance.

Constraints on the amount or structure of employee compensation, higher levels of deferral, performance conditions and other circumstances triggering the forfeiture of unvested awards may adversely affect UBS's ability to retain and attract key employees. The loss of key staff and the inability to attract qualified replacements, depending on which and how many roles are affected, could seriously compromise UBS's ability to execute its strategy and to successfully improve its operating and control environment and may affect its business performance.

Swiss law requires that shareholders approve the compensation of the Board of Directors ("**BoD**") and the GEB each year. If UBS's shareholders fail to approve the compensation for the GEB or the BoD, this could have an adverse effect on its ability to retain experienced directors and its senior management.

UBS depends on its risk management and control processes to avoid or limit potential losses in its businesses

Controlled risk-taking is a major part of the business of a financial services firm. Some losses from risk-taking activities are inevitable, but to be successful over time, UBS must balance the risks it takes against the returns it generates. UBS must, therefore, diligently identify, assess, manage and control its risks, not

only in normal market conditions but also as they might develop under more extreme, stressed conditions, when concentrations of exposures can lead to severe losses.

As seen during the financial crisis of 2007–2009, UBS is not always able to prevent serious losses arising from extreme or sudden market events that are not anticipated by its risk measures and systems. The deterioration of financial markets since the beginning of the crisis was extremely severe by historical standards. Value-at-risk, a statistical measure for market risk, is derived from historical market data, and thus by definition could not have anticipated the losses suffered in the stressed conditions of the crisis. Moreover, stress loss and concentration controls and the dimensions in which UBS aggregated risk to identify potentially highly correlated exposures proved to be inadequate. As a result, UBS recorded substantial losses on fixed income trading positions, particularly in 2008 and 2009. Notwithstanding the steps it has taken to strengthen its risk management and control framework, UBS could suffer further losses in the future if, for example:

a) it does not fully identify the risks in its portfolio, in particular risk concentrations and correlated risks;

b) its assessment of the risks identified or its response to negative trends proves to be untimely, inadequate, insufficient or incorrect;

c) markets move in ways that UBS does not expect – in terms of their speed, direction, severity or correlation – and UBS's ability to manage risks in the resulting environment is, therefore, affected;

d) third parties to whom UBS has credit exposure or whose securities it holds for its own account are severely affected by events not anticipated by its models, and accordingly UBS suffers defaults and impairments beyond the level implied by its risk assessment; or

e) collateral or other security provided by UBS's counterparties proves inadequate to cover their obligations at the time of their default.

UBS holds positions related to real estate in various countries, and could suffer losses on these positions. These positions include a substantial Swiss mortgage portfolio. Although management believes that this portfolio is prudently managed, UBS could nevertheless be exposed to losses if the concerns expressed by the Swiss National Bank and others about unsustainable price escalation in the Swiss real estate market come to fruition. In addition, UBS continues to hold substantial legacy risk positions, primarily in Corporate Center − Non-core and Legacy Portfolio. They remain illiquid in many cases, and UBS continues to be exposed to the risk that they may again deteriorate in value.

UBS also manages risk on behalf of its clients in its asset and wealth management businesses. The performance of assets UBS holds for its clients in these activities could be adversely affected by the same factors mentioned above. If clients suffer losses or the performance of their assets held with UBS is not in line with relevant benchmarks against which clients assess investment performance, UBS may suffer reduced fee income and a decline in assets under management, or withdrawal of mandates.

Investment positions, such as equity investments made as part of strategic initiatives and seed investments made at the inception of funds that UBS manages, may also be affected by market risk factors. These investments are often not liquid and generally are intended or required to be held beyond a normal trading horizon. They are subject to a distinct control framework. Deteriorations in the fair value of these positions would have a negative effect on UBS's earnings.

Liquidity and funding management are critical to UBS's ongoing performance

The viability of UBS's business depends on the availability of funding sources, and its success depends on its ability to obtain funding at times, in amounts, for tenors and at rates that enable UBS to efficiently support its asset base in all market conditions. The volume of UBS's funding sources has generally been stable, but could change in the future due to, among other things, general market disruptions or widening credit spreads, which could also influence the cost of funding. A substantial part of UBS's liquidity and funding requirements are met using short-term unsecured funding sources, including retail and wholesale deposits and the regular issuance of money market securities. A change in the availability of short-term funding could occur quickly.

Moreover, more stringent capital and liquidity and funding requirements will likely lead to increased competition for both secured funding and deposits as a stable source of funding, and to higher funding costs. The addition of loss-absorbing debt as a component of capital requirements, the regulatory requirements to maintain minimum TLAC at holding company level and / or at subsidiaries level, as well as the power of resolution authorities to bail in TLAC and other debt obligations, and uncertainty as to

how such powers will be exercised, will increase UBS's cost of funding and could potentially increase the total amount of funding required absent other changes in UBS's business.

Reductions in UBS's credit ratings may adversely affect the market value of the securities and other obligations and increase UBS's funding costs, in particular with regard to funding from wholesale unsecured sources, and can affect the availability of certain kinds of funding. In addition, as UBS experienced in connection with Moody's downgrade of UBS's long-term rating in June 2012, rating downgrades can require UBS to post additional collateral or make additional cash payments under master trading agreements relating to its derivatives businesses. UBS's credit ratings, together with its capital strength and reputation, also contribute to maintaining client and counterparty confidence and it is possible that rating changes could influence the performance of some of UBS's businesses.

UBS's financial results may be negatively affected by changes to assumptions and valuations, as well as changes to ac-counting standards

UBS prepares its consolidated financial statements in accordance with IFRS. The application of these accounting standards requires the use of judgment based on estimates and assumptions that may involve significant uncertainty at the time they are made. This is the case, for example, with respect to the measurement of fair value of financial instruments, the recognition of deferred tax assets, or the assessment of the impairment of goodwill. Such judgments, including the underlying estimates and assumptions, which encompass historical experience, expectations of the future and other factors, are regularly evaluated to determine their continuing relevance based on current conditions. Using different assumptions could cause the reported results to differ. Changes in assumptions, or failure to make the changes necessary to reflect evolving market conditions, may have a significant effect on the financial statements in the periods when changes occur. Moreover, if the estimates and assumptions in future periods deviate from the current outlook, UBS's financial results may also be negatively affected.

Changes to IFRS or interpretations thereof may cause UBS future reported results and financial position to differ from current expectations, or historical results to differ from those previously reported due to the adoption of accounting standards on a retrospective basis. Such changes may also affect UBS's regulatory capital and ratios. For example, UBS adopted IFRS 9 effective on 1 January 2018, which required it to change the accounting treatment of certain instruments, requires it to record loans at inception net of expected credit losses instead of recording credit losses on an incurred loss basis and is generally expected to result in an increase in recognized credit loss allowances. In addition, the expected credit loss ("**ECL**") provisions of IFRS 9 may result in greater volatility in credit loss expense as ECL changes in response to developments in the credit cycle and composition of UBS's loan portfolio. The effect may be more pronounced in a deteriorating economic environment. Refer to the “Critical accounting estimates and judgments” section and “Note 1 Summary of significant accounting policies” in the “Consolidated financial statements” section of the Annual Report 2017 for more information.

The effect of taxes on UBS's financial results is significantly influenced by tax law changes and reassessments of its deferred tax assets

UBS's effective tax rate is highly sensitive to its performance, its expectation of future profitability and statutory tax rates. Based on prior years' tax losses, UBS has recognised deferred tax assets ("**DTAs**") reflecting the probable recoverable level based on future taxable profit as informed by its business plans. If UBS's performance is expected to produce diminished taxable profit in future years, particularly in the US, UBS may be required to write down all or a portion of the currently recognised DTAs through the income statement. This would have the effect of increasing its effective tax rate in the year in which any write-downs are taken. Conversely, if its performance is expected to improve, particularly in the US or the UK, UBS could potentially recognise additional DTAs as a result of that assessment. The effect of doing so would be to significantly reduce UBS's effective tax rate in years in which additional DTAs are recognized and to increase its effective tax rate in future years. UBS's effective tax rate is also sensitive to any future reductions in statutory tax rates, particularly in the US and Switzerland, which would cause the expected future tax benefit from items such as tax loss carry-forwards in the affected locations to diminish in value. This in turn would cause a write-down of the associated DTAs. For example, the reduction in the US federal corporate tax rate to 21% from 35% introduced by the US Tax Cuts and Jobs Act ("**TCJA**") resulted in a CHF 2.9 billion net write-down in the Group's DTAs in the fourth quarter of 2017. Changes in tax law may materially affect UBS's effective tax rate and in some cases may substantially affect the profitability of certain activities. For example, the TCJA introduced a new minimum tax regime referred to as the base erosion and anti-abuse tax ("**BEAT**") that potentially subjects otherwise deductible payments made from UBS's US businesses to non-US affiliated parties to a minimum tax. UBS currently expects

that BEAT could increase its current tax expense by up to CHF 60 million in 2018. The actual effects could be materially higher as the amount of payments subject to BEAT will increase with higher interest rates and business activity and as a result of interpretative uncertainty relating to BEAT. It may also be lower if UBS is able to successfully mitigate its payments subject to BEAT.

UBS generally revalues its DTAs in the second half of the financial year based on a reassessment of future profitability taking into account updated business plan forecasts. UBS considers the performance of its businesses and the accuracy of historical forecasts tax rates and other factors in evaluating the recoverability of UBS's DTAs, including the remaining tax loss carry-forward period and UBS's assessment of expected future taxable profits in the forecast period used for recognizing DTAs. Estimating future profitability is inherently subjective and is particularly sensitive to future economic, market and other conditions, which are difficult to predict. UBS's results in recent periods have demonstrated that changes in the recognition of DTAs can have a very significant effect on its reported results. The enactment of the TCJA, and the narrowing of the window between the end of the forecast period and the expiry of UBS's US net operating losses, may also lead UBS to review its approach to periodically remeasuring its US DTAs and the timing for recognising deferred tax in UBS's income statement. Any change in the manner in which UBS remeasures DTAs could impact the effective tax rate, particularly in the year in which the change is made.

UBS's full-year effective tax rate could also change if aggregate tax expenses in respect of profits from branches and subsidiaries without loss coverage differ from what is expected, or in case of changes to the forecast period used for DTA recognition purposes as part of the aforementioned reassessment of future profitability. Moreover, tax laws or the tax authorities in countries where UBS has undertaken legal structure changes may prevent the transfer of tax losses incurred in one legal entity to newly organised or reorganised subsidiaries or affiliates or may impose limitations on the utilisation of tax losses that relate to businesses formerly conducted by the transferor. Were this to occur in situations where there were also limited planning opportunities to utilise the tax losses in the originating entity, the DTAs associated with such tax losses could be written down through the income statement.

In addition, statutory and regulatory changes, as well as changes to the way in which courts and tax authorities interpret tax laws, could cause the amount of taxes ultimately paid by UBS to materially differ from the amount accrued.

UBS's stated capital returns objective is based, in part, on capital ratios that are subject to regulatory change and may fluctuate significantly

UBS plans to operate with a fully applied CET1 capital ratio of around 13% and a fully applied CET1 leverage ratio of around 3.7%. UBS's ability to maintain these ratios is subject to numerous risks, including the financial results of its businesses, the effect of changes to capital standards, methodologies and interpretation that may adversely affect the calculation of UBS's fully applied CET1 capital ratio, the imposition of risk add-ons or capital buffers, and the application of additional capital, liquidity and similar requirements to subsidiaries. These risks could prevent or delay UBS's ability to achieve its capital returns policy of a progressive cash dividend coupled with a share repurchase program.

UBS AG's operating results, financial condition and ability to pay its obligations in the future may be affected by funding, dividends and other distributions received from UBS Switzerland AG, UBS Americas Holding LLC, UBS Limited and other subsidiaries, which may be subject to restrictions

UBS AG's ability to pay its obligations in the future may be affected by the level of funding, dividends and other distributions, if any, received from UBS Switzerland AG and other subsidiaries. The ability of such subsidiaries to make loans or distributions, directly or indirectly, to UBS AG may be restricted as a result of several factors, including restrictions in financing agreements and the requirements of applicable law and regulatory, fiscal or other restrictions. In particular, UBS AG's direct and indirect subsidiaries, including UBS Switzerland AG, UBS Limited and UBS Americas Holding LLC, are subject to laws and regulations that restrict dividend payments, authorise regulatory bodies to block or reduce the flow of funds from those subsidiaries to UBS AG, or could impact their ability to repay any loans made to, or other investments in, such subsidiary by UBS AG or another member of the Group. For example, the US CCAR process requires that UBS's US intermediate holding company demonstrate that it can continue to meet minimum capital standards over a nine-quarter hypothetical severely adverse economic scenario. If it fails to meet the quantitative capital requirements, or the Federal Reserve Board's qualitative assessment of the capital planning process is adverse, UBS's US intermediate holding company will be prohibited from paying dividends or making distributions. Restrictions and regulatory actions of this kind could impede access to funds that UBS AG may need to meet its obligations. In addition, UBS AG's right

to participate in a distribution of assets upon a subsidiary's liquidation or reorganisation is subject to all prior claims of the subsidiary's creditors.

Furthermore, UBS AG may guarantee some of the payment obligations of certain of its subsidiaries from time to time. These guarantees may require UBS AG to provide substantial funds or assets to subsidiaries or their creditors or counterparties at a time when UBS AG is in need of liquidity to fund its own obligations.

If UBS experiences financial difficulties, FINMA has the power to open restructuring or liquidation proceed-ings or impose protective measures in relation to UBS Group AG, UBS AG or UBS Switzerland AG, and such proceedings or measures may have a material adverse effect on UBS's shareholders and creditors

Under the Swiss Banking Act, FINMA is able to exercise broad statutory powers with respect to Swiss banks and Swiss parent companies of financial groups, such as UBS AG, UBS Group AG and UBS Switzerland AG, if there is justified concern that the entity is overindebted, has serious liquidity problems or, after the expiration of any relevant deadline, no longer fulfils capital adequacy requirements. Such powers include ordering protective measures, instituting restructuring proceedings (and exercising any Swiss resolution powers in connection therewith), and instituting liquidation proceedings, all of which may have a material adverse effect on shareholders and creditors or may prevent UBS Group AG, UBS AG or UBS Switzerland AG from paying dividends or making payments on debt obligations.

Protective measures may include, but are not limited to, certain measures that could require or result in a moratorium on, or the deferment of, payments. UBS would have limited ability to challenge any such protective measures, and creditors would have no right under Swiss law or in Swiss courts to reject them, seek their suspension, or challenge their imposition, including measures that require or result in the deferment of payments.

If restructuring proceedings are opened with respect to UBS Group AG, UBS AG or UBS Switzerland AG, the resolution powers that FINMA may exercise include the power to (i) transfer all or some of the assets, debt and other liabilities, and contracts of the entity subject to proceedings to another entity, (ii) stay for a maximum of two business days the termination of, or the exercise of rights to terminate, netting rights, rights to enforce or dispose of certain types of collateral or rights to transfer claims, liabilities or certain collateral, under contracts to which the entity subject to proceedings is a party, and / or (iii) partially or fully write down the equity capital and, if such equity capital is fully written down, convert into equity or write down the capital and other debt instruments of the entity subject to proceedings. Shareholders and creditors would have no right to reject, or to seek the suspension of, any restructuring plan pursuant to which such resolution powers are exercised. They would have only limited rights to challenge any decision to exercise resolution powers or to have that decision reviewed by a judicial or administrative process or otherwise.

Upon full or partial write-down of the equity and of the debt of the entity subject to restructuring proceedings, the relevant shareholders and creditors would receive no payment in respect of the equity and debt that is written down, the write-down would be permanent, and the investors would not, at such time or at any time thereafter, receive any shares or other participation rights, or be entitled to any write-up or any other compensation in the event of a potential recovery of the debtor. If FINMA orders the conversion of debt of the entity subject to restructuring proceedings into equity, the securities received by the investors may be worth significantly less than the original debt and may have a significantly different risk profile, and such conversion would also dilute the ownership of existing shareholders. In addition, creditors receiving equity would be effectively subordinated to all creditors in the event of a subsequent winding up, liquidation or dissolution of the entity subject to restructuring proceedings, which would increase the risk that investors would lose all or some of their investment.

FINMA has broad powers and significant discretion in the exercise of its powers in connection with restructuring proceedings. Furthermore, certain categories of debt obligations, such as certain types of deposits, are subject to preferential treatment. As a result, holders of obligations of an entity subject to a Swiss restructuring proceeding may have their obligations written down or converted into equity even though obligations ranking on par with or junior to such obligations are not written down or converted.

Moreover, FINMA has expressed its preference for a "single-point-of-entry" resolution strategy for global systemically important financial groups, led by the bank's home supervisory and resolution authorities and focused on the top-level group company. This would mean that, if UBS AG or one of UBS Group AG's other subsidiaries faces substantial losses, FINMA could open restructuring proceedings with respect to

UBS Group AG only and order a bail-in of its liabilities if there is a justified concern that in the near future such losses could impact UBS Group AG. In that case, it is possible that the obligations of UBS AG or any other subsidiary of UBS Group AG would remain unaffected and outstanding, while the equity capital and the capital and other debt instruments of UBS Group AG would be written down and / or converted into equity of UBS Group AG in order to recapitalise UBS AG or such other subsidiary.

Risks related to "benchmarks"

Since April 2013, the U.K. Financial Conduct Authority ("**FCA**") has regulated the London Interbank Offered Rates ("**LIBOR**") and regulators in other jurisdictions have increased oversight of other interbank offered rates ("**IBORs**") and similar "benchmark" rates. Efforts to transition from IBORs to alternative benchmark rates are under way in several jurisdictions. The FCA announced in July 2017 that it will not continue beyond 2021 to regulate LIBOR or take other actions to sustain LIBOR, and urged users to plan the transition to alternative reference rates. As a result, there can be no guarantee that LIBOR will be determined after 2021 on the same basis at present, if at all.

In April 2017, the Working Group on Sterling Risk-Free Reference Rates selected the Sterling Overnight Index Average as the recommended British pound risk-free rate. In the US, the Alternative Reference Rates Committee has recommended a broad Treasuries repo financing rate as the new US dollar secured risk-free rate, which is expected to be available in 2018. The Federal Reserve Bank of New York has launched a consultation on the construction of this and two other Treasury repurchase agreement-derived rates. The European Central Bank ("**ECB**") has also announced its decision to develop, before 2020, a euro unsecured overnight interest rate based on transaction data already reported to the ECB by banks. The working group on euro risk-free rates, led by the ECB, released a consultation in June 2018 aiming to assess the potential advantages and disadvantages of three euro risk-free rates, which could replace the Euro OverNight Index Average (EONIA) as of 2020. In July 2018, the International Swaps and Derivatives Association launched a market-wide consultation on technical issues related to new benchmark fallbacks for derivatives contracts that reference certain IBORs. At this time, it is not possible to predict the effect of any such changes, any establishment of alternative reference rates or any other reforms to IBORs that may be implemented in the United Kingdom or elsewhere. UBS has significant contractual rights and obligations referenced to IBOR benchmarks. Discontinuance of, or changes to, benchmark rates as a result of these developments or other initiatives or investigations, as well as uncertainty as to the timing and manner of implementation of such changes or discontinuance, may require adjustments to agreements by UBS, its clients and other market participants, as well as to UBS's systems and processes.

IV. Information about UBS AG

UBS AG with its subsidiaries (together, "**UBS AG consolidated**", or "**UBS AG Group**"; together with UBS Group AG, which is the holding company of UBS AG, and its subsidiaries, "**UBS Group**", "**Group**", "**UBS**" or "**UBS Group AG consolidated**") provides financial advice and solutions to private, institutional and corporate clients worldwide, as well as private clients in Switzerland. The operational structure of the Group is comprised of the Corporate Center and the business divisions Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank. UBS's strategy is centered on its leading Global Wealth Management business and its premier universal bank in Switzerland, which are enhanced by Asset Management and the Investment Bank. UBS focuses on businesses that, in its opinion, have a strong competitive position in their targeted markets, are capital efficient, and have an attractive long-term structural growth or profitability outlook.

On 30 September 2018, UBS Group's common equity tier 1 ("**CET1**") capital ratio was 13.5%, the CET1 leverage ratio was 3.80%, the total loss-absorbing capacity ratio was 31.8% on a fully applied basis, and the total loss-absorbing capacity leverage ratio was 8.9% on a fully applied basis.[1] On the same date,

[1] All figures based on the Basel III framework as applicable to Swiss systemically relevant banks. Refer to the "*Capital management*" section of the Annual Report 2017, the UBS Group Third Quarter 2018 Report and the UBS AG Third Quarter 2018 Report, as defined herein, for more information.

invested assets stood at CHF 3,267 billion, equity attributable to shareholders was CHF 51,122 million and market capitalisation was CHF 59,754 million. On the same date, UBS employed 65,556 people[2].

On 30 September 2018, UBS AG consolidated CET1 capital ratio was 13.7%, the CET1 leverage ratio was 3.83%, the total loss-absorbing capacity ratio was 31.3% on a fully applied basis, and the total loss-absorbing capacity leverage ratio was 8.8% on a fully applied basis.[1] On the same date, invested assets stood at CHF 3,267 billion and equity attributable to UBS AG shareholders was CHF 50,136 million. On the same date, UBS AG Group employed 47,091 people[3].

The rating agencies S&P Global Ratings Europe Limited ("**Standard & Poor's**"), Moody's Deutschland GmbH ("**Moody's**"), Fitch Ratings Limited ("Fitch Ratings"), and Scope Ratings GmbH ("**Scope Ratings**") have published solicited credit ratings reflecting their assessment of the creditworthiness of UBS AG, i.e. its ability to fulfil in a timely manner payment obligations, such as principal or interest payments on long-term loans, also known as debt servicing. The ratings from Fitch Ratings, Standard & Poor's and Scope Ratings may be attributed a plus or minus sign, and those from Moody's a number. These supplementary attributes indicate the relative position within the respective rating class. UBS AG has a long-term counterparty credit rating of A+ (outlook: stable) from Standard & Poor's, long-term senior debt rating of Aa3 (outlook: stable) from Moody's, long-term issuer default rating of AA- (outlook: stable) from Fitch Ratings and issuer rating of AA- (outlook: stable) from Scope Ratings.

Generally, rating agencies base their ratings on such material and information, and such of their own investigations, studies and assumptions, as they deem appropriate. The ratings of UBS AG should be evaluated independently from similar ratings of other entities, and from the rating, if any, of its securities. A credit rating is not a recommendation to buy, sell or hold securities issued or guaranteed by the rated entity and may be subject to review, revision, suspension, reduction or withdrawal at any time by the assigning rating agency. All the above-mentioned rating agencies are registered as credit rating agencies under Regulation (EC) No 1060/2009 as amended by Regulation (EU) No 513/2011.

The following table gives an overview of the rating classes as used by the above rating agencies and their respective meaning. UBS AG's rating is indicated by the red box.

Standard & Poor's		Moody's		Fitch Ratings		Scope Ratings	
Long-Term Issuer credit rating		Long-Term rating		Long-Term Issuer Default Rating		Long-Term Issuer credit rating	
AAA	Extremely strong capacity to meet financial commitments	Aaa	Highest quality	AAA	Highest credit quality	AAA	Exceptionally strong credit quality with the lowest risk of a default-like event
AA+	Very strong capacity to meet financial commitments	Aa1	High quality	AA+	Very high credit quality	AA+	Very strong credit quality with an extremely low risk of a default-like event
AA		Aa2		AA		AA	
AA-		Aa3		AA-		AA-	
A+	Strong capacity to meet its financial commitments	A1	Upper-medium grade	A+	High credit quality	A+	Strong credit quality with a very low risk of a default-like event
A		A2		A		A	
A-		A3		A-		A-	
BBB+	Adequate capacity to meet	Baa1	Medium grade	BBB+	Good credit	BBB+	Good credit quality with

[2] Full-time equivalents.

[3] Full-time equivalents.

Standard & Poor's			Moody's		Fitch Ratings		Scope Ratings	
BBB	its financial commitments		Baa2		BBB	quality	BBB	a low risk of a default-like event.
BBB-			Baa3		BBB-		BBB-	
BB+	Significant speculative characteristics	Less vulnerable in the near term than other lower-rated obligors	Ba1	Speculative, subject to substantial credit risk	BB+	Speculative	BB+	Moderate-to-modest credit quality with a moderate risk of a default-like event
BB			Ba2		BB		BB	
BB-			Ba3		BB-		BB-	
B+		More vulnerable than the obligors rated 'BB'	B1	Speculative, subject to high credit risk	B+	Highly speculative	B+	Weak credit quality with a material risk of a default-like event
B			B2		B		B	
B-			B3		B-		B-	
CCC+		Currently vulnerable	Caa1	Speculative, of poor standing and subject to very high credit risk	CCC	Substantial credit risk	CCC	Very weak credit quality with a significant risk of a default-like-event
CCC			Caa2		CC	Very high levels of credit risk	CC	Very weak credit quality with a very significant risk of a default-like-event
			Caa3		C	Exceptionally high levels of credit risk	C	Extremely weak credit quality with a highly significant risk of a default-like-event
CCC-		Currently highly vulnerable	Ca	Highly speculative, likely in, or very near, default with some prospect of recovery of principal and interest	RD	Restricted default		
CC								
R	Under regulatory supervision		C	Typically in default, with little prospect for recovery of principal or interest	D	Default	D	Credit default-like event
SD	Selective Default							
D	Default							

All the above rating agencies are registered as credit rating agencies under Regulation (EC) No 1060/2009 as amended by Regulation (EU) No 513/2011.

Corporate Information

The legal and commercial name of the Issuer is UBS AG.

The company was incorporated under the name SBC AG on 28 February 1978 for an unlimited duration and entered in the Commercial Register of Canton Basel-City on that day. On 8 December 1997, the company changed its name to UBS AG. The company in its present form was created on 29 June 1998 by the merger of Union Bank of Switzerland (founded 1862) and Swiss Bank Corporation (founded 1872). UBS AG is entered in the Commercial Registers of Canton Zurich and Canton Basel-City. The registration number is CHE-101.329.561.

UBS AG is incorporated and domiciled in Switzerland and operates under the Swiss Code of Obligations as an *Aktiengesellschaft*, a corporation limited by shares.

According to article 2 of the Articles of Association of UBS AG, the purpose of UBS AG is the operation of a bank. Its scope of operations extends to all types of banking, financial, advisory, trading and service activities in Switzerland and abroad. UBS AG may establish branches and representative offices as well as banks, finance companies and other enterprises of any kind in Switzerland and abroad, hold equity interests in these companies, and conduct their management. UBS AG is authorized to acquire, mortgage and sell real estate and building rights in Switzerland and abroad. UBS AG may borrow and invest money on the capital markets. UBS AG is part of the group of companies controlled by the group parent company UBS Group AG. It may promote the interests of the group parent company or other group companies. It may provide loans, guarantees and other kinds of financing and security for group companies.

The addresses and telephone numbers of UBS AG's two registered offices and principal places of business are: Bahnhofstrasse 45, CH-8001 Zurich, Switzerland, telephone +41 44 234 1111; and Aeschenvorstadt 1, CH-4051 Basel, Switzerland, telephone +41 61 288 5050.

Any statements regarding the competitive position of UBS AG, UBS AG Group or the Group contained in this document are made on the basis of the opinion of UBS AG or the Group.

V. Organisational Structure of UBS AG

UBS AG is a Swiss bank and the parent company of the UBS AG Group. It is 100% owned by UBS Group AG, which is the holding company of the UBS Group. UBS operates as a group with four business divisions and a Corporate Center.

In 2014, UBS began adapting its legal entity structure to improve the resolvability of the Group in response to too big to fail requirements in Switzerland and recovery and resolution regulation in other countries in which the Group operates. In December 2014, UBS Group AG became the holding company of the Group.

In 2015, UBS AG transferred its Personal & Corporate Banking and Wealth Management businesses booked in Switzerland to the newly established UBS Switzerland AG, a banking subsidiary of UBS AG in Switzerland. In 2016, UBS Americas Holding LLC was designated as the intermediate holding company for UBS's US subsidiaries and UBS merged its Wealth Management subsidiaries in various European countries into UBS Europe SE, UBS's German-headquartered European subsidiary. Additionally, UBS transferred the majority of Asset Management's operating subsidiaries to UBS Asset Management AG.

UBS Business Solutions AG, a wholly owned subsidiary of UBS Group AG, was established in 2015 and acts as the Group service company. In 2017, UBS's shared services functions in Switzerland and the UK were transferred from UBS AG to UBS Business Solutions AG. UBS also completed the transfer of shared services functions in the US to its US service company, UBS Business Solutions US LLC, a wholly owned subsidiary of UBS Americas Holding LLC.

In 2015, UBS implemented a more self-sufficient business and operating model for UBS Limited, UBS's investment banking subsidiary in the UK. Given the continuing uncertainty on transition arrangements and the potential future restrictions on providing financial services into the EU from the UK, UBS is in the process of obtaining regulatory approvals for the merger of UBS Limited into UBS Europe SE. The timing and extent of the actions UBS takes may vary considerably from its current plan depending on regulatory requirements and the nature of any transition or successor agreements between the UK and the EU.

Following the announcement by the China Securities Regulatory Commission that foreign investors will be permitted to increase their ownership percentages in China affiliates to a cap of 51%, and may be allowed to increase their ownership up to 100% in 2021, UBS submitted in May 2018 a preliminary application to increase the shareholding in its China affiliate, UBS Securities Co. Limited, from 24.99% to 51%. The transaction is subject to completion of a share purchase from existing shareholders and regulatory approval.

UBS continues to consider further changes to the Group's legal structure in response to regulatory requirements and other external developments. Such changes may include further consolidation of operating subsidiaries in the EU, and adjustments to the booking entity or location of products and services.

UBS Group AG's interests in subsidiaries and other entities as of 31 December 2017, including interests in significant subsidiaries, are discussed in "Note 28 Interests in subsidiaries and other entities" to the UBS Group AG's consolidated financial statements included in the UBS Group AG and UBS AG Annual Report 2017 published on 9 March 2018 ("**Annual Report 2017**").

UBS AG's interests in subsidiaries and other entities as of 31 December 2017, including interests in significant subsidiaries, are discussed in "Note 28 Interests in subsidiaries and other entities" to the UBS AG's consolidated financial statements included in the Annual Report 2017.

UBS AG is the parent company of, and conducts a significant portion of its operations through, its subsidiaries. UBS AG has contributed a significant portion of its capital and provides substantial liquidity to subsidiaries. In addition, UBS Business Solutions AG provides substantial services to group companies including UBS AG and its subsidiaries. To this extent, UBS AG is dependent on certain of the entities of the UBS AG Group and of the UBS Group.

VI. Business Overview

Business Divisions and Corporate Center

UBS operates as a group with four business divisions (Global Wealth Management, Personal & Corporate Banking, Asset Management, and the Investment Bank) and a Corporate Center. Each of the business divisions and the Corporate Center are described below. A description of the Group's strategy can be found under "Our strategy" in the "Operating environment and strategy" section of the Annual Report 2017; a description of the businesses, strategies, clients, organisational structures, products and services of the business divisions and the Corporate Center can also be found in the "Operating environment and strategy" section of the Annual Report 2017.

Global Wealth Management

Global Wealth Management provides comprehensive advice and tailored financial services to wealthy private clients around the world. Its clients benefit from the full spectrum of resources that a global firm can offer, including investment management, wealth planning, banking and lending, and corporate financial advice. Global Wealth Management's model gives clients access to a wide range of products from the world's leading third-party institutions that complement UBS's own offerings.

Personal & Corporate Banking

Personal & Corporate Banking provides comprehensive financial products and services to private, corporate and institutional clients in Switzerland and is among the leading players in the private and corporate loan market in Switzerland, with a well-collateralized and conservatively managed lending portfolio. Its business is central to UBS's universal bank delivery model in Switzerland. Personal & Corporate Banking works with the wealth management, investment bank and asset management businesses to help clients receive the best products and solutions for their specific financial needs. Personal & Corporate Banking is also an important source of growth for the other business divisions in Switzerland through client referrals. In addition, Personal & Corporate Banking manages a substantial part of UBS's Swiss infrastructure and banking products platform, both of which are leveraged across the Group.

Asset Management

Asset Management is a large-scale and diversified asset manager. It offers investment capabilities and investment styles across all major traditional and alternative asset classes, as well as platform solutions and advisory support, to institutions, wholesale intermediaries and wealth management clients around the world.

Investment Bank

The Investment Bank provides investment advice, financial solutions and capital market access, with principal offices in all major financial centres. It serves corporate, institutional and wealth management

clients across the globe and partners with UBS's wealth management, personal and corporate banking and asset management businesses. The business division is organized into Corporate Client Solutions and Investor Client Services and also includes UBS Securities Research.

Corporate Center

Corporate Center provides services to the Group through the reporting units Corporate Center – Services and Group Asset and Liability Management ("**Group ALM**"). Corporate Center also includes the Non-core and Legacy Portfolio unit. Services consists of the Group Chief Operating Officer area (Group Corporate Services, Group Human Resources, Group Operations, Group Sourcing and Group Technology), Group Finance (excluding Group ALM), Group Legal, Group Risk Control, Group Communications & Branding, Group Regulatory & Governance, and UBS in Society. Group ALM manages the structural risks of UBS's balance sheet, including interest rate risk in the banking book, currency risk and collateral risk, as well as the risks associated with the Group's liquidity and funding portfolios. Group ALM also seeks to optimize the Group's financial performance by matching assets and liabilities within the context of the Group's liquidity, funding and capital targets and constraints. Group ALM serves all business divisions and other Corporate Center units through three main risk management areas, and its risk management is fully integrated into the Group's risk governance framework. Non-core and Legacy Portfolio manages legacy positions from businesses exited by the Investment Bank, and is overseen by a committee chaired by the Group Chief Risk Officer.

Competition

The financial services industry is characterised by intense competition, continuous innovation, restrictive, detailed, and sometimes fragmented, regulation and ongoing consolidation. UBS faces competition at the level of local markets and individual business lines, and from global financial institutions that are comparable to UBS in their size and breadth. Barriers to entry in individual markets and pricing levels are being eroded by new technology. UBS expects these trends to continue and competition to increase.

Recent Developments:

UBS AG (consolidated) key figures

UBS AG derived the selected consolidated financial information included in the table below for the years ended 31 December 2017, 2016 and 2015 from the Annual Report 2017, which contains the audited consolidated financial statements of UBS AG, as well as additional unaudited consolidated financial information, for the year ended 31 December 2017 and comparative figures for the years ended 31 December 2016 and 2015. The selected consolidated financial information included in the table below for the nine months ended 30 September 2018 and 30 September 2017 was derived from the UBS AG Third Quarter 2018 Report, which contains the UBS AG interim consolidated financial statements (unaudited), as well as additional unaudited consolidated financial information, for the nine months ended 30 September 2018 and comparative figures for the nine months ended 30 September 2017.

The consolidated financial statements were prepared in accordance with International Financial Reporting Standards ("**IFRS**") issued by the International Accounting Standards Board ("**IASB**") and are stated in Swiss francs ("**CHF**"). Information for the years ended 31 December 2017, 2016 and 2015 which is indicated as being unaudited in the table below was included in the Annual Report 2017, but has not been audited on the basis that the respective disclosures are not required under IFRS, and therefore are not part of the audited financial statements. The Annual Report 2017 and the UBS AG Third Quarter 2018 Report are incorporated by reference herein. The section “Measurement of performance” of the Annual Report 2017 contains an explanation of the use of the information contained under the heading “Key performance indicators” in the table below and the definitions of each of these key performance indicators. Prospective investors should read the whole of this Prospectus and the documents incorporated by reference herein and should not rely solely on the summarized information set out below:

	As of or for the nine months ended		As of or for the year ended		
CHF million, except where indicated	30.9.18	30.9.17	31.12.17	31.12.16	31.12.15
	Unaudited		*audited, except where indicated*		

Results					
Operating income	22,839	22,237	29,479	28,421	30,605
Operating expenses	17,971	17,993	24,481	24,352	25,198
Operating profit / (loss) before tax	4,868	4,244	4,998	4,069	5,407
Net profit / (loss) attributable to shareholders	3,690	3,257	845	3,207	6,235
Key performance indicators					
Profitability and growth					
Return on tangible equity (%) [1]	11.3	9.6	2.0*	6.9*	13.5*
Cost / income ratio (%) [2]	78.5	80.8	82.7*	85.6*	82.0*
Net profit growth (%) [3]	13.3	26.8	(73.7)*	(48.6)*	78.0*
Resources					
Common equity tier 1 capital ratio (%) [4, 5]	13.7	14.0	14.0*	14.5*	15.4*
Common equity tier 1 leverage ratio (%) [6]	3.83	3.76	3.7*	3.7*	3.6*
Going concern leverage ratio (%) [7, 8]	4.6	4.2	4.2*	4.2*	-
Additional information					
Profitability					
Return on equity (%) [9]	9.8	8.3	1.6*	5.9*	11.7*
Return on risk-weighted assets, gross (%) [10]	12.2	12.9	12.8*	13.2*	14.3*
Return on leverage ratio denominator, gross (%) [11]	3.4	3.4	3.4*	3.2*	-
Resources					
Total assets	933,091	914,551	916,363	935,353	943,256
Equity attributable to shareholders	50,136	53,246	50,718	53,662	55,248
Common equity tier 1 capital [5]	34,392	33,337	33,240	32,447	32,042
Risk-weighted assets [5]	251,428	237,322	236,606*	223,232*	208,186*
Going concern capital ratio (%) [8]	16.5	15.6	15.6*	16.3*	-
Total loss-absorbing capacity ratio (%) [8]	31.3	31.5	31.4*	29.6*	-
Leverage ratio denominator [12]	898,894	885,896	887,189*	870,942*	898,251*
Total loss-absorbing capacity leverage ratio (%) [8]	8.8	8.4	8.4*	7.6*	-
Other					
Invested assets (CHF billion) [13]	3,267	3,054	3,179	2,810	2,678
Personnel (full-time equivalents)	47,091	48,949	46,009*	56,208*	58,131*

* unaudited

[1] Net profit attributable to shareholders before amortization and impairment of goodwill and intangible assets (annualized as applicable) / average equity attributable to shareholders less average goodwill and intangible assets. This metric provides information on the profitability of the business in relation to tangible equity.
[2] Operating expenses / operating income before credit loss (expense) or recovery. This metric provides information on the efficiency of the business by comparing operating expenses with gross income.
[3] Change in net profit attributable to shareholders from continuing operations between current and comparison periods / net profit attributable to shareholders from continuing operations of comparison period. This metric provides information on profit growth in comparison with prior period.
[4] Common equity tier 1 capital / risk-weighted assets.
[5] Based on the Basel III framework as applicable to Swiss systemically relevant banks ("SRB").
[6] Common equity tier 1 capital / leverage ratio denominator. Calculated in accordance with Swiss SRB rules applicable as of 1 January 2020.
[7] Total going concern capital / leverage ratio denominator.
[8] Based on the Swiss SRB rules applicable as of 1 January 2020 that became effective on 1 July 2016. Figures for prior periods are not available.
[9] Net profit attributable to shareholders (annualized as applicable) / average equity attributable to shareholders. This metric provides information on the profitability of the business in relation to equity.
[10] Operating income before credit loss (annualized as applicable) / average fully applied risk-weighted assets. This metric provides information on the revenues of the business in relation to risk-weighted assets.
[11] Operating income before credit loss (annualized as applicable) / average fully applied leverage ratio denominator. From 31 December 2015 onward, the leverage ratio denominator calculation is aligned with the Basel III rules. For periods prior to 31 December 2015 the leverage ratio denominator is calculated in accordance with former Swiss SRB rules. Therefore the figure for the period ended on 31 December 2015 is not presented as it is not available on a fully comparable basis. This metric provides information on the revenues of the business in relation to leverage ratio denominator.
[12] From 31 December 2015 onward, the leverage ratio denominator calculation is aligned with the Basel III rules.
[13] Includes invested assets for Personal & Corporate Banking.

1. UBS will contest RMBS civil complaint filed by United States Department of Justice

The US Department of Justice ("**DOJ**") filed a civil complaint on 8 November 2018 in the U.S. District Court for the Eastern District of New York related to UBS's issuance, underwriting and sale of RMBS more than a decade ago. The complaint seeks unspecified monetary civil penalties under the Financial Institutions Reform, Recovery and Enforcement Act of 1989 ("**FIRREA**") regarding transactions that date back to 2006 and 2007.

2. Adoption of IFRS 9

Effective 1 January 2018, UBS adopted IFRS 9, Financial Instruments. The adoption of IFRS 9 resulted in changes to the classification and measurement of certain financial instruments, which have been applied prospectively from 1 January 2018.

3. Changes to UBS functional and presentation currencies

Effective 1 October 2018 and as required by IAS 21, *The Effects of Changes in Foreign Exchange Rates*, the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland has changed from Swiss francs to US dollars and the functional currency of UBS AG's London Branch operations has changed from British pounds to US dollars. In line with these changes, the presentation currency of UBS Group AG's and UBS AG's consolidated financial statements will change from Swiss francs to US dollars. Prior periods will be restated for this presentation currency change, with assets, liabilities and total equity converted to US dollars at historic closing exchange rates prevailing on the respective balance sheet dates, and income and expenses translated at the respective average rates prevailing for the relevant periods. There will be no material changes to prior-period profit and loss or total equity attributable to UBS shareholders. The restated historical financial data time series is available under “Quarterly reporting – Time series & spreadsheets“ at *www.ubs.com/investors.*

Beginning with UBS's fourth quarter 2018 report, financial information will be presented in US dollars. In addition, UBS will continue to provide select financial and regulatory information in Swiss francs as part of its quarterly and annual reporting.

UBS expects that these functional and presentation currency changes, together with related changes to its risk management framework and certain hedging programs, should increase UBS Group reported net interest income by approximately USD 0.3 billion annually. Based on UBS's US dollar balance sheet as of mid-October 2018, post implementation of the presentation and functional currency changes and related hedging activities, UBS estimates that a parallel +100 basis point shift in yield curves would result in a combined increase in annual net interest income of Global Wealth Management and Personal & Corporate Banking of approximately USD 0.6 billion, or USD 0.1 billion higher compared with the sensitivity as of 30 September 2018. The sensitivity of shareholders' equity to such a shift in yield curves continues to be estimated as a decrease of approximately USD 1.9 billion recognized in Other comprehensive income (“**OCI**”).

UBS estimates that, under a US dollar functional and presentation currency, a 10% depreciation of the US dollar against other currencies would reduce its CET1 capital ratio by 7 basis points and UBS's Swiss SRB going concern leverage ratio by 14 basis points. Conversely, UBS estimates that a 10% appreciation of the US dollar against other currencies would increase its CET1 capital ratio by 7 basis points and UBS's Swiss SRB going concern leverage ratio by 15 basis points.

The aforementioned estimates are calculated based on UBS's estimated US dollar balance sheet as of mid-October 2018 post implementation of the functional and presentation currency changes and related hedging activities.

4. Expected changes in methodology for deferred tax assets

Following the reduction in the US federal corporate tax rate to 21% from 35%, which was included in the Tax Cuts and Jobs Act enacted in the fourth quarter of 2017, and the reduction in timeframe between the end of our seven-year profit forecast period and the expiry of our US tax losses carried forward, UBS is

reviewing its approach to the remeasurement of its US DTAs and the timing for recognizing deferred taxes in UBS's income statement. As a result of this review, which is ongoing and will depend in part on legal entity business plans that are expected to be finalized shortly, UBS expects to remeasure its US operations-related DTAs in Switzerland and in the US during the fourth quarter of 2018. These remeasurements are expected to include changes in recognized tax loss and temporary difference DTAs in respect of US profits, including the elimination of the seven-year profit forecast period limit for the tax loss DTAs related to UBS Americas Inc. However, these changes are anticipated to have a limited net effect on the tax expense and no effect on CET1 capital in the fourth quarter of 2018. As a result of the review, it is anticipated that US tax loss DTAs will begin to be amortized with effect from 1 January 2019.

5. Adoption of Swiss corporate tax reform

In September 2018, the Swiss Parliament adopted corporate tax reform measures, previously known as Tax Proposal 17, that abolish preferential corporate tax treatment for holding companies and introduce a series of tax measures that are aligned to Organisation for Economic Co-operation and Development (OECD) standards, aiming to maintain Switzerland's competitiveness as a business location. The measures include an optional relief on capital tax that compensates for the proposed elimination of the current preferential holding company capital tax rate. In addition, the cantonal share of direct federal tax revenue will be increased, giving the cantons leeway to reduce their cantonal corporate income tax rate. If a referendum is not called, most measures will take effect in 2020, with some measures already taking effect in early 2019. The changes would increase UBS's tax liability in Switzerland by a modest amount; the changes in cantonal tax rates, if enacted, would be expected to largely offset such increase.

6. UK withdrawal from the EU

UBS has planned its response to the UK withdrawal from the EU assuming that the UK will leave the EU in March 2019 and that any transition arrangements will only become legally binding close to the exit date. Given the continuing uncertainty on transition arrangements and the potential future restrictions on providing financial services into the EU from the UK, UBS is in the process of obtaining regulatory approvals for the merger of UBS Limited, UBS's UK-headquartered subsidiary, into UBS Europe SE, UBS's German-headquartered European subsidiary. Following completion of the merger, UBS expects that UBS Europe SE will become subject to direct supervision by the European Central Bank.

As reported in the Annual Report 2017, certain clients and other counterparties of UBS Limited would become clients or counterparties of UBS Europe SE through a business transfer proceeding and the merger of the two entities. UBS has now commenced the business transfer proceeding in the UK to facilitate the transfer of client business as well as the cross-border merger proceeding. UBS currently expects the business transfer and merger to become effective in the first quarter of 2019, prior to the UK leaving the EU at the end of March 2019.

UBS anticipates that clients and other counterparties of UBS Limited who can be serviced by UBS AG, London Branch generally will be migrated to UBS AG, London Branch in the fourth quarter of 2018 and prior to the merger of UBS Limited and UBS Europe SE. In connection with the merger, a small number of roles will be relocated from the UK to other European locations. UBS also expects to increase the loss-absorbing capacity of UBS Europe SE to reflect the additional activities it would acquire. The timing and extent of any actions UBS takes may vary considerably from its current plan depending on regulatory requirements and the nature of any transition or successor agreements between the UK and the EU.

7. Developments related to the transition away from IBOR

Efforts to transition from the interbank offered rate ("**IBOR**") benchmarks to alternative benchmark rates are continuing. The following key developments took place in the third quarter of 2018.

- The working group on euro risk-free rates recommended ESTER (euro short-term rate) as the replacement for EONIA (Euro OverNight Index Average), which will be prohibited by the EU Benchmark Regulation after 1 January 2020.

- Futures contracts referenced to the Secured Overnight Financing Rate (SOFR), the recommended successor to US dollar LIBOR (London Interbank Offered Rate), began trading on the Chicago Mercantile Exchange.

- The Bank of England consulted on the development of Term SONIA (Sterling Overnight Index Average) Reference Rates, which are expected to become available in the second half of 2019.

- The International Swaps and Derivatives Association, as part of a Financial Conduct Authority ("**FCA**") mandate, consulted on preferred options for LIBOR transition fallbacks for derivatives.

The FCA and the Prudential Regulation Authority have written to the CEOs of banks and insurance companies in the UK, including UBS, seeking assurance that senior managers and boards understand the risks associated with the transition away from IBOR and are taking appropriate preparatory action to transition to alternative rates before the end of 2021.

UBS has a substantial number of contracts linked to IBOR and has established a cross-divisional, cross-regional governance structure and change program to address the scale and complexity of the transition from 2018 to 2021.

8. Increase in stake in UBS Securities China

Following the announcement by the China Securities Regulatory Commission that foreign investors will be permitted to increase their ownership percentages in China affiliates to a cap of 51%, and may be allowed to increase their ownership up to 100% in 2021, UBS submitted in May 2018 a preliminary application to increase theAs disclosed in the Second Quarter 2018 Report (as defined herein), UBS submitted a preliminary application in May 2018 to increase its shareholding in its China affiliate, UBS Securities Co. Limited ("**UBSS**"), from 24.99% to 51%. The transaction is subject to completion of a share purchase from existing shareholders and regulatory approval. If UBSit acquires majority ownership, it would UBS expects to consolidate its investment in UBSS under International Financial Reporting Standards ("**IFRS**") and would be required to remeasure its current 24.99% holding in UBSS at fair value, likely resulting in aan estimated loss. of CHF 0.3 billion in Corporate Center – Services if the disclosed offer prices are accepted. The loss will be treated as an adjusting item. UBS's CET1 capital should not be materially affect UBS's CET1 capital affected as the loss is expected to be largely offset by the release of a capital deduction for the goodwill included withinwith the initial stake.

9. Worldline to acquire SIX Payment Services

On 15 May 2018, SIX and Worldline signed a binding agreement to enter into a strategic partnership in the cards business. Under the agreement, SIX will transfer its existing cards business to Worldline and receive a 27% stake in Worldline. The transaction is currently expected to close in the fourth quarter of 2018. When the transaction closes, UBS expects to recognize in the income statement a share of the gain recognized by SIX proportional to UBS's 17.31% equity ownership in SIX, estimated at CHF 0.4 billion subject to Worldline's share price upon closing. The gain, of which approximately 80% will be reflected in Personal & Corporate Banking and approximately 20% in Global Wealth Management, will be treated as an adjusting item. For CET1 capital, the gain may be offset by related capital deductions.

10. IFRS 16, *Leases*

UBS will adopt IFRS 16, Leases on 1 January 2019, fundamentally changing how UBS accounts for operating leases when acting as a lessee. UBS expects assets and liabilities to increase by approximately CHF 4 billion upon adoption with a corresponding increase in risk-weighted assets ("**RWA**") and leverage ratio denominator ("**LRD**"), with associated modest effects on capital and leverage ratios.

11. Changes in Corporate Center cost allocations and equity attribution to business divisions as of the first quarter of 2019.

In order to align Group and divisional performance, UBS will adjust its methodology for the allocation of Corporate Center expenses, funding costs and balance sheet to the business divisions. In aggregate, this will result in an increase of approximately CHF 0.7 billion in Corporate Center retained profit, offset by higher allocations to the business divisions, and lead to approximately a 2 percentage point increase in business division adjusted cost / income ratios.

Following these changes, the retained loss in Corporate Center – Services will primarily reflect funding costs for deferred tax assets, costs relating to UBS's legal entity transformation program and other costs not attributable to or representative of the performance of the business divisions. Furthermore, Corporate Center will allocate approximately CHF 90 billion of additional LRD, and associated RWA, from Corporate Center – Group ALM to business divisions. This is incremental to the existing LRD and RWA allocations from Corporate Center – Group ALM to the business divisions. With this methodology update and further changes to UBS's equity attribution framework, UBS expects to allocate approximately CHF 7 billion of additional attributed equity to the business divisions, of which CHF 3 billion will be allocated to the Investment Bank. The remaining attributed equity retained in Corporate Center will primarily relate to deferred tax assets and dividend accruals. All of these changes will be effective 1 January 2019 and UBS will provide restated prior-period information.

12. Changes in Corporate Center segment reporting

Effective 1 January 2019, UBS will no longer separately assess the performance of Corporate Center – Non-core and Legacy Portfolio as a result of its substantially reduced size and resource consumption. Following this change, and in line with IFRS 8, Operating Segments, UBS will include the results of Corporate Center – Non-core and Legacy Portfolio with Corporate Center – Services. Prior-period information will be restated.

Refer to the "Recent developments" section of the UBS Third Quarter 2018 Report and the "Note 1 Basis of accounting" and "Note 18 Transition to IFRS 9 as of 1 January 2018" to the "Consolidated financial statements" section of the UBS AG Third Quarter 2018 Report, as well as to "IFRS 9, Financial Instruments" and "IFRS 15, Revenue from Contracts with Customers" in the "Significant accounting and financial reporting changes in 2018" section of the Annual Report 2017 for further information on key accounting, regulatory and legal developments.

VII. Trend Information

As indicated in the UBS Group Third Quarter 2018 Report, global economic growth prospects and monetary policy normalization continue to provide a supportive backdrop to UBS's business, although ongoing geopolitical tensions, rising protectionism and trade disputes have further dampened investor sentiment and confidence. UBS expects these latter trends to continue to impact Global Wealth Management clients' transaction activity in the fourth quarter; however, moderately increased levels of volatility and volumes are generally positive for UBS's institutional business in the Investment Bank. Funding costs related to long-term debt and capital instruments issued to comply with regulatory funding and liquidity requirements will be higher than in the previous year, but should be broadly stable compared with the third quarter.

VIII. Administrative, Management and Supervisory Bodies of UBS AG

UBS AG complies with all relevant Swiss legal and regulatory corporate governance requirements. As a foreign private issuer with debt securities listed on the NYSE, UBS AG also complies with the relevant NYSE corporate governance standards.

UBS AG operates under a strict dual board structure, as mandated by Swiss banking law. The Board of Directors ("**BoD**") exercises the ultimate supervision over management, whereas the Executive Board ("**EB**"), headed by the President of the Executive Board ("**President of the EB**"), has executive management responsibility. The functions of Chairman of the BoD and President of the EB are assigned to two different people, ensuring a separation of power. This structure establishes checks and balances and preserves the institutional independence of the BoD from the day-to-day management of UBS AG, for which responsibility is delegated to the EB under the leadership of the President of the EB. No member of one board may simultaneously be a member of the other.

Supervision and control of the EB remain with the BoD. The authorities and responsibilities of the two bodies are governed by the Articles of Association and the Organization Regulations of UBS AG with their annexes.

Board of Directors

The BoD is the most senior body of UBS AG. The BoD consists of at least five and no more than twelve members. All the members of the BoD are elected individually by the Annual General Meeting of Shareholders ("**AGM**") for a term of office of one year, which expires after the completion of the next AGM. Shareholders also elect the Chairman upon proposal of the BoD.

The BoD meets as often as business requires, and at least six times a year.

Members of the Board of Directors

Member and business address	Title	Term of office	Current principal positions outside UBS AG
Axel A. Weber UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Chairman	2019	Chairman of the Board of Directors of UBS Group AG; board member of the Swiss Bankers Association; Trustees Board member of Avenir Suisse; Advisory Board member of the "Beirat Zukunft Finanzplatz"; board member of the Swiss Finance Council; Chairman of the board of the Institute of International Finance; board member of the International Monetary Conference; member of the European Financial Services Round Table; member of the European Banking Group; member of the International Advisory Panel, Monetary Authority of Singapore; member of the Group of Thirty, Washington, D.C.; Chairman of the Board of Trustees of DIW Berlin; Advisory Board member of the Department of Economics at the University of Zurich; member of the Trilateral Commission.
Michel Demaré UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Independent Vice Chairman	2019	Independent Vice-Chairman of the Board of Directors of UBS Group AG; board member of Vodafone Group Plc; board member of Louis-Dreyfus Commodities Holdings BV; Vice Chairman of the Supervisory Board of IMD, Lausanne; Advisory Board member of the Department of Banking and Finance at the University of Zurich.
David Sidwell UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Senior Independent Director of the Board of Directors of UBS Group AG; Senior Advisor at Oliver Wyman, New York; board member of Chubb Limited; board member of GAVI Alliance; Chairman of the Board of Village Care, New York; Director of the National Council on Aging, Washington D.C.
Jeremy Anderson UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; trustee of the UK's Productivity Leadership Group.
Reto Francioni UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; professor at the University of Basel; board member of Coca-Cola HBC AG; Chairman of the board of Swiss International Air Lines AG; board member of Francioni AG; board member of MedTech Innovation Partners AG.
Ann F. Godbehere UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; board member of Rio Tinto plc (chairman of the audit committee); board member of Rio Tinto Limited (chairman of the audit committee).
Fred Hu UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; non-executive chairman of the board of Yum China Holdings; board member of Hong Kong Exchanges and Clearing Ltd.; chairman of Primavera Capital Limited; non-executive director of Dalian Wanda Commercial Properties Co Ltd.; board member of China Asset Management; board member of Minsheng Financial Leasing Co.; trustee of the China Medical Board; Governor of the Chinese International School; co-chairman of the Nature Conservancy's Asia Pacific Council; director and member of the Executive Committee of China Venture Capital and Private Equity Association Ltd.; Global Advisory Board member of the Council on Foreign Relations.
Julie G. Richardson	Member		Member of the Board of Directors of UBS Group AG; board member of

UBS AG, Bahnhofstrasse 45, CH-8001 Zurich		2019	The Hartford Financial Services Group, Inc. (chairman of the audit committee); board member of Yext (chairman of the audit committee); board member of Vereit, Inc. (chairman of the compensation committee).
Isabelle Romy UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; partner and board member at Froriep Legal AG, Zurich; associate professor at the University of Fribourg and at the Federal Institute of Technology, Lausanne; vice chairman of the Sanction Commission of SIX Swiss Exchange; member of the Fundraising Committee of the Swiss National Committee for UNICEF; Supervisory Board member of the CAS program Financial Regulation of the University of Bern and University of Geneva.
Robert W. Scully UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; board member of Chubb Limited; board member of Zoetis Inc.; board member of KKR & Co LP; board member of the Dean's Advisors of Harvard Business School.
Beatrice Weder di Mauro UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; distinguished fellow at INSEAD in Singapore; Supervisory Board member of Robert Bosch GmbH; board member of Bombardier Inc.; member of the ETH Zurich Foundation Board of Trustees.
Dieter Wemmer UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Member	2019	Member of the Board of Directors of UBS Group AG; board member of Ørsted A/S; member of the CFO Forum; member of the Systemic Risk Working Group of the European Central Bank and the Bank for International Settlements; member of the Berlin Center of Corporate Governance.

Organizational principles and structure

Following each AGM, the BoD meets to appoint one or more Vice Chairmen, BoD committee members, and their respective Chairpersons. At the same meeting, the BoD appoints a Company Secretary, who acts as secretary to the BoD and its committees.

The BoD committees comprise the Audit Committee and the Risk Committee. The BoD has also established a Special Committee, which is an ad-hoc committee, called and held on an ad-hoc basis, focused on internal and regulatory investigations.

Audit Committee

The Audit Committee ("AC") consists of five BoD members, all of whom were determined by the BoD to be fully independent. As a group, members of the Audit Committee must have the necessary qualifications and skills to perform all of their duties and together must possess financial literacy and experience in banking and risk management.

The AC itself does not perform audits but monitors the work of the external auditors who in turn are responsible for auditing UBS AG's consolidated and standalone annual financial statements and for reviewing the quarterly financial statements.

The function of the AC is to serve as an independent and objective body with oversight of: (i) UBS AG's accounting policies, financial reporting and disclosure controls and procedures, (ii) the quality, adequacy and scope of external audit, (iii) UBS AG's compliance with financial reporting requirements, (iv) senior management's approach to internal controls with respect to the production and integrity of the financial statements and disclosure of the financial performance, and (v) the performance of Internal Audit in conjunction with the Chairman of the BoD.

Together with the external auditors and Internal Audit, the AC in particular reviews the annual financial statements of UBS AG and, where applicable, the quarterly financial statements as well as the consolidated annual and quarterly financial statements and consolidated annual report of UBS AG, as proposed by management, in order to recommend their approval to the BoD or propose any adjustments the AC considers appropriate.

Periodically, and at least annually, the AC assesses the qualifications, expertise, effectiveness, independence and performance of the external auditors and their lead audit partner, in order to support the BoD in reaching a decision in relation to the appointment or dismissal of the external auditors and to the rotation of the lead audit partner. The BoD then submits these proposals to the shareholders for approval at the AGM.

The members of the AC are Jeremy Anderson (Chairperson), Michel Demaré, Ann F. Godbehere, Isabelle Romy and Beatrice Weder di Mauro.

Executive Board ("EB")

Under the leadership of the President of the EB, the EB has executive management responsibility for UBS AG and its business. All EB members (with the exception of the President of the EB) are proposed by the President of the EB. The appointments are made by the BoD.

Members of the Executive Board

The current members of the EB are listed below. In addition, it was announced that Edmund Koh will take over as President of UBS Asia Pacific and join the EB effective 1 January 2019, while Kathryn Shih will retire and leave the EB.

Member and business address	Function	Current principal positions outside UBS AG
Sergio P. Ermotti UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	President of the Executive Board	Member of the Group Executive Board and Group Chief Executive Officer of UBS Group AG; board member of UBS Switzerland AG; Chairman of the Board of Directors of UBS Business Solutions AG; Chairman of the UBS Optimus Foundation board; Chairman of the Fondazione Ermotti, Lugano; Chairman and President of the board of the Swiss-American Chamber of Commerce; board member of the Global Apprenticeship Network; member of the Institut International D'Etudes Bancaires; member of the Saïd Business School Global Leadership Council, University of Oxford.
Martin Blessing UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	co-President Global Wealth Management	Member of the Group Executive Board and President co-Global Wealth Management of UBS Group AG; member of the Executive Board of Baden-Baden Entrepreneur Talks.
Christian Bluhm UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Chief Risk Officer	Member of the Group Executive Board and Group Chief Risk Officer of UBS Group AG; board member of UBS Business Solutions AG; board member of UBS Switzerland AG.
Markus U. Diethelm UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	General Counsel	Member of the Group Executive Board and Group General Counsel of UBS Group AG; board member of UBS Business Solutions AG; Chairman of the Swiss-American Chamber of Commerce's legal committee; Chairman of the Swiss Advisory Council of the American Swiss Foundation; member of the Foundation Council of the UBS International Center of Economics in Society;; member of the Professional Ethics Commission of the Association of Swiss Corporate Lawyers; member of the Supervisory Board of the Fonds de Dotation LUMA / Arles.
Kirt Gardner UBS AG, Bahnhofstrasse 45, CH-	Chief Financial Officer	Member of the Group Executive Board and Group Chief Financial Officer of UBS Group AG; board member of UBS Business Solutions AG.

8001 Zurich		
Robert Karofsky UBS AG, 1285 Avenue Of The Americas, New York, NY 10019, USA	Co-President Investment Bank	Member of the Group Executive Board and co-President Investment Bank of UBS Group AG; president and board member of UBS Securities LLC; trustee of the UBS Americas Inc. Political Action Committee.
Sabine Keller-Busse UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Chief Operating Officer	Member of the Group Executive Board and Group Chief Operating Officer of UBS Group AG; board member of UBS Business Solutions AG; vice-chairman of the Board of Directors of SIX Group (Chairman of the nomination & compensation committee); Foundation Board member of the UBS Pension Fund; Foundation Board member of the University Hospital Zurich.
Ulrich Körner UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	President Asset Management and President UBS Europe, Middle East and Africa	Member of the Group Executive Board, President Asset Management and President UBS Europe, Middle East and Africa at UBS Group AG; member of the Supervisory Board of UBS Europe SE; Chairman of the Foundation Board of the UBS Pension Fund; member of the UBS Optimus Foundation Board; Vice President of the board of Lyceum Alpinum Zuoz; member of the Financial Service Chapter Board of the Swiss-American Chamber of Commerce; Advisory Board member of the Department of Banking and Finance at the University of Zurich; member of the business advisory council of the Laureus Foundation Switzerland.
Tom Naratil UBS AG, 1200 Harbor Boulevard, Weehawken, NJ 07086 USA	co-President Global Wealth Management and President UBS Americas	Member of the Group Executive Board and co-President Global Wealth Management and President UBS Americas of UBS Group AG; CEO and board member of UBS Americas Holding LLC; board member of the American Swiss Foundation; member of the Board of Consultors for the College of Nursing at Villanova University.
Piero Novelli UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Co-President Investment Bank	Member of the Group Executive Board and co-President Investment Bank at UBS Group AG.
Markus Ronner UBS AG, Bahnhofstrasse 45, CH-8001 Zurich	Head of Group Compliance, Regulatory and Governance	Member of the Group Executive Board and Head of Group Compliance, Regulatory and Governance at UBS Group AG.
Kathryn Shih UBS AG, 2 International Finance Centre, 8 Finance Street, Central, Hong Kong	President UBS Asia Pacific	Member of the Group Executive Board of UBS Group AG and President UBS Asia Pacific; board member of Kenford International Ltd.; board member of Shih Co Charitable Foundation Ltd.; member of the Hong Kong Trade Development Council (Financial Services Advisory Committee).

Potential Conflicts of Interest

Members of the BoD and the EB may act as directors or executive officers of other companies (for current principal positions outside UBS AG, if any, of BoD and EB members, please see the tables above, respectively) and may have economic or other private interests that differ from those of UBS AG. Conflicts of interest may potentially arise from these positions or interests. For example, it cannot be excluded that a member of the BoD or EB has or will have a function within a company, the shares of which are or will be traded by UBS AG or which has or will have a business relationship with UBS AG. UBS AG is confident that its internal corporate governance practices and its compliance with relevant legal and regulatory provisions reasonably ensure that any conflicts of interest of the type described above are appropriately managed, including through disclosure when appropriate.

IX. Major Shareholders

UBS Group AG owns 100% of the outstanding shares of UBS AG.

X. Financial Information concerning the Issuer's Assets and Liabilities, Financial Position and Profits and Losses

The consolidated and standalone financial accounts are closed on 31 December of each year. Detailed information about UBS AG (consolidated) and UBS AG assets and liabilities, financial position and profits and losses

- for financial year 2017 is available in the section "UBS AG consolidated financial statements" of the Annual Report 2017 as included in this Registration Document in Appendix 3 (*cf.* pages C-127-C-279 (inclusive)) and in the UBS AG's standalone financial statements for the year ended 31 December 2017 (the "**Standalone Financial Statements 2017**") as included in this Registration Document in Appendix 4 (*cf.* pages D-2-D-23 (inclusive)), respectively; and

- for financial year 2016 is available in the section "UBS AG consolidated financial statements" of the Annual Report 2016 as included in this Registration Document in Appendix 1 (*cf.* pages A-41-A-197 (inclusive)) and in the UBS AG's standalone financial statements for the year ended 31 December 2016 (the "**Standalone Financial Statements 2016**") as included in this Registration Document in Appendix 2 (*cf.* pages B-2-B-22 (inclusive)), respectively.

The consolidated and standalone financial accounts are closed on 31 December of each year.

1. Historical Financial Information

With respect to the financial year 2017, reference is made to the following parts of the Annual Report 2017 (within the Financial information section, English version) as included in, and repaginated for the purposes of, this Registration Document:

(i) the following parts of the Annual Report 2017: the UBS AG consolidated financial statements, in particular to the Income statement on page C-127 of Appendix 3, the Balance sheet on page C-130, the Statement of changes in equity on pages C-131-C-134 (inclusive), the Statement of cash flows on pages C-136-C-137 (inclusive) and the Notes to the consolidated financial statements on pages C-138-C-279 (inclusive); and

(ii) the following parts of the Standalone Financial Statements: the Income statement on page D-2, the Balance sheet on pages D-3-D-4 (inclusive), the Statement of appropriation of retained earnings and proposed dividend distribution out of capital contribution reserve on page D-5, and the Notes to the UBS AG Standalone Financial Statements and Regulatory Information for the Year Ended 31 December 2017 ("**UBS AG Standalone Financial Statements 2017**", included in this Registration Document in Appendix 4) on pages D-6-D-23 (inclusive).

With respect to the financial year 2016, reference is made to the following parts of the Annual Report 2016 (within the Financial information section, English version) as included in, and repaginated for the purposes of, this Registration Document:

(i) the following parts of the Annual Report 2016: the UBS AG consolidated financial statements, in particular to the Income statement on page A-41 of Appendix 1, the Balance sheet on page A-44, the Statement of changes in equity on pages A-45-A-48 (inclusive), the Statement of cash flows on pages A-50-A-51 (inclusive) and the Notes to the consolidated financial statements on pages A-52-A-197 (inclusive); and

(ii) the following parts of the Standalone Financial Statements 2016: the Income statement on page B-2, the Balance sheet on pages B-3- B-4 (inclusive), the Statement of appropriation of retained earnings and proposed dividend distribution out of capital contribution reserve on page B-5, and the Notes to the UBS AG Standalone Financial Statements and Regulatory Information for the Year Ended 31 December 2016 ("**UBS AG Standalone Financial Statements 2016**", included in this Registration Document in Appendix 2) on pages B-6-B-22 (inclusive).

The annual financial reports form an essential part of UBS AG's reporting. They include the audited consolidated financial statements of UBS AG, prepared in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board. The annual reports also

include discussions and analysis of the consolidated financial and business results of UBS, its business divisions and the Corporate Center. In addition, UBS AG prepares and publishes standalone financial statements in accordance with Swiss GAAP, as well as certain additional disclosures required under US Securities and Exchange Commission regulations.

2. Auditing of Historical Annual Financial Information

The consolidated financial statements and the standalone financial statements of UBS AG for financial years 2017 and 2016 were audited by Ernst & Young. The reports of the auditors on the consolidated financial statements can be found in the relevant sections of the Annual Report 2017 as included in this Registration Document in Appendix 3 on pages C-122-C-126 and in the relevant sections of the Annual Report 2016 as included in this Registration Document in Appendix 1 on page A-40. The reports of the auditors on the standalone financial statements of UBS AG can be found in the relevant sections of the UBS AG Standalone Financial Statements 2017 as included in this Registration Document in Appendix 4 on pages D-24-D-27 (inclusive) and in the relevant sections of the Standalone Financial Statements 2016 as included in this Registration Document in Appendix 2 on pages B-23-B-26 (inclusive).

There are no qualifications in the auditors' reports on the consolidated financial statements of UBS AG and the standalone financial statements of UBS AG for the years ended on 31 December 2017 and 31 December 2016.

3. Interim Financial Information

Reference is also made to (i) the UBS Group AG first quarter 2018 report published on 23 April 2018 (**"UBS Group First Quarter 2018 Report"**) and the UBS AG first quarter 2018 report, published on 27 April 2018 (**"UBS AG First Quarter 2018 Report"**), which contain information on the financial condition and results of operations, including the interim financial statements, of UBS Group AG consolidated and UBS AG consolidated, respectively, as of and for the period ended 31 March 2018; to (ii) the UBS Group AG second Quarter Report 2018 published on 24 July 2018 (**"UBS Group Second Quarter 2018 Report"**) and the UBS AG second quarter 2018 report, published on 27 July 2018 (**"UBS AG Second Quarter 2018 Report"**), which contain information on the financial condition and results of operations, including the interim financial statements, of UBS Group AG consolidated and UBS AG consolidated, respectively, as of and for the period ended 30 June 2018; and to (iii) the UBS Group AG third Quarter Report 2018 published on 25 October 2018 (**"UBS AG Third Quarter 2018 Report"**) and the UBS AG third quarter 2018 report, published on 31 October 2018 (**"UBS AG Third Quarter 2018 Report"**), which contain information on the financial condition and results of operations, including the interim financial statements, of UBS Group AG consolidated and UBS AG consolidated, respectively, as of and for the period ended 30 September 2018. The interim consolidated financial statements are not audited.

XI. Litigation, Regulatory and Similar Matters

UBS operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this section may refer to UBS AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where UBS may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which UBS believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. UBS makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that UBS has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS, but are nevertheless expected to be, based on UBS's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists

that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

In the case of certain matters below, UBS states that it has established a provision, and for the other matters, it makes no such statement. When UBS makes this statement and it expects disclosure of the amount of a provision to prejudice seriously its position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, UBS does not disclose that amount. In some cases UBS is subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which UBS does not state whether it has established a provision, either (a) it has not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) it has established a provision but expects disclosure of that fact to prejudice seriously its position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which UBS has established provisions, UBS is able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which it is able to estimate expected timing is immaterial relative to its current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in "Note 14a Provisions" of the UBS AG's unaudited consolidated financial statements included in the UBS AG Third Quarter 2018 Report. It is not practicable to provide an aggregate estimate of liability for UBS's litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require UBS to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although it therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, UBS believes that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement ("**NPA**") described in item 5 of this section, which UBS entered into with the DOJ, Criminal Division, Fraud Section in connection with UBS's submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate ("**LIBOR**"), was terminated by the DOJ based on its determination that UBS had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require UBS to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations and may permit financial market utilities to limit, suspend or terminate UBS's participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining UBS's capital requirements. Information concerning UBS's capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of the UBS AG Third Quarter 2018 Report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Global Wealth Manage-ment	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	UBS

Balance as of 31 December 2017	555	79	1	345	240	0	1,224	2,444
Balance as of 30 June 2018	567	75	0	333	216	0	1,251	2,442
Increase in provisions recognized in the income statement	31	0	0	11	30	0	4	**76**
Release of provisions recognized in the income statement	(3)	0	0	(68)	(1)	0	0	**(72)**
Provisions used in conformity with designated purpose	(48)	0	0	0	0	0	(60)	**(109)**
Foreign currency translation / unwind of discount	(6)	0	0	(3)	0	0	(13)	**(24)**
Balance as of 30 September 2018	**541**	**75**	**0**	**272**	**244**	**0**	**1,180**	**2,312**

1 Provisions, if any, for the matters described in this section are recorded in Global Wealth Management (item 3 and item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this section are allocated between Global Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this section in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio.

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration ("**FTA**") to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that, in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders. On 30 July 2018, the Swiss Federal Administrative Court granted UBS's appeal by holding the French administrative assistance request inadmissible. The FTA filed a final appeal with the Swiss Federal Supreme Court.

Since 2013, UBS (France) S.A., UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory, regarding the laundering of proceeds of tax fraud, and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("caution") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("réquisitoire"). In March 2017, the investigating judges issued the trial order ("ordonnance de renvoi") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and that transfers the case to court. The trial started on 8 October 2018 and is scheduled to last until 15 November 2018.

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("inculpé") regarding the laundering of proceeds of tax fraud, of banking and financial solicitation by unauthorized persons, and of serious tax fraud.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other

constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

UBS's balance sheet at 30 September 2018 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which UBS has established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that UBS has recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities ("**RMBS**") and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. ("**UBS RESI**"), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totalled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action ("**Trustee Suit**") in the US District Court for the Southern District of New York ("**SDNY**") seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations issued and underwritten by UBS with an original principal balance of approximately USD 2 billion. In July 2018, UBS and the trustee entered into an agreement under which UBS will pay USD 850 million to resolve this matter. A significant portion of this amount will be borne by other parties that indemnified UBS. The settlement remains subject to approval by the court and proceedings to determine how the settlement funds will be distributed to RMBS holders. After giving effect to this settlement, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the FIRREA, which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS has also responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the US Securities and Exchange Commission ("**SEC**") relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

UBS's balance sheet at 30 September 2018 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which UBS has established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that UBS has recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC ("**BMIS**") investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority ("**FINMA**") and the Luxembourg Commission de Surveillance du Secteur Financier ("**CSSF**"). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS ("**BMIS Trustee**").

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds ("**funds**") that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico ("**UBS PR**") have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.8 billion, of which claims with aggregate claimed damages of USD 1.7 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims have been filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans. A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied, and a request for permission to appeal that ruling was denied by the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In September 2018, the court denied plaintiffs' motion for class certification.

In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA based on plaintiffs' allegation that the loans are not valid. The trial court granted UBS PR's motion for summary judgment and dismissed the action.

In 2014 and 2015, UBS entered into settlements with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico ("**OCFI**"), the SEC and the Financial Industry Regulatory Authority ("**FINRA**") in relation to their examination of UBS's operations. UBS also understands that the

DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. UBS is cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico ("**System**") against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Beginning in 2015, and continuing through 2017, certain agencies and public corporations of the Commonwealth of Puerto Rico ("**Commonwealth**") defaulted on certain interest payments on Puerto Rico bonds. The funds hold significant amounts of those bonds and the defaults on interest payments have had, and are expected to continue to have, an adverse effect on dividends from the funds. Executive orders of the Governor of Puerto Rico that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of creditors' rights. In 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

UBS's balance sheet at 30 September 2018 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which UBS has established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that UBS has recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Beginning in 2013 numeroud authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority ("**FCA**") and the US Commodity Futures Trading Commission ("**CFTC**") in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System ("**Federal Reserve Board**") and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In 2015, the DOJ's Criminal Division ("**Criminal Division**") terminated the 2012 Non-Prosecution Agreement ("**NPA**") with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation measures. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ ("**Antitrust Division**") and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. UBS has entered into a settlement agreement that would resolve US federal court class actions relating to foreign currency transactions with the defendant banks and persons who transacted in foreign exchange futures contracts and options on such futures. The settlement agreement, which has been approved by the court, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 ("**ERISA**") for whom a defendant bank provided foreign exchange transactional services or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. In July 2018, the Second Circuit affirmed the dismissal of the case with prejudice.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and alleged co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint.

In 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017. In March 2018, the court dismissed the consolidated complaint. Plaintiffs have filed a motion seeking leave to file an amended complaint.

Putative class actions were also filed against UBS and other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits asserted claims under the antitrust laws and the Commodity Exchange Act ("**CEA**"), and other claims. In July 2018, the court in New York granted UBS’s motions to dismiss amended complaints in the putative class actions relating to gold and silver. In 2017, the court granted UBS’s motion to dismiss the platinum and palladium action. Plaintiffs in the platinum and palladium action subsequently filed an amended complaint that did not allege claims against UBS.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office ("**SFO**"), the Monetary Authority of Singapore ("**MAS**"), the Hong Kong Monetary Authority ("**HKMA**"), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the UK Financial Services Authority ("**FSA**"), the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission ("**WEKO**") regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom UBS has reached resolutions and to undertake certain remediation measures with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of other actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and

SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

USD LIBOR class and individual actions in the US: In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims. Although, the Second Circuit vacated the district court's judgment dismissing antitrust claims, the district court again dismissed antitrust claims against UBS in 2016. Certain plaintiffs have appealed that decision to the Second Circuit. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims. UBS entered into an agreement in 2016 with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs have sought permission to appeal that ruling to the Second Circuit. In July 2018, the Second Circuit denied the petition to appeal of the class of USD lenders.

Other benchmark class actions and ISDAFIX class action in the US: In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including a federal antitrust claim for lack of standing. In 2015, this court dismissed the plaintiff's federal racketeering claims on the same basis and affirmed its previous dismissal of the plaintiff's antitrust claims against UBS. In 2017, this court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR / SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR / SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2017, UBS agreed to pay USD 14 million to resolve putative class actions filed in federal court in New York and New Jersey against UBS and other financial institutions on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX. The final settlement was approved in June 2018.

Government bonds: Putative class actions have been filed since 2015 in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. A consolidated complaint was filed in 2017 in the SDNY alleging that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction and in the secondary market and asserting claims under the antitrust laws and for unjust enrichment. Defendants' motions to dismiss the consolidated complaint are pending.
Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, UBS's balance sheet at 30 September 2018 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which UBS has established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that UBS has recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the

existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

UBS's balance sheet at 30 September 2018 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which UBS has established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that UBS has recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission ("**SFC**") has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong listed initial public offerings for 18 months. UBS has appealed the decision.

The specific litigation, regulatory and other matters described above under items (1) to (7) include all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects as described in "Note 14 Provisions and contingent liabilities" to UBS AG unaudited consolidated financial statements included in the UBS AG Third Quarter 2018 Report. The proceedings indicated below are matters that have recently been considered material, but are not currently considered material, by UBS. Besides the proceedings described above and below, there are no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened, of which UBS AG is aware) that may have, or have had in the recent past, significant effects on UBS AG Group's and/or UBS AG's financial position or profitability and are or have been pending during the last twelve months until the date of this document.

Wealth management cross-border TEFRA inquiries: In 2015, UBS received inquiries from the US Attorney's Office for the Eastern District of New York ("**USAO EDNY**") and from the SEC, which were investigating potential sales to US persons of bearer bonds and other unregistered securities in possible violation of the Tax Equity and Fiscal Responsibility Act of 1982 ("**TEFRA**") and the registration requirements of the US securities laws. UBS cooperated with the authorities in these investigations. In 2018, UBS was informed by the USAO EDNY and the SEC that they have closed their investigations and that they will not take any action.

Puerto Rico 2012 claims: Beginning in 2012, two federal class action complaints, which were subsequently consolidated, were filed against various UBS entities, certain closed-end funds and certain members of UBS PR senior management, seeking damages for investor losses in the funds during the period from January 2008 through May 2012. In 2016, the court denied plaintiffs' motion for class certification. In March 2017, the US Court of Appeals for the First Circuit denied plaintiffs' petition seeking permission to bring an interlocutory appeal challenging the denial of their motion for class certification. In August 2017 the district court dismissed the case.

Other mortgage-related regulatory matters: UBS also received and responded to subpoenas from the New York State Attorney General ("**NYAG**") and other state attorneys general relating to UBS's RMBS business. In March 2018, UBS and the NYAG reached an agreement to resolve the NYAG's investigation, whereby UBS will pay USD 41 million and provide consumer relief in a stated amount of USD 189 million calculated as set forth in the settlement agreement.

BMIS customers' claims in the US: In 2014, several claims, including a purported class action, were filed in the US by BMIS customers against UBS entities, asserting claims similar to those made by the BMIS Trustee described in item (3) - Madoff above, and seeking unspecified damages. These claims have either been voluntarily withdrawn or dismissed on the basis that the courts did not have jurisdiction to hear the claims against the UBS entities. In 2016, the plaintiff in one of those claims appealed the dismissal. In

February 2018, the United States Court of Appeals for the Second Circuit affirmed the dismissal of the plaintiff's claim.

CFTC precious metals investigations: within the context of the investigations by authorities described in item (5) - Foreign exchange-related regulatory matters above, UBS reached in January 2018 a settlement with the CFTC in connection with the CFTC's precious metals investigations. As part of that settlement, UBS paid a USD 15 million civil monetary penalty.

XII. Significant Changes in the Financial or Trading Position; Material Adverse Change in Prospects

There has been no significant change in the financial or trading position of UBS AG or UBS AG Group since 30 September 2018, which is the end of the last financial period for which financial information has been published.

There has been no material adverse change in the prospects of UBS AG or UBS AG Group since 31 December 2017.

XIII. Material Contracts

No material contracts have been entered into outside of the ordinary course of UBS AG's or UBS AG Group's business, which could result in any member of the UBS AG Group being under an obligation or entitlement that is material to UBS AG's ability to meet its obligations to the investors in relation to the issued securities.

XIV. Documents on Display

- The annual report of UBS Group AG and UBS AG as of 31 December 2017, comprising the introductory section, as well as the sections (1) Operating environment and strategy, (2) Financial and operating performance, (3) Risk, treasury and capital management, (4) Corporate governance, responsibility and compensation, (5) Consolidated financial statements (including the "Statutory auditor's report on the audit of the consolidated financial statements" and the "Report of Independent Registered Public Accounting Firm"), (6) Standalone financial statements, (7) Significant regulated subsidiary and sub-group information, (8) Additional regulatory information, and the Appendix;

- The UBS AG standalone financial statements and regulatory information for the year ended 31 December 2017 (including the "Report of the statutory auditor on the financial statements");

- The annual report of UBS Group AG and UBS AG as of 31 December 2016, comprising the introductory section, as well as the sections (1) Operating environment and strategy, (2) Financial and operating performance, (3) Risk, treasury and capital management, (4) Corporate governance, responsibility and compensation, (5) Financial statements (including the "Statutory auditor's report on the audit of the consolidated financial statements" and the "Report of Independent Registered Public Accounting Firm"), (6) Additional regulatory information, and the Appendix;

- The UBS AG standalone financial statements and regulatory information for the year ended 31 December 2016 (including the "Report of the statutory auditor on the financial statements"); and

- The UBS Group First Quarter 2018 Report and the UBS AG First Quarter 2018 Report;

- The UBS Group Second Quarter 2018 Report and the UBS AG Second Quarter 2018 Report;

- The UBS Group Third Quarter 2018 Report and the UBS AG Third Quarter 2018 Report;

- The Articles of Association of UBS AG,

shall be maintained in printed format, for free distribution, at the offices of UBS AG for a period of twelve months after the publication of this document. In addition, the annual and quarterly reports, as well as quarterly result materials of UBS Group AG and UBS AG are published on UBS's website, at www.ubs.com/investors or a successor address. The Articles of Association of UBS AG are also available on UBS's Corporate Governance website, at www.ubs.com/ governance.

Appendix 1 – Excerpts from the Annual Report 2016 as at 31 December 2016

It should be noted that the term "pro-forma" as used in this Appendix 1 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

Current market climate and industry trends

Global economic developments in 2016

Global growth slowed modestly in 2016. Each of the world's major economic areas – the US, the eurozone and China – saw slower growth, primarily due to lower investment spending. Brazil and Russia experienced another year in recession, and Japan's growth remained muted. India delivered very strong growth.

At a global level, economic uncertainty meant investment spending continued to fall short of pre-financial crisis levels, despite record low interest rates across much of the world. In 2016, the trend of slower investment spending was exacerbated by low energy prices, which led to further cutbacks in capital investment, particularly in the US and Russia. Oil prices saw an improvement toward the end of the year, primarily as a result of an OPEC decision to reduce production, but geopolitical and economic uncertainty poses a risk to a broad recovery in investment spending.

Despite these conditions, equity markets delivered generally positive performance. After a challenging start to 2016 on concerns about China and a decline in oil prices, global equity markets rallied to record highs, supported by the economic stimulus in China, and the Bank of England's monetary easing policy in response to the rise in political uncertainty following the outcome of the UK referendum on EU membership.

Fixed income markets performed well through much of the year, although signs of rising US inflation and expectations of fiscal stimulus led to a sharp sell-off toward the year-end. Currency markets saw a recovery in the Brazilian real and the South African rand, while the British pound and Mexican peso declined sharply following the outcomes of the UK referendum on EU membership and the US presidential election, respectively.

US growth was lower than expected, primarily due to stagnation in business investment in the energy sector. Private consumption remained relatively robust, jobs growth was strong, unemployment decreased, and improving wage growth and credit availability proved supportive of consumer confidence. The US Federal Reserve Board raised interest rates just once toward the end of the year. Political and financial market uncertainty led the Federal Reserve Board to proceed with caution in 2016.

In Japan, growth remained positive due to positive net exports, but continued to show little response to the extensive monetary and fiscal stimulus put in place in recent years. Weak wage growth, uncertainty over social security, and a negative wealth effect resulting from an appreciating yen weighed on consumption.

The Bank of Japan introduced a new policy of yield curve control to cap longer-term interest rates, contributing to yen weakness in the latter months of the year.

In Europe, growth slowed a little, but proved resilient following the outcome of the UK referendum on EU membership. Exceptionally loose monetary policy, low oil prices and improving credit conditions supported growth in the eurozone. Meanwhile, UK growth was aided by the effects of stronger than expected household consumption following the referendum, as well as a weaker British pound and lower interest rates.

The Swiss economy recovered from the sharp appreciation of the Swiss franc in the prior year, with economic growth accelerating in 2016 to almost double the pace of 2015. Continued sound growth in key eurozone trading partners benefited exports, after a slowdown in 2015.

Growth in emerging markets was highly divergent. The slowdown in China proved milder than anticipated, as a rebound in real estate prices and construction stabilized the economy after an uncertain start in 2016. India saw another year of strong growth, driven largely by private consumption, although uncertainty related to the government's action to take high-value banknotes out of circulation acted as a temporary brake on growth toward the end of the year. Brazil saw a second year of deep recession, with private consumption and investment continuing to suffer from high rates of inflation, interest rate hikes, and persistent political uncertainty. Russia's economy contracted again, but less severely than in 2015, as the economy showed signs of adjustment to the drop in oil prices, with consumption recovering well in the latter half of the year.

Economic and market outlook for 2017

We expect a modest acceleration in global growth in 2017, supported by accelerating growth in the US, a beginning of recovering from the recessions in Brazil and Russia, and only modest slowdowns in Europe and China. Central bank policy globally is expected to remain broadly supportive, as the European Central Bank is likely to continue with quantitative easing, even if at a slower pace, even as the Federal Reserve Board continues to increase rates.

US consumption continues to benefit from an improving labor market, while a post-election rally in business sentiment bodes well for investment spending and deregulation could provide additional stimulus. Eurozone growth could slow modestly as political uncertainty weighs on investment spending and the positive effects of monetary easing begin to wane. A recovery in the euro and in oil prices might also slow exports and consumption, respectively. Switzerland is expected to see a continuation of steady growth, although uncertainty over corporate tax reform and the continued Swiss franc strength present headwinds. China is likely to see slower growth as the real estate and construction boom slows, but quasi-fiscal and credit stimuli are likely to keep growth steady. More stable commodity prices and currencies should prove helpful for Brazil and Russia.

Major risks to growth and markets relate to uncertainty regarding the effect of higher US interest rates, the possibility of greater protectionism in response to changes in US trade policy, uncertainty raised by the commencement of the UK's negotiation of its withdrawal agreement with the EU, and the potential for surprises from election outcomes in the Netherlands, France and Germany. China's management of its rising debt levels and economic transition remains an important medium-term factor, as does the possibility of heightened geopolitical tensions in an uncertain global environment.

Industry trends

Wealth accumulation

The wealth management industry offers fundamentally attractive economics with a forecast for robust wealth accumulation around the world. According to the Boston Consulting Group Global Wealth Report 2016, the ultra high net worth segment is expected to expand by about 9.5% annually from 2015 to 2020, and the high net worth segment by about 9.4% annually. Asia Pacific and the emerging markets are expected to be the fastest-growing regions, with an estimated annual market growth rate of 14.0% and 10.4% for the high net worth, and 16.0% and 12.4% for the ultra high net worth segments, respectively. Mature markets, such as Western Europe and North America, are forecast to see wealth accumulation grow within the high net worth and ultra high net worth segments at an annual rate exceeding expected gross domestic product growth. We believe that wealth management is likely to remain a highly fragmented industry with high barriers to entry due to the significant investments needed to meet current and proposed regulatory requirements.

Demographics, wealth transfer and retirement funding

Demographic changes, particularly escalating costs associated with the care of an aging population and the funding challenges faced by public pension systems, will be a key long-term driver for both wealth consumption and wealth transfer. Pressures on public pension schemes will make reform a pressing matter in several countries. Although change in public pension schemes will vary, a general and gradual shift from public to privately funded pension schemes seems inevitable.

These developments are expected to benefit our businesses, as individuals and privately funded pension schemes seek investment advice and tailored service offerings with a relevant product range. We believe that our strong capabilities in asset management, as well as our ability to tailor our service offerings to our clients' financial needs and preferences, put us in a position of strength to address these emerging needs.

Digitalization

Over the last few years, investments in financial technology have increased sharply. The market expects continued digital disruption in the financial industry, driven by consumer preferences and expectations. We strongly believe that core technologies, such as automated investment advice, mobile access to banking services and distributed ledger technology, will become mainstream in the financial services industry. Digital capabilities are likely to play a significant role in transforming how banks interact with clients and how they operate internally.

Further adaptation of operating models

Increases in operational cost pressure, reflecting higher regulatory costs and a subdued revenue environment, will drive financial services firms to seek more efficient operating models. This push for efficiency is forcing banks to reassess their front-to-back processes, focus on identifying potential for standardization, and reconsider the ownership of value chain components. Over the past few years, a diverse network of suppliers and service providers for different parts of the banking industry value chain has emerged, in particular by disrupting the traditional approach to process ownership, service and supply chain.

Consolidation

Increasing investment requirements along with constrained supply, a stronger refocus on core businesses and a subdued macro environment will continue to drive and accelerate efficiency efforts that are likely to span all functions in the banking business. A retrenchment of banks' operations to their core markets is expected to continue, with banks curtailing or even abandoning completely some of their past international expansion efforts. This is expected to foster concentration in certain markets, but also increase competition in certain business lines in order to gain scale and more efficiency.

Considering continuous cost pressures, the industry is likely to seek opportunities to achieve further increased efficiency of non-client-facing logistics and control functions, and the emergence of more utility-like models, for example, centralized providers of banking infrastructure or shared service companies, is increasingly probable. Moreover, we will continue to see banks focusing on their business portfolios, exiting their non-core products and geographies, and further crystallizing and sharpening their core value proposition in order to increase revenues, reduce costs and improve their balance sheets. This could lead to added pressure on profitability.

Banking intermediation developments

Against the backdrop of digitalization and new market participants, the banking sector's role as a facilitator of economic policy and an enabler of domestic growth may come under pressure, as well as be subjected to renewed public discussion and regulatory scrutiny. The combination of enhanced regulatory requirements, reduced risk appetite and subdued macroeconomic prospects continues to curb the lending appetite of banks. While banks are currently still active in more specific or niche areas, such as long-dated assets and high-risk lending, other financial industry players are increasingly stepping into banking intermediation and risk-taking areas. It is expected that this trend will continue with its extent and pace depending on regulatory developments.

Despite these challenges, we believe banks still have the necessary capital and the competitive ability to preserve their core role in the economy and to have continued access to their traditional sources of revenue.

Regulation

There has been continuous regulatory pressure on the financial services industry to become simpler, more transparent and more resilient, and we expect that regulation will remain a major driver of change and costs for the industry.

We believe we have the right business model to comply with new, more demanding regulations without the need to change our strategy. We have one of the highest fully applied CET1 capital ratios among our peer group of large global banks and we have made substantial progress in our efforts to improve resolvability. We are well prepared to meet the requirements of the revised Swiss too big to fail framework by the effective date in 2020, and we intend to use this period to fully implement the new requirements.

→ **Refer to the "Regulatory and legal developments" and "Capital management" sections of this report for more information**

Regulation and supervision

The Swiss Financial Market Supervisory Authority (FINMA) is UBS's home country regulator and consolidated supervisor. As a financial services provider with a global footprint, we are also regulated and supervised by the relevant authorities in each of the jurisdictions in which we conduct business, including the US, the UK and the rest of the EU. Through UBS AG and UBS Switzerland AG, which are licensed as banks in Switzerland, we may engage in a full range of financial services activities in Switzerland and abroad, including personal banking, commercial banking, investment banking and asset management.

As we are a designated global systemically important bank (G-SIB) and considered systemically relevant in Switzerland, we are subject to more rigorous regulatory requirements and supervision than most other Swiss banks. Since the financial crisis of 2007–2009, regulation of financial services firms has been undergoing significant changes both in Switzerland and in the other countries where we operate. These changes, which continue to require significant resources to implement, have a material effect on how we conduct our business and result in increased ongoing costs.

→ **Refer to the "The legal structure of UBS Group" section of this report for more information**

→ **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Regulation and supervision in Switzerland

Supervision

UBS Group AG and its subsidiaries are subject to consolidated supervision by FINMA under the Swiss Federal Law on Banks and Savings Banks (Swiss Banking Act) and the related ordinances that impose, among other requirements, minimum standards for capital, liquidity, risk concentration and organizational structure. FINMA fulfills its statutory supervisory responsibilities through licensing, regulation, monitoring and enforcement. FINMA is responsible for the prudential supervision and mandates audit firms to perform on its behalf a regulatory audit and certain other supervisory tasks.

Resolution planning and resolvability

The Swiss Banking Act and related ordinances provide FINMA with additional powers to intervene in order to prevent a failure or resolve a failing financial institution, including UBS Group AG, UBS AG and UBS Switzerland AG. These measures may be triggered when certain thresholds are breached and permit the exercise of considerable discretion by FINMA in determining whether, when or in what manner to exercise such powers. In case of a possible insolvency, FINMA may impose more onerous requirements on us, including restrictions on the payment of dividends and interest as well as measures to alter our legal structure (e.g., to separate lines of business into dedicated entities, with limitations on intra-group funding and certain guarantees) or to reduce business risk in some manner. The Swiss Banking Act provides FINMA with the ability to extinguish or convert to common equity the liabilities of the Group in connection with its resolution.

Furthermore, Swiss too big to fail requirements require Swiss systemically relevant banks, including UBS, to put in place viable emergency plans to preserve the operation of systemically important functions in case of a failure of the institution, to the extent that such activities are not sufficiently separated in advance. In response to these requirements in Switzerland, as well as to similar requirements in other jurisdictions, UBS has developed comprehensive recovery plans that provide the tools to manage a severe loss event. UBS also provides relevant authorities with resolution plans for restructuring or winding down certain businesses in the event the firm could not be stabilized. Alongside these measures, the bank has invested significantly in structural, financial and operational ring-fencing measures to improve the Group's resolvability.

→ **Refer to the "Capital management" section of this report for more information on the Swiss SRB framework and the Swiss too big to fail requirements**

→ **Refer to the "Treasury management" section of this report for more information on liquidity coverage ratio requirements**

Regulation and supervision outside Switzerland

Regulation and supervision in the US

In the US, UBS is subject to overall regulation and supervision by the Board of Governors of the Federal Reserve (Federal Reserve Board) under a number of laws. Furthermore, our US operations are subject to additional oversight by the Federal Reserve Board's Large Institution Supervision Coordinating Committee, which coordinates supervision of large or complex financial institutions.

UBS AG is a financial holding company under the Bank Holding Company Act and maintains several branches and representative offices in the US, which are authorized and supervised by either the Office of the Comptroller of the Currency or the state banking authority of the state in which the branch is located. UBS AG is currently registered as a swap dealer with the Commodity Futures Trading Commission (CFTC), and we expect to register it as a security-based swap dealer with the Securities and Exchange Commission (SEC) when such registration is required.

UBS Americas Holding LLC, the holding company for our non-branch operations in the US as required under the Dodd-Frank Act, is subject to risk-based capital, liquidity, Comprehensive Capital Analysis and Review, stress test, capital plan and governance requirements established by the Federal Reserve Board.

UBS Bank USA, a Federal Deposit Insurance Corporation-insured depository institution subsidiary, is licensed and regulated by state regulators in Utah.

UBS Financial Services Inc., UBS Securities LLC and several other US subsidiaries are subject to regulation by a number of different government agencies and self-regulatory organizations, including the SEC, the Financial Industry Regulatory Authority, the CFTC, the Municipal Securities Rulemaking Board and national securities exchanges, depending on the nature of their business.

Regulation and supervision in the UK

Our operations in the UK are mainly regulated and supervised by the Prudential Regulation Authority (PRA), an affiliated authority of the Bank of England, and the Financial Conduct Authority (FCA). Some of our subsidiaries and affiliates are also regulated by the London Stock Exchange and other UK securities and commodities exchanges of which they are a member.

UBS Limited is a private limited company incorporated in the UK and is authorized by the PRA and regulated by the PRA and the FCA to conduct a broad range of banking and investment business.

UBS AG maintains a UK-registered branch in London that serves as a global booking center for our Investment Bank.

Financial services regulation in the UK is currently conducted in accordance with EU directives covering, among other topics, compliance with certain capital and liquidity adequacy standards, client protection requirements and business conduct principles. This may be subject to change depending on how the relationship between the UK and the EU evolves.

Regulation and supervision in Germany

UBS Europe SE, headquartered in Frankfurt, Germany, is supervised by the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) and subject to EU and German laws and regulations. UBS Europe SE was established in the fourth quarter of 2016, following the merger of UBS Deutschland AG and our Wealth Management subsidiaries in Germany, Italy, Luxembourg (including its branches in Austria, Denmark and Sweden), the Netherlands and Spain.

Anti-money laundering and anti-corruption

A major focus of government policy relating to financial institutions in recent years has been combating money laundering and terrorist financing. The US Bank Secrecy Act and other laws and regulations applicable to UBS require the maintenance of effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing, and to verify the identity of our clients. Failure to maintain and implement adequate programs to prevent money laundering and terrorist financing could result in significant legal and reputational risk.

We are subject to laws and regulations in jurisdictions in which we operate, including the US Foreign Corrupt Practices Act and the UK Bribery Act, prohibiting corrupt or illegal payments to government officials and others. We maintain policies, procedures and internal controls intended to comply with these laws and regulations.

Data protection

We are subject to laws and regulations concerning the use and protection of customer, employee, and other personal and confidential information, including provisions under Swiss law, the EU Data Protection Directive and laws of other jurisdictions.

→ **Refer to the "Risk factors" section of this report for more information**

Regulatory and legal developments

Key international developments

Revisions of BCBS capital framework and ongoing consultations

Proposed revisions to the Pillar 1 requirements

The Basel Committee on Banking Supervision (BCBS) is currently finalizing a comprehensive reform package for the Basel III capital framework, the elements of which have been proposed in a series of separate consultation papers. High-level guidance on the revisions issued by the BCBS in November 2016 included: (i) the revised standardized approach to credit risk will be more risk-sensitive and more consistent with banks' internal model-based approaches, which are subject to approval by the home country regulator; (ii) a revised standardized approach for operational risk will replace the existing approaches, including the advanced measurement approach, which is based on banks' internal models and also subject to approval by the home country regulator; and (iii) a leverage ratio surcharge for global systemically important banks (G-SIBs) will be introduced. In addition, an aggregate output floor, in relation to the level of capital required, is expected to be part of the reform package. Final rules, which were expected to be issued in January 2017, have been delayed. We expect that if the proposals are adopted in their current form and implemented in Switzerland, the proposed changes to the capital framework will likely result in a significant increase in our overall RWA without considering the effect of mitigating measures.

Revisions to the Pillar 2 requirements

In April 2016, the BCBS revised its 2004 principles for the management and supervision of interest rate risk. The revised standards include guidance on the development of interest rate shock scenarios, enhanced quantitative disclosure requirements as well as an updated standardized framework, which banks could be mandated to follow. The impact of these revisions can only be determined once its implementation in national prudential regulations becomes clearer.

Revisions to the Pillar 3 requirements

FINMA has revised its Pillar 3 disclosure requirements to reflect changes to the BCBS Pillar 3 standards. Requirements relating to the 2015 BCBS revisions became effective for Swiss banking institutions on 31 December 2016 with additional requirements to be implemented during 2017. Further revisions to the Pillar 3 framework are expected as part of the finalization of the Basel III capital framework.

→ **Refer to the "Significant accounting and financial reporting changes" section of this report and the "Basel III Pillar 3 UBS Group AG 2016" report under "Pillar 3, SEC filings & other disclosures" at *www.ubs.com/investors* for more information**

Consultation on regulatory capital treatment of accounting provisions

In October 2016, the BCBS issued a consultative document and a discussion paper on the Basel III regulatory capital treatment of accounting provisions following the publication of IFRS 9, *Financial Instruments,* issued by the International Accounting Standards Board, and the Current Expected Credit Loss (CECL) model, issued by the US Financial Accounting Standards Board. The new rules require the use of expected credit loss models as opposed to the currently applied incurred credit loss impairment approach under IFRS and US GAAP. UBS will adopt the IFRS 9 requirements on 1 January 2018. The BCBS consultative document proposes to retain for an interim period the current regulatory treatment of accounting provisions. This would result in the impact of IFRS 9 on common equity tier 1 capital to be limited to the excess of expected credit losses over the current regulatory expected losses for banks applying the internal ratings-based (IRB) approach. The BCBS also considers the adoption of transitional arrangements to phase in this impact. The BCBS discussion paper sets out longer-term options that include retaining the current regulatory treatment and introducing an expected credit loss component to the standardized regulatory approach. The consultation period ended in January 2017.

→ **Refer to the "Significant accounting and financial reporting changes" section of this report for more information**

Developments on TLAC and MREL requirements

Following the publication of the Financial Stability Board's (FSB) international total loss-absorbing capacity (TLAC) standard in November 2015, a number of major jurisdictions issued TLAC requirements during 2016.

Switzerland was the first jurisdiction to implement TLAC requirements as part of the revision of the Swiss Capital Adequacy Ordinance that became effective on 1 July 2016. Subject to a limited reduction of the gone concern requirement based on improvements to our resolvability, the TLAC requirements applicable to UBS as of 1 January 2020 are 28.6% of RWA (excluding countercyclical buffer requirements) and 10% of the leverage ratio denominator. The revised Capital Adequacy Ordinance requires that TLAC-eligible instruments be issued out of a holding company, which would increase the overall tax burden for the Group under the current Swiss tax law. The Swiss Federal Council has requested the Federal Tax Administration to propose amendments to the Swiss tax law in order to address this issue.

In November 2016, the Bank of England published the final UK Minimum Requirement for own Funds and Eligible Liabilities (MREL) rules, including minimum standards for domestic systemically important banks (D-SIBs) in the UK, such as UBS Limited. Starting as of 1 January 2020, D-SIBs will have to meet MREL requirements amounting to the greater of (i) a multiple, initially less than two and increasing to two as of 1 January 2022, of the Pillar 1 requirement of 8% and an institution-specific add-on, or (ii) if subject to a leverage ratio requirement, two times the applicable requirement of currently 3%.

Also in November 2016, the European Commission (EC) published a proposal to integrate the FSB TLAC standard into the EU MREL regime. The EC proposes to apply MREL requirements to global systemically important institutions (G-SIIs) calculated at 16% of RWA and 6% of the leverage exposure measure as of 1 January 2019, increasing to 18% and 6.75%, respectively, as of 1 January 2022. The proposal would also introduce internal MREL requirements for material subsidiaries of non-EU G-SIIs.

In December 2016, the Federal Reserve Board issued a final rule that will apply TLAC requirements, minimum long-term debt requirements and clean holding company requirements to all US G-SIBs and to foreign G-SIBs' US intermediate holding companies (covered IHCs), including UBS Americas Holding LLC. The final rule will require covered IHCs to maintain debt to the parent G-SIB qualifying as TLAC (internal TLAC) of at least the greatest of 16% of RWA, 6% of leverage exposure or 9% of average total consolidated assets, plus a buffer, including eligible long-term debt of at least the greatest of 6% of RWA, 2.5% of leverage exposure or 3.5% of average total consolidated assets. The final rule prohibits covered IHCs from having liabilities to unrelated third parties that exceed 5% of its total TLAC (clean holding company requirement) unless all of its TLAC is contractually subordinated to third-party liabilities. It further prohibits a covered IHC from incurring short-term debt, entering into derivatives with unaffiliated parties and issuing certain guarantees. The rule becomes effective as of 1 January 2019.

→ **Refer to the "Capital management" section of this report for more information on the revised Swiss SRB framework**

Implementation of margin requirements for non-cleared OTC derivatives

The G20 commitments on derivatives call for adoption of mandatory exchange of initial and variation margin for uncleared over-the-counter (OTC) derivative transactions (margin rules).

Margin rules for the largest counterparties (phase 1 counterparties) became effective in the US, Canada and Japan on 1 September 2016 and in the EU, Switzerland and major jurisdictions in Asia in the first quarter of 2017. Margin requirements for the next group of counterparties, including significant numbers of end users, have generally become effective in these jurisdictions on 1 March 2017. In recognition of the low level of industry and end-user readiness for these requirements, regulators in many of these jurisdictions have issued supervisory guidance or other relief intended to allow market participants to continue to transact while proceeding as quickly as practicable to implement the requirements. This relief is generally effective until September 2017. The non-cleared margin requirements will have a significant operational and funding impact on the OTC derivatives activities of UBS and many of our clients. The delays in the completion of rulemaking have affected our ability to complete the execution of required documentation and operational processes with counterparties ahead of relevant compliance dates, which may limit our and other dealers' ability to transact with clients until this is remedied.

Key developments in Switzerland

Implementation of the mass immigration initiative

In December 2016, the Swiss Parliament passed changes to the Foreign Nationals Act to implement the mass immigration initiative of February 2014. The rules aim to make better use of the domestic workforce by giving preferential treatment to the unemployed who are resident in Switzerland. In professions, industries or regions where unemployment is above average, employers will be required to advertise vacant positions to employment agencies and to select suitable agency-registered job seekers for interviews. However, employers will not be required to justify decisions not to hire such candidates. The Swiss Parliament deems the new rules compatible with the Agreement on the Free Movement of Persons between Switzerland and the EU.

The legislation is subject to an optional national referendum vote, for which 50,000 signatures of Swiss citizens would have to be collected by 7 April 2017. If there is no referendum vote, the rules will take effect after this deadline.

Corporate Tax Reform III rejected in referendum vote

In June 2016, the Swiss Parliament approved legislation to reform the Swiss corporate tax code. The reform aimed to align the individual cantonal corporate tax regimes with international standards by eliminating reduced holding company tax rates and other privileges and providing a set of both optional and mandatory measures for the cantons to mitigate the effect on the corporate tax burden.

The reform was rejected by popular referendum on 12 February 2017. The Federal Council announced that a new proposal will be drafted.

Company law reform

In November 2016, the Swiss Federal Council submitted a draft bill to Parliament proposing to reform Swiss company law. The revision is aimed at transferring the provisions of the Ordinance against Excessive Compensation in Listed Companies Limited by Shares into the relevant federal law. Moreover, the Federal Council included new proposals to balance gender representation at senior executive and board level in listed companies and to introduce transparency rules for payments to government authorities by commodity firms.

Under the current proposal, we expect the impact on UBS to concern mainly corporate governance and shareholder rights. However, the exact impact can only be determined once the final law has been passed.

Switzerland begins automatic exchange of information

Automatic exchange of information in tax matters (AEI) between Switzerland and all EU member states and a number of other countries took effect on 1 January 2017. The first exchange of information between Switzerland and tax authorities in these countries will begin in 2018 based on 2017 data. The Swiss Federal Department of Finance has initiated consultations to extend the standard to additional countries.

We have experienced outflows of cross-border client assets as a result of changes in local tax regimes or their enforcement.

FINMA launches consultations on revision of Swiss Banking Insolvency Ordinance

In September 2016, the Swiss Financial Market Supervisory Authority (FINMA) conducted a consultation on revisions to the Banking Insolvency Ordinance, which governs restructuring proceedings and bankruptcy proceedings for Swiss banking institutions. The draft includes provisions on the requirement for banks to include in financial contracts that are subject to foreign laws or foreign places of jurisdiction contractual acknowledgment of FINMA's ability to temporarily postpone exercise of remedies against banks. Such postponement is intended to ensure the continuation of key contractual relationships without interruption in crisis situations. Regulatory authorities in the UK, France, Germany, Japan, Switzerland and the US have adopted or proposed similar requirements to increase legal certainty in cross-border bank resolutions. Implementation of these requirements is likely to require us to amend the terms of a significant number of trading agreements.

FINMA issues final corporate governance guidelines for banks

In November 2016, FINMA issued a circular on corporate governance, risk management and internal controls at banks. The circular sets out the duties and responsibilities of boards of directors and executive board members and defines requirements for the design of the relevant group-wide risk management framework, the internal control framework and the internal audit function. At the same time, FINMA introduced new principles on IT and cyber risks in the circular on operational risk. We do not expect the aforementioned requirements to have a significant impact on us. In addition, FINMA revised the circular on remuneration schemes. The requirements will enter into force on 1 July 2017 and will also apply to UBS.

Switzerland launches consultation on data protection

In an effort to improve data protection and to reflect the new technological and social landscape in existing laws, the Swiss Federal Council launched a consultation on the proposed revision of the data protection law in December 2016. The Federal Council intends to increase the transparency of data processing and strengthen data privacy. To this end, individuals and institutions with access to personal data should be subject to increased transparency and information requirements. The revision would enable Switzerland to meet the requirements of the EU directive on data protection and to ratify the revised Council of Europe Convention on the Protection of Individuals with regard to Automatic Processing of Personal Data, both of which are key to ensuring that the EU continues to recognize Switzerland as having an adequate level of data protection and that cross-border data transmission will remain possible in the future. Implementation of new data protection requirements has required and will require significant investment by the Group.

Parliamentary debate on FinSA and FinIA

The Financial Services Act (FinSA) and Financial Institutions Act (FinIA), which were approved by the Swiss Federal Council in November 2015, have entered parliamentary debate. The two comprehensive acts will have far-reaching consequences for the provision of financial services in Switzerland. The FinSA primarily aims to improve client protection, while the FinIA will introduce a prudential supervision of managers of individual client assets, managers of the assets of occupational benefits schemes and trustees. The upper house of the Swiss Parliament made a number of major adjustments to the proposal by the Federal Council, e.g., by reducing the areas of expanded information, documentation and clarification duties. The lower house of Parliament starts its debate in the first quarter of 2017.

Key developments in the EU

EC proposes implementation rules for Basel III reforms

In November 2016, alongside its proposals to implement the FSB TLAC standard, the European Commission (EC) published proposals to implement the remaining elements of the Basel III reforms in the EU. The proposals would require non-EU G-SIBs with two or more EU entities to establish an EU-domiciled intermediate holding company. In addition, banks would be required to maintain a tier 1 leverage ratio of 3%, with the possibility of a G-SII add-on, and a minimum net stable funding ratio of 100%. The EC would also create a new asset class of non-preferred senior debt, which would rank below other senior debt in insolvency. The precise impact on UBS will depend on the final rules and their implementation at a national level.

UK referendum on EU membership

Following the result of the June 2016 referendum on the UK's membership in the EU, the UK prime minister, Theresa May, has confirmed the UK will invoke Article 50 of the Treaty on European Union by no later than the end of March 2017 subject to passing the necessary legislation required by the Supreme Court judgment on 24 January 2017. This will trigger a two-year period, subject to extension, during which the UK will negotiate its withdrawal agreement with the EU. Barring any changes to this time schedule, it is expected that the UK will formally leave the EU in early 2019. The future of the UK's relationship with the EU remains unclear, although the UK government has stated that the UK will leave the EU single market and will seek a phased period of implementation for the new relationship that could cover the legal and regulatory framework for the financial services industry.

Any future limitations on providing financial services into the EU from our UK operations could require us to make potentially significant changes to our operations in the UK and our legal structure. Potential effects of a UK exit from the EU and potential mitigating actions may vary considerably depending on the timing of withdrawal and the nature of any transition or successor arrangements.

Application of MiFID II/MiFIR package postponed until January 2018

The EU Markets in Financial Instruments Directive II and Regulation package (MiFID II / MiFIR) came into force in July 2014. The bulk of the requirements were intended to become applicable on 3 January 2017, with transitional provisions in several areas. However, taking into account the significant technical implementation challenges faced by regulators and market participants, the application date has been postponed to 3 January 2018. MiFID II / MiFIR will affect many areas of our business in the Investment Bank, Wealth Management, Asset Management and Personal & Corporate Banking. We have a Group-wide implementation program in place for MiFID II / MiFIR.

EU Benchmarks Regulation entered into force

The EU Benchmarks Regulation (EBR), which aims to improve the accuracy and integrity of benchmarks, entered into force on 30 June 2016 and the majority of requirements will take effect as of 1 January 2018. New EU and third-country benchmarks may not be used in the EU after 1 January 2018 unless they comply with EBR. Existing benchmarks (financial indices used as a reference in financial instruments, contracts or investment funds on 1 January 2018) are subject to transitional provisions. The regulation will have a cross-divisional and a cross-regional impact, as it affects UBS at three levels: administrator of UBS benchmarks, contributor to various benchmarks, and as a user of benchmarks. The governance, control and transparency requirements for administrators and contributors will have cost implications. The application of EBR may have a significant effect across the industry as it may result in a reduction in benchmarks available for use in financial instruments and financial contracts or to measure the performance of investment funds.

Key developments in the US

US Department of Labor finalizes fiduciary rule

In April 2016, the US Department of Labor (DOL) adopted a rule that expands the definition of "fiduciary" under the Employee Retirement Income Security Act of 1974 (ERISA). On 1 March 2017, the DOL proposed a 60 day extension of the current 10 April 2017 applicability date of the fiduciary rule and its exemptions. The proposed delay is intended to give the DOL time to commence an examination of the rule called for by a memorandum issued by President Donald Trump on 3 February 2017. That memo directed the DOL to review the fiduciary rule to "determine whether it may adversely affect the ability of Americans to gain access to retirement information and financial advice." The rule would require all advisors, including broker-dealers, to abide by an ERISA fiduciary standard in dealings with qualified retirement plans and individual retirement accounts. It would also prohibit various customary transactions and fee arrangements in the financial services industry with respect to retirement plan investors, unless certain exemption criteria are fully met. Wealth Management Americas and Asset Management would be required to materially change some of their business processes in response to the rule.

Changes to rules regulating systemic risks

UBS Americas Holding LLC, the intermediate holding company for our US subsidiaries, is subject to US capital requirements, governance requirements and other prudential regulation, including the Comprehensive Capital Analysis and Review (CCAR) process beginning in 2017. In January 2017, the Federal Reserve Board adjusted its capital plan and stress testing rules. Among other changes, the rules will decrease the amount of capital any firm subject to the quantitative requirements of CCAR can distribute to shareholders outside an approved capital plan without seeking prior approval from the Federal Reserve Board from 1% to 0.25%. This change will apply to UBS Americas Holding LLC for the 2017 CCAR cycle. As announced by Federal Reserve Board Governor Daniel Tarullo in September 2016, the Federal Reserve Board may further revise the CCAR process and make various changes to the modeling assumptions used in the CCAR scenarios. The revised CCAR process could, among other things, require firms to hold an additional stress capital buffer determined every year.

Separately, in March 2016, the Federal Reserve Board proposed a rule to impose new limits on significant single-counterparty credit exposures of large banking organizations, including large US bank holding companies and US operations of foreign banking organizations. The proposal would apply single-counterparty credit limits to US-domiciled bank holding companies with total consolidated assets of USD 50 billion or more. The proposed limits are designed to become more stringent as the systemic importance of a firm increases. Under the proposal, the exposure of UBS's US operations to another systemically important financial firm would be limited to a maximum of 15% of our tier 1 capital, and exposure to any other single counterparty would be restricted to 25% of our tier 1 capital. In addition, the single-counterparty credit limits would apply separately to UBS Americas Holding LLC, based on its capital. If adopted as proposed, these limits may affect how UBS conducts its operations in the US, including the use of other financial firms for payments and securities clearing services and as transactional counterparties.

US incentive compensation regulation

In May 2016, US federal financial regulators, including the Board of Governors of the Federal Reserve (Federal Reserve Board), jointly proposed regulations that would, among other things, (i) prescribe mandatory deferral amounts and periods for incentive compensation based on the size of the financial institution and (ii) require downward adjustment, forfeiture and / or claw-back of incentive compensation in certain circumstances. The proposal would apply to incentive compensation plans of our principal operating entities in the US and would prescribe specific deferral and forfeiture requirements for executive officers, highly compensated employees and significant risk takers as defined in the proposal. If implemented as proposed, these regulations would require changes to our incentive compensation programs.

→ **Refer to the "Risk factors" section of this report for more information**

Our strategy

Who we are

The world's largest and only truly global wealth manager

Our strategy is centered on our leading wealth management businesses and our premier universal bank in Switzerland, which are enhanced by Asset Management and the Investment Bank. We focus on businesses that have a strong competitive position in their targeted markets, are capital efficient, and have an attractive long-term structural growth or profitability outlook. We are the world's largest and only truly global wealth manager, with a strong presence in the largest and fastest growing markets. Our wealth management businesses benefit from significant scale in an industry with attractive growth prospects, increasingly high barriers to entry, and their leading position across the attractive high net worth and ultra high net worth client segments. We are the preeminent universal bank in Switzerland, the only country where we operate in all business divisions. Our leading position in our home market is central to UBS's global brand and profit stability. The partnership between our wealth management businesses and our other businesses is a key differentiating factor and a source of competitive advantage.

Strong capital position and capital efficient business model

Capital strength is the foundation of our strategy and provides another competitive advantage. Our fully applied common equity tier 1 (CET1) capital ratio is one of the highest among large global banks, and we are well-positioned to meet the revised fully applied Swiss too big to fail provisions as of 1 January 2020. Our capital-accretive and efficient business model helps us adapt to changes in regulatory requirements, while pursuing growth opportunities without the need for significant earnings retention. We believe that our business model can generate an adjusted return on tangible equity of more than 15% in a normalized market environment.

We are committed to an attractive capital returns policy

Our earnings capacity and capital efficiency support our objective to deliver sustainable and growing capital returns to our shareholders. We are committed to a total capital return of at least 50% of net profit attributable to shareholders, provided that we maintain a fully applied CET1 capital ratio of at least 13% and consistent with our objective of maintaining a post-stress fully applied CET1 capital ratio of at least 10%. Total capital returns will consist of an ordinary dividend, which we intend to grow steadily over time, and other forms of capital returns. For the financial year 2016, our Board of Directors intends to propose a dividend payment of CHF 0.60 per share, which is in line with the ordinary dividend paid for 2015, and which represents a payout ratio of 71%.

Our priorities

1. Continue to execute our strategy and deliver on our performance targets

The strategic change we initiated in 2011 was driven by our decision to focus on our strengths and our anticipation of more demanding regulation. Having successfully completed our strategic transformation in 2014, we intend to continue building on our successful track record and to focus on disciplined execution to deliver on our performance targets.

2. Improve effectiveness and efficiency

Our effectiveness and efficiency programs focus on creating the right infrastructure and cost framework for the future, including optimizing our global workforce and footprint. Delivering on our cost savings target is critical to offsetting the escalating costs associated with regulatory change and to achieve our return objectives.

3. Invest for growth

We continue to upgrade and enhance our capabilities in technology and digitalization with a focus on innovation, better serving our clients and further strengthening our competitive position. We are also committed to investing in the development of our employees and attracting the best available talent.

Our performance targets, expectations and ambitions

The tables below show our performance targets, expectations and ambitions for the Group and business divisions. They are calculated on an annual basis, and represent our objectives for sustainable business performance over the cycle. Our performance targets, expectations and ambitions are based on adjusted results and assume constant foreign currency translation rates.

→ **Refer to the "Group performance" section of this report for more information on adjusted results and adjusting items**

Group

Adjusted cost/income ratio	60–70%
Adjusted return on tangible equity	>15%
Common equity tier 1 capital ratio (fully applied)[1]	At least 13%[2]
Risk-weighted assets (fully applied)	Expectation: around CHF 250 billion short/medium term[3]
Leverage ratio denominator (fully applied)	Expectation: around CHF 950 billion short/medium term[3]
Net cost reduction[4]	CHF 2.1 billion by end 2017

1 Based on the revised Swiss SRB capital framework that became effective on 1 July 2016. Refer to the "Capital management" section of this report for more information. 2 Our capital returns policy also includes our objective of maintaining a post-stress fully applied common equity tier 1 (CET1) capital ratio of at least 10%. 3 Based on the currently applicable rules. Refer to the "Capital management" section of this report for more information. Also reflects known FINMA multipliers and methodology changes for risk-weighted assets (RWA), and assumes normalized market conditions for both RWA and leverage ratio denominator (LRD). 4 Year-end 2017 exit rate compared with full-year 2013 adjusted operating expenses for Corporate Center and compared with full-year 2015 adjusted operating expenses for business divisions. Cost reductions exclude expenses for provisions for litigation, regulatory and similar matters, foreign currency movements and temporary regulatory program costs. Business division adjusted operating expenses are before allocations and exclude items that are not representative of the underlying net cost reduction performance, mainly related to variable compensation expenses and compensation for financial advisors in Wealth Management Americas.

Business divisions

Wealth Management	Net new money growth rate	3–5%	Expectation: 10–15% annual adjusted pre-tax profit growth for combined businesses over the cycle
	Adjusted cost/income ratio	55–65%	
Wealth Management Americas[1]	Net new money growth rate	2–4%	
	Adjusted cost/income ratio	75–85%	
Personal & Corporate Banking	Net new business volume growth rate	1–4% (personal banking)	
	Net interest margin	140–180 bps	
	Adjusted cost/income ratio	50–60%	
Asset Management	Net new money growth rate	3–5% excluding money market flows	
	Adjusted cost/income ratio	60–70%	
	Adjusted annual pre-tax profit	Ambition: CHF 1 billion in the medium term	
Investment Bank	Adjusted annual pre-tax RoAE	>15%[2]	
	Adjusted cost/income ratio	70–80%	
	Risk-weighted assets (fully applied)	Expectation: around CHF 85 billion short/medium term[3]	
	Leverage ratio denominator (fully applied)	Expectation: around CHF 325 billion short/medium term[3]	

1 Based on US dollars. 2 Under the current capital regime. 3 Based on the currently applicable rules. Refer to the "Capital management" section of this report for more information. Also reflects known FINMA multipliers and methodology changes for RWA, and assumes normalized market conditions for both RWA and LRD. Including RWA and LRD directly associated with activity that Corporate Center – Group Asset and Liability Management manages centrally on the Investment Bank's behalf.

Measurement of performance

Performance measures

Key performance indicators

The Group and business divisions are managed on the basis of a KPI framework, which identifies profit and growth financial measures, in the context of sound risk and capital management objectives. When determining variable compensation, both Group and business division KPIs are taken into account.

We review the KPI framework on a regular basis, considering our strategy and the market environment in which we operate.

KPIs are disclosed in our quarterly and annual reporting to allow comparison of our performance over the reporting periods. For certain KPIs we have performance targets in place, which are defined in order to measure our performance against our strategy. Our KPIs are designed to be assessed on an over-the-cycle basis and are subject to seasonal patterns.

→ **Refer to the "Our strategy" section of this report for more information on performance targets**

Changes to our key performance indicators in 2017

We have fully aligned our performance targets and our KPI framework as of 1 January 2017, and as a result our "Cost reduction" target will be classified as a KPI for the Group as of 2017. Furthermore, to simplify the KPI framework, "Average value-at-risk (1-day, 95% confidence, 5 years of historical data)" for the Investment Bank will be reported as "Additional information" rather than as a KPI, and "Return on assets, gross (%)" for the Group and the Investment Bank will be removed from the KPI framework, as these will no longer be used as strategic steering metrics. In addition, the going concern leverage ratio will change from a phase-in to a fully applied basis.

2016 Group and business division key performance indicators

Key performance indicators	Definition	Group	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank
Net profit growth (%)	Change in net profit attributable to shareholders from continuing operations between current and comparison periods / net profit attributable to shareholders from continuing operations of comparison period	●					
Pre-tax profit growth (%)	Change in business division operating profit before tax between current and comparison periods / business division operating profit before tax of comparison period		●	●	●	●	●
Cost / income ratio (%)	Operating expenses / operating income before credit loss (expense) or recovery	●	●	●	●	●	●
Return on tangible equity (RoTE) (%)	Net profit attributable to shareholders before amortization and impairment of goodwill and intangible assets (annualized as applicable) / average equity attributable to shareholders less average goodwill and intangible assets	●					
Return on attributed equity (RoAE) (%)	Business division operating profit before tax (annualized as applicable) / average attributed equity						●
Return on assets, gross (%)[1]	Operating income before credit loss (expense) or recovery (annualized as applicable) / average total assets	●					●
Going concern leverage ratio (phase-in, %)[1]	Total going concern capital / leverage ratio denominator	●					
Common equity tier 1 capital ratio (fully applied, %)	Common equity tier 1 capital / risk-weighted assets	●					
Net new money growth (%)	Net new money for the period (annualized as applicable) / invested assets at the beginning of the period. Group net new money growth is reported as net new money growth for combined wealth management businesses. Asset Management net new money excludes money market flows	●	●	●		●	
Gross margin on invested assets (bps)	Operating income before credit loss (expense) or recovery (annualized as applicable) / average invested assets		●	●		●	
Net margin on invested assets (bps)	Business division operating profit before tax (annualized as applicable) / average invested assets		●	●		●	
Net new business volume growth for personal banking (%)	Net new business volume (i.e., total net inflows and outflows of client assets and loans) for the period (annualized as applicable) / business volume (i.e., total of client assets and loans) at the beginning of the period				●		
Net interest margin (%)	Net interest income (annualized as applicable) / average loans				●		
Average VaR (1-day, 95% confidence, 5 years of historical data)[1]	Value-at-risk (VaR) expresses maximum potential loss measured to a 95% confidence level, over a 1-day time horizon and based on five years of historical data						●

1 Removed from the key performance indicator framework in 2017.

New key performance indicators in 2017

Key performance indicators	Definition	Group	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank
Cost reduction	Net exit rate cost reduction[1]	●					
Going concern leverage ratio (fully applied, %)	Total going concern capital / leverage ratio denominator	●					

1 Exit rate compared with full-year 2013 adjusted operating expenses for Corporate Center and full-year 2015 adjusted operating expenses for business divisions. Cost reductions exclude expenses for provisions for litigation, regulatory and similar matters, foreign currency movements and temporary regulatory program costs. Business division adjusted operating expenses are before allocations and exclude items that are not representative of the underlying net cost reduction performance, mainly related to variable compensation expenses and compensation for financial advisors in Wealth Management Americas.

Wealth Management

Business

Wealth Management provides comprehensive advice and tailored financial services to wealthy private clients around the world, except those served by Wealth Management Americas. Our clients benefit from the full spectrum of resources that UBS as a global firm can offer, including banking and lending solutions, wealth planning, investment management solutions, and corporate finance advice. Our guided architecture model gives clients access to a wide range of products from the world's leading third-party institutions that complement our own products.

Strategy and clients

We are the preeminent wealth manager for private clients outside the US, particularly in the ultra high net worth, high net worth and affluent segments. We generally define ultra high net worth clients as those with investable assets of more than CHF 50 million, and high net worth clients as those with investable assets of between CHF 2 million and CHF 50 million. Affluent clients are those with investable assets between CHF 250,000 and CHF 2 million.

We believe the wealth management business has attractive long-term growth prospects and expect its growth to outpace that of global gross domestic product. From a client segment perspective, we believe the global ultra high net worth market, including family offices, has the highest growth potential, followed by the high net worth and affluent markets. We seek to capitalize on our market-leading position in the ultra high net worth business and to increase our market share considerably in this segment. We also invest significantly in growing our high net worth and affluent businesses, especially by leveraging and further strengthening our leading competence in investment management, as well as by investing in our digital capabilities.

Investment management and portfolio construction are at the heart of our offering. We aspire to provide our clients a wider selection of discretionary and advisory services, helping them to more effectively achieve their goals. This in turn would further increase our mandate penetration and contribute to higher recurring revenues. Our integrated client service model allows us to bundle capabilities across the Group to identify investment opportunities in varying market conditions and create solutions that suit individual client needs. For example, ultra high net worth clients benefit from tailored institutional coverage and global execution provided by dedicated specialist teams from Wealth Management and the Investment Bank through the Global Family Office Group. Furthermore, we have enhanced our coverage and offering by establishing a global distribution management function and a dedicated global ultra high net worth organization.

We have unique scale, an industry-leading platform and are active in the most diverse wealth management markets and segments. Our booking centers across the globe give us a strong local presence that allows us to book client assets in multiple locations, in response to client preferences.

In Asia Pacific, we have accelerated our growth and expanded our onshore presence, with a particular focus on Hong Kong, Singapore and China, as well as on other major markets such as Japan and Taiwan, to capture long-term growth opportunities. In emerging markets, we continue to focus on markets such as Mexico, Brazil, Turkey, Russia, Israel and Saudi Arabia. We regularly assess our local presence to ensure proximity to our clients in key markets, as well as to make sure client needs for global diversification and local offerings are met.

In Europe, our long-established local presence in all major markets supports our growth ambition. We have combined our offshore and onshore businesses, creating economies of scale and enabling us to deal efficiently with increased regulatory and fiscal requirements. In December 2016, we established UBS Europe SE, an important step in simplifying our governance structure and in improving operational and capital efficiency across our European operations. UBS Europe SE was formed through the merger of UBS Deutschland AG and our Wealth Management subsidiaries in Germany, Italy, Luxembourg (including branches in other countries), the Netherlands and Spain. Further countries may be included in the future.

In Switzerland, Wealth Management collaborates closely with our colleagues in the personal and corporate banking, asset management and investment banking businesses. This creates opportunities to expand our business through client referrals and generates efficiencies by enabling us to use UBS's extensive branch network, which includes around 100 Wealth Management offices.

We offer extensive training to our client advisors, designed to enable the delivery of superior advice and solutions. All of our client advisors must obtain the Wealth Management Diploma, a program accredited by the Swiss Accreditation Service of the State Secretariat for Economic Affairs, which ensures a high level of knowledge and expertise. For our most senior client advisors, we offer extensive training through the Wealth Management Master program.

We are investing in digitalization and innovation to meet the evolving needs of our clients. The One Wealth Management Platform program is our signature business transformation strategy, through which we aim to deliver advisory, digital and back office capabilities to our clients around the world. We intend to standardize our operating model and deliver operating efficiencies across our global wealth management business. The program has already been rolled out in Switzerland and Germany and is currently being implemented in Hong Kong and Singapore. In addition, we are developing new solutions to deliver our services through digital channels. For example, in 2016, we launched UBS SmartWealth in the UK, which combines digital wealth management with UBS's market-leading expert insight, offering clients tailored investment advice based on their personal goals, and online access to their investments at any time.

We evaluate our performance against key performance indicators and our performance targets.

→ **Refer to the "Our strategy" section of this report for more information on our performance targets**

→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

Products and services

Our approach focuses on gaining an understanding of our clients' financial objectives that enables us to provide proprietary and third-party solutions tailored to their individual needs. Clients benefit from a comprehensive set of capabilities and expertise, including planning, investing, lending, protection, philanthropy, corporate and banking services. Investment management capabilities are a core component of this value proposition.

Our Global Chief Investment Office, which serves both Wealth Management and Wealth Management Americas, synthesizes the research and expertise of UBS's global network of economists, strategists, analysts and investment specialists across all business divisions. These experts closely monitor and assess financial market developments and form a clear, concise and consistent investment view, known as the UBS House View.

The UBS House View identifies and communicates investment opportunities and market risks to help protect and grow our clients' wealth, which we apply to our clients' portfolios and asset allocations, underpinning the investment strategies for our flagship discretionary mandates. The strategic asset allocation is an essential part of our disciplined style of managing our clients' wealth and strives to ensure that our clients remain on course to meet their financial goals over the long term. It is complemented by our tactical asset allocation, which uses our global expertise to help our clients navigate markets and ultimately improve the risk and return trade-off potential of their portfolios.

Our Investment Products and Services unit ensures our solutions are in step with market conditions by aligning our discretionary and advisory offerings with the UBS House View. Clients can invest in a full range of financial instruments, from single securities, such as equities and bonds, to various investment funds, structured products and alternative investments. Additionally, we offer our clients advice on structured lending and corporate finance.

To help our clients address the challenges of an increasingly complex financial world, we continue to develop innovative products. In 2016, we rolled out expanded investment mandate solutions based on our Chief Investment Office's new asset allocation framework. These innovative investment solutions are designed to meet specific client needs and preferences beyond those addressed in our existing discretionary mandate offering. For example, our UBS Manage Advanced Systematic Asset Allocation mandate is a quantitatively driven investment concept that allows investors to participate fully in upward-trending equity markets and to reduce their exposure to equity risk in downward-trending and volatile equity markets.

By aggregating demand for private investments, we are able to offer our clients access to investment opportunities in the private markets space that are traditionally only available to institutional investors. In 2016, we expanded our private markets offering, most notably through a joint venture with Hamilton Lane, one of the largest independent alternative investment management firms globally.

We have also continued to invest significantly into our discretionary and advisory platform infrastructure, with a focus on customizing these offerings on a large scale and processing them more efficiently.

Organizational structure

We are primarily organized along regional lines, with our business areas being Asia Pacific, Europe and Emerging Markets, Switzerland and Global Ultra High Net Worth.

We are governed by executive, risk and operating committees and operate mainly through UBS Switzerland AG and UBS AG branches. Headquartered in Switzerland, we have a presence in more than 40 countries with approximately 190 offices, of which around 100 are in Switzerland.

Competitors

Our main global competitors include the private banking operations of BNP Paribas, Citigroup, Credit Suisse, Deutsche Bank, HSBC, JPMorgan Chase and Julius Baer. In the European domestic markets, we primarily compete with the local private banking operations of large banks such as Deutsche Bank in Germany, RBS in the UK and UniCredit in Italy. In Asia Pacific, the private banking franchises of Citigroup, Credit Suisse and HSBC are our main competitors.

Wealth Management Americas

Business

Wealth Management Americas provides advice-based solutions through financial advisors who deliver a fully integrated set of products and services specifically designed to address the needs of our clients. Our business is primarily domestic US but includes Canada and international business booked in the US. We believe we have attractive growth opportunities and a clear strategy focused on serving our target client segments, particularly the high and ultra high net worth segments.

Strategy and clients

Wealth Management Americas is one of the leading wealth managers in the Americas in terms of financial advisor productivity and invested assets by financial advisor. We offer a fully integrated set of products and services to meet the needs of our high net worth and ultra high net worth client segments, while also serving the needs of core affluent clients. We define high net worth clients as those with investable assets of between USD 1 million and USD 10 million, and ultra high net worth clients as those with investable assets of more than USD 10 million. Core affluent clients are defined as those with investable assets of between USD 250,000 and USD 1 million. The Global Family Office – Americas, a joint venture between Wealth Management Americas and the Investment Bank, provides integrated, comprehensive wealth management and institutional-type services to select Family Office clients. Our Wealth Advice Center serves emerging affluent clients with investable assets of less than USD 250,000. We are committed to providing high-quality advice to our clients across all their financial needs by employing the best professionals in the industry, delivering the highest standard of execution and running a streamlined and efficient business.

We evaluate our performance against key performance indicators and our performance targets.

→ **Refer to the "Our strategy" section of this report for more information on our performance targets**

→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

We believe we are uniquely positioned to serve high net worth and ultra high net worth investors in the world's largest wealth market. With a network of over 7,000 financial advisors and USD 1 trillion in invested assets, we have a distinctive opportunity to "feel small and play big" by combining the agility of a boutique firm with all of the capabilities of a premier, truly global wealth manager. To accomplish that, in 2016 we introduced a new Wealth Management Americas operating model designed to move decision-making closer to clients, better leverage the capabilities that our unrivaled global footprint can offer, invest in next-generation technology and achieve long-term sustainable organic growth through an increased focus on retaining and developing our financial advisors. We aim to differentiate ourselves from competitors and be a trusted and leading provider of financial advice and solutions to our clients by enabling our financial advisors to leverage the full resources of UBS globally, including access to wealth management research, our global Chief Investment Office, and solutions from our other business divisions. These resources are augmented by our commitment to an open architecture platform and supported by our partnerships with many of the world's leading third-party institutions. Moreover, our wealth management offering includes banking, mortgage and financing solutions that enable us to provide advice on both the asset and liability sides of our clients' balance sheets.

We believe the long-term growth prospects of the wealth management business are attractive in the Americas, with high net worth and ultra high net worth expected to be the fastest-growing client segments in terms of invested assets in the region. We plan to grow our business by enabling our financial advisors to focus on delivering holistic advice across the full spectrum of client needs through continued expansion of our cross-business collaboration throughout the firm, and delivering banking and lending services that complement our wealth management solutions. We also plan to continue investing in platforms and technology, while remaining disciplined on cost. We expect these efforts to enable us to achieve higher levels of client satisfaction, strengthen our client relationships and lead to greater productivity across our financial advisors.

Products and services

We offer clients a full array of solutions that focus on meeting their individual financial needs. Our financial advisors work closely with internal specialists to support evolving goals and expectations throughout the client life cycle, including comprehensive wealth planning and portfolio strategy and management. Our offering is designed to meet a wide variety of investment objectives, including wealth accumulation and preservation, income generation, portfolio diversification, legacy planning and philanthropy.

We offer products and solutions including equities, fixed income, retirement services, annuities, alternative investments, managed accounts and structured products. Wealth Management Americas' financial advisors are supported by a dedicated capital markets team collaborating with the Investment Bank and Asset Management in order to leverage the resources of the entire firm, as well as with third-party investment banks and asset management firms. To address the full range of our clients' financial needs, the Wealth Management Americas Banking Group offers competitive lending and cash management services, such as securities-backed lending, resource management accounts, Federal Deposit Insurance Corporation (FDIC)-insured deposits, mortgages and credit cards. Wealth Management Americas clients also benefit from our commitment to close collaboration with our Wealth Management business. Our integrated Wealth Management Research Americas and Global Chief Investment Office Wealth Management organizations together provide market analysis, economic outlooks and research guidance through a global lens and deliver them in our UBS House View to help support investment decisions.

For corporate and institutional clients, we offer a robust suite of solutions, including equity compensation, administration, investment consulting, defined benefit and contribution pension programs, and cash management services. For example, our UBS Equity Plan Advisory Services provides equity compensation plan services and advice to more than 180 US corporations, representing one million participants worldwide.

Organizational structure

Our business is primarily domestic US but includes Canada and international business booked in the US.

In the US and Puerto Rico, we operate primarily through UBS Financial Services Inc. and UBS Financial Services Incorporated of Puerto Rico through 208 branches. Our banking services in the US include those conducted through UBS Bank USA, an FDIC-insured depository institution subsidiary, and branches of UBS AG. Canadian wealth management and banking operations are conducted through UBS Bank (Canada). We are governed by executive, risk and operating committees.

Competitors

We compete with national full-service brokerage firms, domestic and global private banks, regional broker-dealers, independent broker-dealers, registered investment advisors, trust companies and other financial services firms offering wealth management services to US and Canadian private clients, as well as foreign non-resident clients seeking wealth management services within the US. Our main competitors include the wealth management businesses of Bank of America, Morgan Stanley and Wells Fargo.

Personal & Corporate Banking

Business

As the leading personal and corporate banking business in Switzerland, we provide comprehensive financial products and services to private, corporate and institutional clients in Switzerland. We are among the leading players in the private and corporate loan market in Switzerland, with a well-collateralized and conservatively managed lending portfolio.

Our business is a central element of UBS's universal bank delivery model in Switzerland. We work with the Group's wealth management, investment bank and asset management businesses to ensure that our clients receive the best products and solutions for their specific financial needs. We are also an important source of growth for our other business divisions in Switzerland through client referrals. In addition, we manage a substantial part of UBS's Swiss infrastructure and banking products platform, both of which are leveraged across the Group.

Our distribution model is based on a multi-channel strategy. With a steadily rising number of users and client interactions for our expanding electronic and mobile banking offering, we continue to strengthen our position as the leading multi-channel bank in Switzerland.

Strategy and clients

Our strategy focuses on profitable and qualitative growth in Switzerland. We aim to provide stable and substantial profits for the Group and create revenue opportunities for other businesses within the firm.

In the personal banking business, we aspire to be the bank of choice for private clients in Switzerland. We continue to pursue our strategy of moderately and selectively growing our business in high-quality loans and to further leverage the potential of digitalization. Currently, we serve one in three Swiss households through our branch network, customer service centers and digital banking services. We are continuously expanding our multi-channel offering and continue to build on UBS's long tradition as a leader and innovator in digital services to deliver a superior client experience, capture market share and increase efficiency and customer loyalty.

In the corporate and institutional business, we want to be our clients' main bank. We aim to continuously improve our profitability and capital efficiency, striving to expand our market share in Switzerland with a focus on a qualitative growth strategy, centered on cash flow-based lending and our strategic advisory and trading business. Additionally, we are selectively expanding our international footprint to serve Swiss corporate clients abroad as well as global corporate clients headquartered in Switzerland.

Our clients value their relationship with us and our efforts to provide them with superior service. In 2016, for the sixth consecutive year, the international finance magazine *Euromoney* named UBS "Best Domestic Cash Manager Switzerland" based on a survey of cash managers and chief financial officers. Additionally, UBS was rated best asset servicing provider for asset managers and as the leading custodian bank in Switzerland and Europe, according to The R & M Survey, one of the industry's most important client surveys.

Constant employee development is a crucial element of our divisional strategy, as this is our key to ensuring superior client service. UBS sets the pace in client advisor certification, specifically with the implementation of its state-accredited ISO certification program.

Moreover, we continuously strive to simplify structures and processes in order to improve client experience without compromising our risk standards.

We evaluate our performance against key performance indicators and our performance targets.

→ **Refer to the "Our strategy" section of this report for information on our performance targets**

→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

Products and services

Our private clients have access to a comprehensive life cycle based offering and convenient digital banking, targeting the specific needs of day-to-day banking, retirement and investment goals, and real estate transactions. In 2016, new services such as digital account opening and UBS Safe, where clients can securely store electronic files, were introduced.

Our corporate and institutional clients benefit from our financing and investment solutions, notably regarding access to equity and debt capital markets, syndicated and structured credit, private placements, leasing and traditional financing. Our transaction banking offers solutions for payment and cash management services, trade and export finance, receivable finance, as well as global custody solutions to institutional clients.

In 2016, we implemented a number of product and service innovations, such as the launch of UBS Atrium, an innovative platform in the real estate business, where UBS acts as an intermediary in the market, connecting clients and institutional investors. UBS's platform services focus on credit origination and servicing of brokered mortgages, thereby providing an attractive investment opportunity for institutional investors in a low-yield environment. Additionally, we enhanced our digital Asset Wizard, which gives clients comprehensive wealth oversight, including a new functionality that allows clients to create a wide range of reports tailored to their individual needs.

We collaborate closely with the Investment Bank to offer capital market and foreign exchange products, hedging strategies, trading capabilities, as well as corporate finance advice. Working with Asset Management, we also provide state-of-the-art fund and portfolio management solutions.

Organizational structure

Our business is organized into Personal Banking, Wealth Management Switzerland and Corporate & Institutional Clients. The Swiss network includes over 300 branches, covering 10 geographical regions.

We are governed by executive, risk and operating committees and operate mainly through UBS Switzerland AG.

Competitors

In the Swiss retail business, our competitors are Credit Suisse, PostFinance, Raiffeisen, the cantonal banks and other regional and local Swiss banks.

In the Swiss corporate and institutional business, our main competitors are Credit Suisse, the cantonal banks and globally active foreign banks in Switzerland.

Asset Management

Business

Asset Management provides investment management products and services, platform solutions and advisory support to institutions, wholesale intermediaries and wealth management clients around the world, with an onshore presence in 22 countries. We are a leading fund house in Europe, the largest mutual fund manager in Switzerland and one of the largest fund of hedge funds and real estate investment managers in the world. Our global investment capabilities include all major traditional and alternative asset classes.

Strategy and clients

While market conditions and the low-yield environment in 2016 proved to be challenging for the industry, our global, diversified asset management business model continues to provide a solid foundation to capture growth opportunities in the shifting market dynamics.

The long-term outlook for the asset management industry remains positive, with three main drivers: (i) aging populations will lead to higher savings requirements; (ii) tighter government spending budgets will lead to increased private pension funding; and (iii) emerging regulation is creating opportunities for asset managers that have the necessary scale and expertise.

We have defined our current strategy with an overarching goal to deliver holistic investment and platform solutions to our clients, by leveraging our global reach and investment expertise.

Moreover, we are strengthening our institutional business and seeking to accelerate the growth of our wholesale business by building strategic partnerships, platforms and advisory support. This is a key area in which we intend to pursue growth in the coming years. Asset Management also continues to collaborate with the wealth management businesses to provide best-in-class products and services to meet private clients' needs.

We aim to drive profitable and sustainable growth in key markets in Europe, Switzerland, the Americas and Asia Pacific, including China, where we also continue to expand our long-standing onshore presence.

To support our efforts to achieve growth and increase our operational efficiency, we continue to invest in our operating platform and have made significant progress transforming our organization to create a less complex and unified global platform. We completed the sale of our Alternative Fund Services business in 2015, and announced an agreement in 2017 to sell our fund administration servicing units in Luxembourg and Switzerland to Northern Trust. The transaction is expected to close in the second half of the year, subject to relevant approvals and other customary conditions.

We continue to develop our well-established passive capabilities, including indexed strategies and exchange-traded funds (ETFs), where we are building on our strong position in Asia Pacific, Europe and Switzerland. We also continue to expand our world-class fund-of-hedge-fund business.

We evaluate our performance against key performance indicators and our performance targets.

→ **Refer to the "Our strategy" section of this report for more information on our performance targets**

→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

Products and services

We offer clients a wide range of investment products and services in different asset classes, which can be delivered through segregated, pooled or advisory mandates as well as registered investment funds in various jurisdictions. Our active traditional and alternative capabilities are:

- *Equities* – investment strategies with varying risk and return objectives, including global, regional and thematic strategies, as well as a high alpha and growth and quantitative styles.
- *Multi Asset* – global and regional asset allocation and currency investment strategies across the risk / return spectrum.
- *O'Connor* – a global, relative value-focused, single-manager hedge fund platform providing investors with absolute and risk-adjusted returns.
- *Fixed Income* – global, regional and local market-based single-sector, multi-sector and extended-sector strategies, such as high-yield and emerging market debt, as well as unconstrained and currency strategies.
- *Global Real Estate* – global and regional strategies across the major real estate sectors, mainly focused on core and value added strategies and also including other strategies across the risk / return spectrum.
- *Infrastructure and Private Equity* – direct infrastructure investment in core infrastructure assets globally, and multi-manager infrastructure and private equity strategies in broadly diversified fund-of-funds portfolios.

Our *Solutions* business offers:

- Multi-manager hedge fund solutions and advisory services, providing exposure to hedge fund investments with tailored risk and return profiles.
- Customized multi-asset solutions and advisory services, including risk-managed and structured strategies, manager selection, pension risk management, risk advisory and global tactical asset allocation.

Our passive capabilities include indexed, alternative beta and rules-based strategies across equities, fixed income, commodities, real estate and alternatives with benchmarks ranging from mainstream to highly customized indices and rules-driven solutions. We offer our products in various structures, including ETFs, pooled funds, structured funds and mandates.

Organizational structure

Our business is organized by the products and services we offer, with principal offices located in Chicago, Frankfurt, Hartford, Hong Kong, London, New York, Singapore, Sydney, Tokyo and Zurich. We are governed by executive, risk and operating committees.

As part of UBS's efforts to improve the resolvability of the Group, we have established UBS Asset Management AG, a subsidiary of UBS AG, to which we transferred the majority of Asset Management's operating subsidiaries during 2016, excluding subsidiaries domiciled in the US, which were transferred to UBS Americas Holdings LLC.

→ **Refer to the "The legal structure of UBS Group" section of this report for more information**

In 2017, we aligned our businesses to enable us to better leverage our best investment processes, tools and systems to generate high alpha, systematic products and solutions for clients. Our Equities, Fixed Income and Solutions capabilities and hedge funds business were integrated within a new area named Investments.

In addition, our Global Real Estate and Infrastructure and Private Equity businesses were also combined to form a new area named Real Estate & Private Markets. We will continue to grow this business by developing integrated and innovative solutions, as well as expanding in key markets, such as Brazil, Canada and Japan.

Competitors

Our main competitors include global firms with wide-ranging capabilities and distribution channels, such as AllianceBernstein Investments, Amundi, BlackRock, Deutsche Bank Asset Management, Goldman Sachs Asset Management, Invesco, JPMorgan Chase Asset Management, Morgan Stanley Investment Management and Schroders.

Investment Bank

Business

The Investment Bank is present in over 35 countries, with principal offices in all major financial centers, providing investment advice, financial solutions and capital markets access. We serve corporate, institutional and wealth management clients across the globe and form a synergetic partnership with our wealth management, personal and corporate banking and asset management businesses.

The business division is organized into Corporate Client Solutions and Investor Client Services, and also includes UBS Securities Research. Our specialist teams work closely together, complementing our global product offering with their regional expertise. This enables us to understand our clients and provide services tailored to their investment and financing needs.

Strategy and clients

We aspire to provide best-in-class services and solutions to our corporate, institutional and wealth management clients, through an integrated, solutions-led approach, driven by our intellectual capital and leveraging our award-winning electronic platforms. With our client-centric business model, we partner with our wealth management, personal and corporate banking and asset management businesses, and we believe we are well positioned to provide our clients with market insight, global coverage of markets and products, and execution services.

Our focus remains on our traditional strengths in advisory, capital markets, equities and foreign exchange businesses, complemented by a rates and credit platform, to deliver attractive and sustainable risk-adjusted returns. Using our powerful research and technology capabilities, we pioneer integrated solutions to support our clients as they adapt to evolving market structures, driven by changes to the regulatory, technological and economic landscape.

We continue to invest in talent and technology and to strengthen our operational risk framework. In 2016, we continued to implement our technology plan, aimed at enhancing the effectiveness of our platform for clients and simplifying our processes.

To support our goal of earning attractive returns on our allocated capital, we operate within a tightly controlled framework of balance sheet, risk-weighted assets and leverage ratio denominator. We evaluate our performance against key performance indicators and our performance targets.

→ **Refer to the "Our strategy" section of this report for more information on our performance targets and expectations**

→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

Products and services

Corporate Client Solutions

In Corporate Client Solutions, we advise our clients on strategic business opportunities and help them raise capital to fund their business activities. Together with Investor Client Services, we offer a full-service solution, which includes the distribution and risk management of capital markets products and financing solutions. Its main business lines are:

- *Advisory* consults clients on matters such as mergers and acquisitions, spin-offs, exchange offers, leveraged buyouts, joint ventures, exclusive sales, restructurings, takeover defense and corporate broking.
- *Equity Capital Markets* offers comprehensive equity capital-raising services, as well as related derivative products. This includes managing initial public offerings and private placements, as well as equity-linked transactions and other strategic equities solutions.
- *Debt Capital Markets* provides financing advice and helps clients raise various types of debt capital, as well as hedge resulting exposures.
- *Financing Solutions* provides customized solutions across asset classes via a wide range of financing capabilities, including structured financing, real estate finance and special situations.
- *Risk Management* includes corporate lending and associated hedging activities.

Investor Client Services

In Investor Client Services, we enable our clients to buy and sell securities on capital markets across the globe and to manage their risk and liquidity. Its businesses are:

Equities

As one of the world's largest equities houses and leading equity market participants in the primary and secondary markets, we distribute, structure, execute, finance and clear equity cash and derivative products. Our main business lines are:

- *Cash* offers trade execution and clearing for single stocks and portfolios through both traditional and electronic channels, along with investment advisory and consultancy services.
- *Derivatives* enables clients to manage risk and meet funding requirements through a wide range of listed and over-the-counter equity derivative instruments. We create and distribute structured products and notes, enabling our clients to optimize their investment returns.
- *Financing Services* provides our hedge fund and institutional clients with a fully integrated platform for financing transactions, which includes prime brokerage. In addition, we execute and clear exchange-traded equity derivatives in more than 45 markets globally.

Foreign Exchange, Rates and Credit

Foreign Exchange, Rates and Credit provides execution services and solutions with an emphasis on electronic trading and maintains high levels of balance sheet velocity. The main business lines are:

- *Foreign Exchange* helps our clients manage their currency exposures and is recognized as one of the leading foreign exchange market-makers as well as the market leader in the precious metals business.
- *Rates and Credit* encompasses sales, trading and market-making in a selected range of rates and credit products. In addition, we work closely with Corporate Client Solutions, providing support to our debt capital markets businesses and tailoring customized financing solutions for our clients.

UBS Securities Research

In UBS Securities Research, we offer clients key insights on securities in major financial markets around the globe. In our flagship Q series reports, experts from across the UBS research team respond to questions from clients, providing a coordinated perspective across regions, sectors and asset classes.

The UBS Evidence Lab is a team of experienced primary research experts and works closely with UBS Securities Research analysts to uncover new evidence that is not yet reflected in market prices.

Organizational structure

Our business is organized along the aforementioned products and services and has a global reach.

We are governed by executive, risk and operating committees and operate through UBS AG branches and other subsidiaries of UBS Group. Securities activities in the US are conducted through UBS Securities LLC, a registered broker-dealer. In the UK, Investment Bank activities are conducted mainly out of UBS AG London branch and UBS Limited.

Competitors

The main competitors are the major global investment banks, including Bank of America Merrill Lynch, Barclays, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan Chase and Morgan Stanley.

Corporate Center

Corporate Center is comprised of the functions that provide services to the Group, which we present from a reporting perspective organized under Services and Group Asset and Liability Management (Group ALM). Corporate Center also includes the Non-core and Legacy Portfolio unit.

Corporate Center – Services

Corporate Center – Services consists of the Group Chief Operating Officer area (Group Corporate Services, Group Operations, Group Sourcing, Group Technology), Group Finance (excluding Group ALM), Group Legal, Group Human Resources, Group Risk Control, Group Communications and Branding, Group Regulatory and Governance, and UBS and Society.

Corporate Center – Services allocates the majority of its operating expenses to the business divisions and other Corporate Center units based on service consumption. Each year, as part of the annual business planning cycle, Corporate Center – Services agrees with the business divisions and other Corporate Center units cost allocations for services at fixed amounts or at variable amounts based on fixed formulas, depending on capital and service consumption levels as well as the nature of the service performed. In 2015 and 2016, where costs incurred were different from those expected, Corporate Center – Services recognized over- and under-recoveries. In 2017, costs will be allocated to the business divisions and other Corporate Center units based on actual costs incurred by Corporate Center – Services.

Operating expenses remaining in Corporate Center – Services after allocations relate mainly to Group governance functions and other corporate activities, certain strategic and regulatory projects and certain retained restructuring expenses.

Corporate Center – Group ALM

Group ALM manages the structural risks of our balance sheet, including interest rate risk in the banking book, currency risk and collateral risk, as well as the risks associated with the Group's liquidity and funding portfolios. Group ALM also seeks to optimize the Group's financial performance by better matching assets and liabilities within the context of the Group's liquidity, funding and capital targets. Group ALM serves all business divisions and other Corporate Center units through three main risk management areas, and its risk management is fully integrated into the Group's risk governance framework.

Business division-aligned risk management activities performed on behalf of business divisions and other Corporate Center units include managing the interest rate risk in the banking book on behalf of Wealth Management and Personal & Corporate Banking and high-quality liquid asset (HQLA) portfolios on behalf of specific business divisions. Beginning in the third quarter of 2016, the area also includes Risk Exposure Management, which performs risk management over credit, debit and funding valuation adjustments for our over-the-counter derivatives portfolio. Net income generated by these activities is fully allocated to the associated business divisions and Corporate Center units.

Capital investment and issuance activities consist of managing the Group's equity and capital instruments as well as instruments that contribute to our total loss-absorbing capacity (TLAC). Revenues from investing the Group's equity and the incremental expenses of issuing capital and TLAC instruments at the UBS Group AG level (the holding company for the UBS Group) relative to issuing senior debt out of operating subsidiaries are fully allocated to the business divisions and other Corporate Center units based on their attributed portion of the Group's equity.

Group structural risk management activities are performed to meet overall Group-wide risk management objectives. They include managing the Group's HQLA and long-term debt portfolios. The net positive or negative income generated through these activities is allocated to the business divisions and other Corporate Center units based on their consumption of the underlying risks. This consumption is determined by various liquidity and funding models and, to reduce volatility, is allocated using stable, internal benchmark rates rather than actual income earned by Group ALM. Net positive or negative income not arising as a result of business division consumption is retained by Group ALM.

As part of its risk management activities, Group ALM enters into derivative hedges to manage the economic and the interest rate risk of the different portfolios. The results of certain hedging activities, including any non-economic volatility caused by the applicable accounting treatment, are retained by Group ALM.

Corporate Center – Non-core and Legacy Portfolio

Corporate Center – Non-core and Legacy Portfolio is comprised of the positions from businesses that were part of the Investment Bank prior to its restructuring, and is overseen by a committee chaired by the Group Chief Risk Officer.

Non-core and Legacy Portfolio pursues a primarily passive wind-down strategy, focusing on a disciplined reduction of risk-weighted assets, leverage ratio denominator and costs. Positions are managed and exited over time with the objective of maximizing shareholder value. Non-core and Legacy Portfolio also includes positions relating to legal matters arising from businesses that were transferred to it.

→ **Refer to "Note 20 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information**

Roles and responsibilities within Corporate Center – Services

Functional head	Responsibilities
Group Chief Financial Officer[1]	– Is responsible for ensuring transparency in, and the assessment of, the financial performance of the Group and business divisions, and for the Group's financial accounting, controlling, forecasting, planning and reporting processes – Is responsible for treasury and capital management, including management and control of funding and liquidity risk with independent oversight from the Group Chief Risk Officer, and for UBS's regulatory capital ratios – Ensures asset and liability management by balancing consumption of the firm's financial resources through consolidation and management of the Group's structural risks enabling sustainable earnings generation – Manages and controls the Group's tax affairs – Manages the divisional and Group financial control functions – Makes proposals to the Board of Directors (BoD) regarding the accounting standards adopted by the Group, and defines financial reporting and disclosure standards, after consultation with the Audit Committee of the BoD – Provides external certifications under sections 302 and 404 of the Sarbanes-Oxley Act of 2002 – Coordinates the working relationship with external auditors under the supervision of the Audit Committee of the BoD – Supports the Group Chief Executive Officer (CEO) in strategy development and key strategic topics – Provides advice on financial aspects of strategic projects and transactions – Manages relations with investors and analysts, in coordination with the Group CEO
Group Chief Operating Officer	– Provides quality, cost-effective and differentiating Group-wide IT services and tools in line with the needs of the business divisions and Corporate Center functions – Delivers a wide range of operational services across all business divisions and regions – Supplies real estate infrastructure and general administrative services, directs and controls all supply and demand management activities, supports the firm with its third-party sourcing strategies and takes responsibility for the firm's nearshore, offshore, outsourcing and supplier-related processes – Formulates and agrees Group-wide operating strategies, objectives, and financial and execution plans for the Group Chief Operating Officer function in support of each business division and the Group functions – Delivers cross-divisional operational initiatives to enhance the firm's operating platform
Group Chief Risk Officer	– Manages the divisional, regional and firm-wide risk control functions and monitors and challenges the firm's risk-taking activities – Develops the Group's risk appetite framework, risk management and control principles, and risk policies – In accordance with the risk appetite framework approved by the BoD, is responsible for: (i) implementing appropriate independent control frameworks for the Group's credit, market, treasury, country, compliance and operational risks (ii) developing and implementing the frameworks for risk measurement, aggregation, portfolio controls and, jointly with the Group Chief Financial Officer, for risk reporting (iii) authorizing transactions, positions, exposures, portfolio limits, and credit risk provisions and allowances in accordance with the risk control authorities delegated to this role – Maintains a control framework to ensure that UBS meets relevant regulatory and professional standards in the conduct of its business and coordinates in this respect with the Group General Counsel
Group General Counsel	– Is responsible for legal matters, policies and processes and for managing the Group's legal function – Assumes responsibility for legal oversight in respect of the Group's key regulatory interactions and maintains relationships with our key regulators with respect to legal matters – Reports legal risks and material litigation and manages litigation
Group Head Human Resources	– Defines and executes a human resources strategy aligned with UBS's objectives and positions the Group as an employer of choice – Ensures cost-efficient operational and advisory services to employees as well as strategic advice to managers and executives, supporting them to attract, engage, develop and retain talent – Maintains relationships with the Group's key regulators with respect to compensation matters
Group Head Communications and Branding	– Manages UBS's corporate and brand communication to its stakeholders in alignment with the Group's overall strategy – Develops UBS's communications strategy, content and positioning with the primary purpose to build and protect the firm's reputation and brand – Manages and coordinates Group-wide marketing communications activities, including partnership marketing and sponsorship measures – Provides shared service delivery of Group-wide communication channels
Group Head Regulatory and Governance	– Develops governmental policy and regulatory strategy and coordinates key external relationships – Manages the Strategic Regulatory Initiatives portfolio and oversees the planning and execution of relevant initiatives – Establishes global and local resolution planning and develops key resolvability improvement measures – Designs the Group's legal entity structure and further develops coherent corporate governance standards – Governs the Group's investigation portfolio and performs important investigations
Head UBS and Society	– Coordinates the Group's corporate responsibility and sustainability strategy activities

1 Relates to responsibilities for both Corporate Center – Services and Corporate Center – Group ALM.

Priorities and initiatives

Our Corporate Center functions strive to provide best-in-class financial, risk, legal and shared services to the Group based on commercially sound service management principles, including transparency on both qualitative and quantitative components of the services offered. Moreover, we continue to focus on achieving greater effectiveness and efficiency through the strategic levers of workforce and footprint, organization and process optimization, and technology, and we remain fully committed to contributing to the Group's net cost reduction.

As of 31 December 2016, 31% of Corporate Center employees and contractors were in offshore or nearshore locations compared with 18% three years earlier. In addition to lower personnel expenses, this allows us to tap growing talent pools and realize efficiencies by reducing our footprint in high-cost real estate locations.

We seek to increase value by leveraging common capabilities and creating centralized functions. Within Group Technology, we continue to modernize our infrastructure and simplify our portfolio of applications. In 2016, we began the transfer of the majority of shared service functions to our separate Group service companies, which, in addition to meeting regulatory requirements, allows us to further strengthen our approach to service management without losing efficiency in the way we operate.

→ **Refer to the "Our strategy" section of this report for more information**

→ **Refer to the "The legal structure of UBS Group" section of this report for more information**

Risk factors

Certain risks, including those described below, may affect our ability to execute our strategy or our business activities, financial condition, results of operations and prospects. Because a broad-based international financial services firm such as UBS is inherently exposed to multiple risks many of which become apparent only with the benefit of hindsight, risks of which we are not presently aware or which we currently do not consider to be material could also adversely affect us. The order of presentation of the risk factors below does not indicate the likelihood of their occurrence or the potential magnitude of their consequences.

Continuing low or negative interest rates may have a detrimental effect on our capital strength, liquidity and funding position, and profitability

Low and negative interest rates in Switzerland and the eurozone negatively affected our net interest income in 2016 and a continuing low or negative interest rate environment may further erode interest margins and adversely affect the net interest income generated by our Personal & Corporate Banking and Wealth Management businesses. Our performance is also affected by the cost of maintaining the high-quality liquid assets required to cover regulatory outflow assumptions embedded in the liquidity coverage ratio (LCR). The Swiss National Bank permits Swiss banks to make deposits up to a threshold at zero interest. Any reduction in, or limitations on the use of this exemption from the otherwise applicable negative interest rates could exacerbate the effect of negative interest rates in Switzerland. Low and negative interest rates may also affect customer behavior and hence our overall balance sheet structure. Mitigating actions that we have taken, or may take in the future, such as the introduction of selective deposit fees or minimum lending rates, have resulted and may further result in the loss of customer deposits, a key source of our funding, net new money outflows and / or a declining market share in our domestic lending business.

Our equity and capital are also affected by changes in interest rates. In particular, the calculation of our pension plan net defined benefit assets and liabilities is sensitive to the discount rate applied. Any further reduction in interest rates would lower the discount rates and result in pension plan deficits due to the long duration of corresponding liabilities. This would lead to a corresponding reduction in our equity and fully applied common equity tier 1 (CET1) capital.

Our global presence subjects us to risk from currency fluctuations

We prepare our consolidated financial statements in Swiss francs. However, a substantial portion of our assets, liabilities, invested assets, revenues and expenses, equity of foreign operations and risk-weighted assets (RWA) are denominated in US dollars, euros, British pounds and in other foreign currencies. Accordingly, changes in foreign exchange rates may adversely affect our profits, balance sheet, including deferred tax assets, and capital, leverage and liquidity ratios. In particular, the portion of our operating income denominated in non-Swiss franc currencies is greater than the portion of operating expenses denominated in non-Swiss franc currencies. Therefore, the appreciation of the Swiss franc against other currencies generally has an adverse effect on our profits, in the absence of any mitigating actions. Moreover, in order to hedge our CET1 capital ratio, CET1 capital needs to have foreign currency exposure, leading to currency sensitivity of CET1 capital. As a consequence, it is not possible to simultaneously fully hedge both the amount of capital and the capital ratio. As the proportion of RWA denominated in non-Swiss franc currencies outweighs the capital in these currencies, a significant appreciation of the Swiss franc against these currencies could benefit our capital ratios, while a significant depreciation of the Swiss franc against these currencies could adversely affect our capital ratios.

Swiss counterparties are, in general, highly reliant on the domestic economy and the economies to which they export, in particular the EU and the US. In addition, the EUR / CHF exchange rate is an important risk factor for Swiss corporates. The stronger Swiss franc may have a negative effect on the Swiss economy, particularly on exporters, which could adversely affect some of the counterparties within our domestic lending portfolio and lead to an increase in the level of credit loss expenses in future periods from the low levels recently observed.

Regulatory and legal changes may adversely affect our business and our ability to execute our strategic plans

Fundamental changes in the laws and regulations affecting financial institutions can have a material and adverse effect on our business. In the wake of the 2007–2009 financial crisis and the subsequent instability in global financial markets, regulators and legislators are considering, have proposed or have adopted a wide range of changes to these laws and regulations. These measures are generally designed to address the perceived causes of the crisis and to limit the systemic risks posed by major financial institutions. They include:

- significantly higher regulatory capital requirements, including changes in the definition and calculation of regulatory capital as well as in the calculation of RWA;

- prudential adjustments to the valuation of assets at the discretion of regulators;
- introduction of a more demanding leverage ratio as well as new or significantly enhanced liquidity and stable funding requirements;
- requirements to maintain liquidity and capital in jurisdictions in which activities are conducted and booked, and requirements to adopt risk, corporate and other governance structures at a local jurisdiction or entity level;
- limitations on principal trading and other activities and limitations on risk concentrations and maximum levels of risk;
- new licensing, registration and compliance regimes, and cross-border market access restrictions;
- taxes and government levies that would effectively limit balance sheet growth or reduce the profitability of trading and other activities;
- a variety of measures constraining, taxing or imposing additional requirements relating to compensation;
- requirements to maintain loss-absorbing capital or debt instruments subject to write-down as part of recovery measures or a resolution of the Group or a Group company, including requirements for subsidiaries to maintain such instruments;
- requirements to adopt structural and other changes designed to reduce systemic risk and to make major financial institutions easier to manage, restructure, disassemble or liquidate, including ring-fencing certain activities and operations within separate legal entities, and adoption of new liquidation regimes intended to prioritize the preservation of systemically significant functions.

There remains significant uncertainty regarding a number of the measures referred to above, including whether, or the form in which, they will be adopted, the timing and content of implementing regulations and interpretations, and the dates of their effectiveness. There is also uncertainty as to whether the laws and regulations that have been adopted will be repealed or modified as a result of geopolitical developments, particularly in the US with its recent change in presidential administration.

Notwithstanding attempts by regulators to align their efforts, the measures adopted or proposed differ significantly across the major jurisdictions, making it increasingly difficult to manage a global institution like UBS. Swiss regulatory changes with regard to such matters as capital and liquidity have generally proceeded more quickly than those in other major jurisdictions, and the requirements for Swiss major international banks are among the strictest of the major financial centers. This could put Swiss banks, such as UBS, at a disadvantage when they compete with peer financial institutions subject to more lenient regulation or with unregulated non-bank competitors.

Planned and potential regulatory and legislative developments in Switzerland and in other jurisdictions in which we have operations may have a material adverse effect on our ability to execute our strategic plans, on the profitability or viability of certain business lines globally or in particular locations, and in some cases, on our ability to compete with other financial institutions, and may require us to increase prices for or cease to offer certain services and products. The developments have been and will likely continue to be costly to implement. They could also have a negative effect on our legal structure or business model, potentially generating capital, liquidity and other resource inefficiencies, all of which may adversely affect our profitability. Finally, the uncertainty related to, or the implementation of, legislative and regulatory changes may have a negative impact on our relationships with clients and our success in attracting client business.

Capital and TBTF regulation: As an internationally active Swiss systemically relevant bank (SRB), we are subject to capital and total loss-absorbing capacity (TLAC) requirements that are among the most stringent in the world. New Swiss SRB capital requirements impose significantly higher requirements based on RWA and a significantly higher leverage ratio requirement. In addition, a TLAC requirement has become applicable.

We may be subject to further increases in capital requirements in the future, from the imposition of further add-ons in the calculation of RWA or from other changes to other components of minimum capital requirements. The Basel Committee on Banking Supervision (BCBS) and other regulators are considering changes to the Basel III capital framework, including revisions related to the credit risk and operational risk frameworks, as well as the introduction of an output floor. If the proposed changes to the capital framework are adopted in their current form in Switzerland, we expect our overall RWA would significantly increase, absent any mitigating measures. We also expect that we would incur significant costs to implement the proposed changes.

Liquidity and funding: The requirements to maintain an LCR of high-quality liquid assets to estimated stressed short-term net cash outflows and a net stable funding ratio (NSFR), or other similar liquidity and funding requirements we are subject to, oblige us to maintain substantially higher levels of overall liquidity than was previously the case, may limit our efforts to optimize interest income and expense, make certain lines of business less attractive and reduce our overall ability to generate profits. Both the LCR and NSFR requirements are intended to ensure that we are not overly reliant on short-term funding and that we have sufficient long-term funding for illiquid assets, and the relevant calculations make assumptions about the relative likelihood and amount of outflows of funding and available sources of additional funding in a market- or firm-specific stress situation. There can be no assurance that in an actual stress situation our funding outflows would not exceed the assumed amounts. Moreover, many of our subsidiaries must comply with minimum capital, liquidity and similar requirements and as a result UBS Group AG and UBS AG have contributed a significant portion of their capital and provide substantial liquidity to them. These funds are available to meet funding and collateral needs in the relevant jurisdictions, but are generally not readily available for use by the Group as a whole.

Banking structure and activity limitations: We have undertaken and continue to undertake significant changes in our legal and operational structure to meet legal and regulatory requirements and expectations.

Changes to our legal and operational structure, particularly the transfer of operations to subsidiaries, require significant time and resources to implement and create operational, capital, liquidity, funding and tax inefficiencies. In addition, they may increase our aggregate credit exposure to counterparties as they transact with multiple entities within the UBS Group, expose our businesses to local capital, liquidity and funding requirements, and potentially give rise to client and counterparty concerns about the credit quality of individual subsidiaries. Such changes could also negatively affect our funding model, limit our operational flexibility and negatively affect our ability to benefit from synergies between business units.

In the US, we have incurred substantial costs for implementing a compliance and monitoring framework in connection with the Volcker Rule under the Dodd-Frank Act. We have also been required to modify our business activities both inside and outside the US to conform to its activity limitations. The Volcker Rule may also have a substantial impact on market liquidity and the economics of market-making activities. We may incur additional costs in the short term if aspects of the Volcker Rule are repealed or modified. We may become subject to other similar regulations substantively limiting the types of activities in which we may engage or the way we conduct our operations. If adopted as proposed, the rule on single counterparty risk proposed by the US Federal Reserve Board may affect how we conduct our operations in the US, including our use of other financial firms for payments and securities clearing services and as transactional counterparties.

Resolvability and resolution and recovery planning: Under the Swiss TBTF framework, and similar requirements in other jurisdictions, we are required to put in place viable emergency plans to preserve the operation of systemically important functions in the event of a failure, to the extent that such activities are not sufficiently separated in advance. If we adopt measures to reduce resolvability risk beyond what is legally required, we are eligible for a limited rebate on the gone concern requirements. Such actions include changes to the legal structure of a bank group, such as the creation of separate legal entities, in a manner that would insulate parts of the group to exposure from risks arising from other parts of the group, thereby making it easier to dispose of certain parts of the group in a recovery scenario, to liquidate or dispose of certain parts of the group in a resolution scenario or to execute a debt bail-in. Additionally, if a recovery or resolution plan that we are required to produce in a jurisdiction is determined by the relevant authority to be inadequate or not credible, relevant regulation may permit the authority to place limitations on the scope or size of our business in that jurisdiction, oblige us to hold higher amounts of capital or liquidity, or to change our legal structure or business in order to remove the relevant impediments to resolution.

The Swiss Banking Act and implementing ordinances provide FINMA with significant powers to intervene in order to prevent a failure of, or to resolve, a failing financial institution. FINMA has considerable discretion in determining whether, when, or in what manner to exercise such powers. In case of a threatened insolvency, FINMA may impose more onerous requirements on us, including restrictions on the payment of dividends and interest. FINMA could also require us, directly or indirectly, for example, to alter our legal structure, including by separating lines of business into dedicated entities, with limitations on intra-group funding and certain guarantees, or to further reduce business risk levels in some manner. FINMA also has the ability to write down or convert into common equity the capital instruments and other liabilities of UBS Group AG, UBS AG and UBS Switzerland AG in connection with a resolution. Refer to "*If we experience financial difficulties, FINMA has the power to open resolution or liquidation proceedings or impose protective measures in relation to UBS Group AG, UBS AG or UBS Switzerland AG, and such proceedings or measures may have a material adverse effect on our shareholders and creditors*" below.

Market regulation: The implementation by the G20 countries of the commitment to require all standardized OTC derivative contracts to be traded on exchanges or trading facilities and cleared through central counterparties has had and will continue to have a significant effect on our OTC derivatives business, which is conducted primarily in the Investment Bank. These market changes are likely to reduce the revenue potential of certain lines of business for market participants generally, and we may be adversely affected. For example, we expect that, as a rule, the shift of OTC derivatives trading to a central clearing model will tend to reduce profit margins in these products. Also, these laws may have a material impact on the market infrastructure that we use, available platforms, collateral management and the way we interact with clients, and may cause us to incur material implementation costs. Margin requirements for non-cleared OTC derivatives will require significant changes to collateral agreements with counterparties and our clients' operational processes. In some jurisdictions implementation is ongoing, while rule-making and implementation are delayed in others. This may result in market dislocation, disruption of cross-border trading, and concentration of counterparty trading. It also affects our ability to implement the required changes and may limit our ability to transact with clients.

Some of the regulations applicable to UBS AG as a registered swap dealer with the Commodity Futures Trading Commission (CFTC) in the US, and certain regulations that will be applicable when UBS AG registers as a security-based swap dealer with the SEC, apply to UBS AG globally, including those relating to swap data reporting, recordkeeping, compliance and supervision. As a result, in some cases US rules will likely duplicate or conflict with legal requirements applicable to us elsewhere, including in Switzerland, and may place us at a competitive disadvantage to firms that are not required to register in the US with the SEC or CFTC.

In many instances, we provide services on a cross-border basis, and we are therefore sensitive to barriers restricting market access for third-country firms. In particular, efforts in the EU to harmonize the regime for third-country firms to access the European market may have the effect of creating new barriers that adversely affect our ability to conduct business in these jurisdictions from Switzerland. In addition, a number of jurisdictions are increasingly regulating cross-border activities based on determinations of equivalence of home country regulation, substituted compliance or similar principles of comity. A negative determination could limit our access to the market in those jurisdictions and may negatively influence our ability to act as a global firm. In addition, as such determinations are typically applied on a jurisdictional level rather than on an entity level, we will generally need to rely on jurisdictions' willingness to collaborate.

→ **Refer to the "Regulation and supervision" and "Regulatory and legal developments" sections of this report for more information**

If we are unable to maintain our capital strength, this may adversely affect our ability to execute our strategy, client franchise and competitive position

Maintaining our capital strength is a key component of our strategy. It enables us to support the growth of our businesses as well as to meet potential regulatory changes in capital requirements. It provides comfort to our stakeholders, forms the basis for our capital return policy, and contributes to our credit ratings. Our capital ratios are determined primarily by RWA, eligible capital and leverage ratio denominator (LRD), all of which may fluctuate based on a number of factors, some of which are outside our control.

Our eligible capital may be reduced by losses recognized within net profit or other comprehensive income. Eligible capital may also be reduced for other reasons, including certain reductions in the ratings of securitization exposures, acquisitions and divestments changing the level of goodwill, adverse currency movements affecting the value of equity, prudential adjustments that may be required due to the valuation uncertainty associated with certain types of positions, and changes in the value of certain pension fund assets and liabilities or in the interest rate and other assumptions used to calculate the changes in our net defined benefit obligation recognized in other comprehensive income.

RWA are driven by our business activities, by changes in the risk profile of our exposures, changes in our foreign currency exposures and foreign exchange rates and by regulation. For instance, substantial market volatility, a widening of credit spreads, which is a major driver of our value-at-risk, adverse currency movements, increased counterparty risk, deterioration in the economic environment, or increased operational risk could result in a rise in RWA. We have significantly reduced our market risk and credit risk RWA in recent years. However, increases in operational risk RWA, particularly those arising from litigation, regulatory and similar matters, and regulatory changes in the calculation of RWA and regulatory add-ons to RWA have offset a substantial portion of this reduction. Changes in the calculation of RWA, or, as discussed above, the imposition of additional supplemental RWA charges or multipliers applied to certain exposures, or the imposition of an RWA floor based on the standardized approach or other methodology changes could substantially increase our RWA. In addition, we may not be successful in our plans to further reduce RWA, either because we are unable to carry out fully the actions we have planned or because other business or regulatory developments or actions counteract the effects of our actions.

We are also subject to significantly higher leverage ratio-based capital and TLAC requirements under the revised Swiss Capital Adequacy Ordinance. The leverage ratio is a simple balance sheet measure and therefore limits balance sheet-intensive activities, such as lending, more than activities that are less balance sheet intensive, and it may constrain our business activities even if we satisfy other risk-based capital requirements. Our leverage ratio denominator is driven by, among other things, the level of client activity, including deposits and loans, foreign exchange rates, interest rates and other market factors. Many of these factors are wholly or partially outside our control.

→ **Refer to the "Regulatory and legal developments" section of this report for more information**

We may not be successful in the ongoing execution of our strategic plans

In October 2012, we announced a significant acceleration in the implementation of our strategy. The strategy included transforming our Investment Bank to focus it on its traditional strengths, very significantly reducing RWA and further strengthening our capital position, and significantly reducing costs and improving efficiency. We also set targets and expectations for our performance. We have substantially completed the transformation of our business. However, the risk remains that we may not succeed in executing the rest of our plans, or may need to delay them, that market events or other factors may adversely affect their implementation or that their effects may differ from those intended. Macroeconomic conditions, geopolitical uncertainty, the changes to the Swiss TBTF framework and the continuing costs of meeting new regulatory requirements have prompted us to adapt our targets and expectations in the past and we may need to do so again in the future.

We have substantially reduced the RWA and LRD usage of our Corporate Center – Non-core and Legacy Portfolio positions, but there is no assurance that we will continue to be able to exit the remaining positions as quickly as our plans suggest or that we will not incur significant losses in doing so. The continued illiquidity and complexity of many of our legacy risk positions in particular could make it difficult to sell or otherwise exit these positions and reduce the RWA and LRD usage associated with these exposures.

As part of our strategy, we also have a program underway to achieve significant incremental cost reductions, but a number of factors could negatively affect our plans. Higher permanent regulatory costs and business demand than we had originally anticipated have partly offset our gross cost reductions and delayed the achievement of cost reduction targets in the past, and we could continue to be challenged in the execution of our ongoing plans. Moreover, as is often the case with major effectiveness and efficiency programs, cost reduction plans involve significant risks, including that restructuring costs may be higher and may be recognized sooner than projected, that we may not be able to identify feasible cost reduction opportunities that are also consistent with our business goals, and that cost reductions may be realized later or may be less than we anticipate. Changes in our workforce as a result of outsourcing, nearshoring or offshoring or staff reductions may introduce new operational risks that, if not effectively addressed could affect our ability to recognize the desired cost and other benefits from such changes or could result in operational losses. Such changes can also lead to expenses recognized in the income statement well in advance of the cost savings intended to be achieved through such workforce strategy, for example, if provisions for real estate lease contracts need to be recognized or when, in connection with the closure or disposal of non-profitable operations, foreign currency translation losses previously recorded in other comprehensive income are reclassified to the income statement.

As we implement our effectiveness and efficiency programs, we may also experience unintended consequences, such as the loss or degradation of capabilities that we need in order to maintain our competitive position, achieve our targeted returns or meet existing or new regulatory requirements and expectations.

Material legal and regulatory risks arise in the conduct of our business

As a global financial services firm operating in more than 50 countries, we are subject to many different legal, tax and regulatory regimes and we are subject to extensive regulatory oversight and exposed to significant liability risk. We are subject to a large number of claims, disputes, legal proceedings and government investigations, and we expect that our ongoing business activities will continue to give rise to such matters in the future. The extent of our financial exposure to these and other matters is material and could substantially exceed the level of provisions that we have established. We are not able to predict the financial and non-financial consequences these matters may have when resolved. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for us.

Our settlements with governmental authorities in connection with foreign exchange, LIBOR and benchmark interest rates starkly illustrate the significantly increased level of financial and reputational risk now associated with regulatory matters in major jurisdictions. In December 2012, we announced settlements totaling approximately CHF 1.4 billion in fines by and disgorgements to US, UK and Swiss authorities. We entered into a non-prosecution agreement (NPA) with the US Department of Justice (DOJ), and UBS Securities Japan Co. Ltd. pleaded guilty to one count of wire fraud relating to the manipulation of certain benchmark interest rates. In May 2015, the DOJ exercised its discretion to terminate the NPA based on its determination that certain UBS employees had committed a US crime related to foreign exchange matters. As a consequence, UBS AG has pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, and paid a USD 203 million fine and is subject to a three-year term of probation. The very large fines and disgorgement amounts were assessed against us, and we were required to enter guilty pleas, despite our full cooperation with the authorities in the investigations, and despite our receipt of conditional leniency or conditional immunity from antitrust authorities in a number of jurisdictions, including the US and Switzerland. We understand that, in determining the consequences for us, the authorities considered the fact that it had in the recent past been determined that we had engaged in serious misconduct in several other matters.

Ever since our material losses arising from the 2007 – 2009 financial crisis, we have been subject to a very high level of regulatory scrutiny and to certain regulatory measures that constrain our strategic flexibility. While we believe that we have remediated the deficiencies that led to those losses as well as to the unauthorized trading incident announced in September 2011, the effects on our reputation and relationships with regulatory authorities of the LIBOR-related settlements of 2012 and settlements with some regulators of matters related to our foreign exchange and precious metals business, have proven to be more difficult to overcome. We are in active dialog with our regulators concerning the actions that we are taking to improve our operational risk management and control framework, but there can be no assurance that our efforts will have the desired effects. As a result of this history, our level of risk with respect to regulatory enforcement may be greater than that of some of our peers.

→ **Refer to "Note 20 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information**

Operational risks affect our business

Our businesses depend on our ability to process a large number of transactions, many of which are complex, across multiple and diverse markets in different currencies, to comply with requirements of many different legal and regulatory regimes to which we are subject and to prevent, or promptly detect and stop, unauthorized, fictitious or fraudulent transactions. We also rely on access to, and on the functioning of, systems maintained by third parties, including clearing systems, exchanges, information processors and central counterparties. Failure of our or third-party systems could have an adverse effect on us. Our operational risk management and control systems and processes are designed to help ensure that the risks associated with our activities, including those arising from process error, failed execution, misconduct, unauthorized trading, fraud, system failures, financial crime, cyberattacks, breaches of information security and failure of security and physical protection, are appropriately controlled. If our internal controls fail or prove ineffective in identifying and remedying these risks, we could suffer operational failures that might result in material losses, such as the loss from the unauthorized trading incident announced in September 2011.

We and other financial services firms have been subject to breaches of security and to cyber and other forms of attack, some of which are sophisticated and targeted attacks intended to gain access to confidential information or systems, disrupt service or destroy data. It is possible that we may not be able to anticipate, detect or recognize threats to our systems or data or that our preventative measures will not be effective to prevent an attack or a security breach. A successful breach or circumvention of security of our systems or data could have significant negative consequences for us, including disruption of our operations, misappropriation of confidential information concerning us or our customers, damage to our systems, financial losses for us or our customers, violations of data privacy and similar laws, litigation exposure and damage to our reputation.

A major focus of US and other countries' governmental policies relating to financial institutions in recent years has been fighting money laundering and terrorist financing. We are required to maintain effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing, and to verify the identity of our clients. We are also subject to laws and regulations related to corrupt and illegal payments to government officials by others, such as the US Foreign Corrupt Practices Act and the UK Bribery Act. We have implemented policies, procedures and internal controls that are designed to comply with such laws and regulations. Failure to maintain and implement adequate programs to combat money laundering, terrorist financing or corruption, or any failure of our programs in these areas, could have serious consequences both from legal enforcement action and from damage to our reputation.

As a result of new and changed regulatory requirements and the changes we have made in our legal structure to meet regulatory requirements and improve our resolvability, the volume, frequency and complexity of our regulatory and other reporting has significantly increased. Regulators have also significantly increased expectations for our internal reporting and data aggregation. We have incurred and continue to incur significant costs to implement infrastructure to meet these requirements. Failure to timely and accurately meet external reporting requirements or to meet regulatory expectations for internal reporting could result in enforcement action or other adverse consequences for us.

Certain types of operational control weaknesses and failures could also adversely affect our ability to prepare and publish accurate and timely financial reports. Following the unauthorized trading incident announced in September 2011, management determined that we had a material weakness in our internal control over financial reporting as of the end of 2010 and 2011, although this did not affect the reliability of our financial statements for either year.

In addition, despite the contingency plans we have in place, our ability to conduct business may be adversely affected by a disruption in the infrastructure that supports our businesses and the communities in which we are located. This may include a disruption due to natural disasters, pandemics, civil unrest, war or terrorism and involve electrical, communications, transportation or other services used by us or third parties with whom we conduct business.

Our reputation is critical to the success of our business

Our reputation is critical to the success of our strategic plans, business and prospects. Reputational damage is difficult to reverse, and improvements tend to be slow and difficult to measure. Our very large losses during the financial crisis, the investigations into our cross-border private banking services to US private clients and the settlements entered into with US authorities with respect to this matter, and other events seriously damaged our reputation. Reputational damage was an important factor in our loss of clients and client assets across our asset-gathering businesses, and contributed to our loss of, and difficulty in attracting, staff in 2008 and 2009. These developments had short-term and also more lasting adverse effects on our financial performance, and we recognized that restoring our reputation would be essential to maintaining our relationships with clients, investors, regulators and the general public, as well as with our employees. The unauthorized trading incident announced in September 2011 and our involvement in the LIBOR matter and investigations relating to our foreign exchange and precious metals business have also adversely affected our reputation. Any further reputational damage could have a material adverse effect on our operational results and financial condition and on our ability to achieve our strategic goals and financial targets.

Performance in the financial services industry is affected by market conditions and the macroeconomic climate

Our businesses are materially affected by market and economic conditions. Adverse changes in interest rates, credit spreads, securities' prices, market volatility and liquidity, foreign exchange rates, commodity prices, and other market fluctuations, as well as changes in investor sentiment, can affect our earnings and ultimately our financial and capital positions.

A market downturn and weak macroeconomic conditions can be precipitated by a number of factors, including geopolitical events, changes in monetary or fiscal policy, trade imbalances, natural disasters, pandemics, civil unrest, acts of violence, war or terrorism. Macroeconomic and political developments can have unpredictable and destabilizing effects and, because financial markets are global and highly interconnected, even local and regional events can have widespread impact well beyond the countries in which they occur. We are closely monitoring developments in Europe following the UK referendum on EU membership, with potential adverse consequences for the UK economy and for the recovery of a weak EU economy. Moreover, if individual countries impose restrictions on cross-border payments or other exchange or capital controls, or change their currency (for example, if one or more countries should leave the eurozone), we could suffer losses from enforced default by counterparties, be unable to access our own assets, and / or be impeded in, or prevented from, managing our risks.

We could be materially affected if a crisis develops, regionally or globally, as a result of disruptions in emerging markets or developed markets that are susceptible to macroeconomic and political developments, or as a result of the failure of a major market participant. Our strategic plans depend more heavily on our ability to generate growth and revenue in emerging markets, including China, causing us to be more exposed to the risks associated with such markets. The binding scenario we use in our combined stress test framework reflects these aspects, and assumes a hard landing in China leading to severe contagion of Asian and emerging markets economies and at the same time multiple debt restructurings in Europe, related direct losses for European banks and fear of a eurozone breakup severely affecting developed markets such as Switzerland, the UK and the US.

→ **Refer to the "Risk measurement" section of this report for more information on our stress testing framework**

We have material exposures to a number of markets, and the regional balance of our business mix also exposes us to risk. Our Investment Bank's Equities business, for example, is more heavily weighted to Europe and Asia, and within this business our derivatives business is more heavily weighted to structured products for wealth management clients, in particular with European and Asian underlyings. Turbulence in these markets can therefore affect us more than other financial service providers.

A decrease in business and client activity and market volumes, for example, as a result of significant market volatility, adversely affects transaction fees, commissions and margins, particularly in our wealth management businesses and in the Investment Bank, as we experienced in 2016. A market downturn is likely to reduce the volume and valuations of assets that we manage on behalf of clients, reducing our asset and performance-based fees, and could also cause a decline in the value of assets that we own and account for as investments or trading positions. On the other hand, reduced market liquidity or volatility limit trading opportunities and impede our ability to manage risks, impacting both trading income and performance-based fees.

Credit risk is an integral part of many of our activities, including lending, underwriting and derivatives activities. Worsening economic conditions and adverse market developments could lead to impairments and defaults on credit exposures and on our trading and investment positions. Losses may be exacerbated by declines in the value of collateral we hold. We are exposed to credit risk in activities, such as our prime brokerage, reverse repurchase and Lombard lending, as the value or liquidity of the assets against which we provide financing may decline rapidly. Macroeconomic developments, such as the continuing strength of the Swiss franc and its effect on Swiss exports, the adoption of negative interest rates by the Swiss National Bank or other central banks or any return of crisis conditions within the eurozone or the EU, and the potential implications of the decision in Switzerland to reinstate immigration quotas for EU and European Economic Area citizens, could also adversely affect the Swiss economy, our business in Switzerland in general and, in particular, our Swiss mortgage and corporate loan portfolios.

The aforementioned developments have in the past affected, and could materially affect, the financial performance of business divisions and of UBS as a whole, including through impairment of goodwill and the adjustment of deferred tax asset levels.

UK referendum on EU membership

Following the outcome of the June 2016 referendum on the UK's membership in the EU, the UK government has stated that it intends to invoke Article 50 of the Treaty on European Union by no later than the end of March 2017. This will trigger a two-year period during which the UK will negotiate its withdrawal agreement with the EU. Barring any changes to this time schedule, the UK is expected to leave the EU in early 2019. The nature of the UK's future relationship with the EU remains unclear. Any future limitations on providing financial services into the EU from our UK operations could require us to make potentially significant changes to our operations in the UK and our legal structure. We are evaluating the potential effects of a UK exit from the EU and potential mitigating actions, although the effects and actions may vary considerably depending on the timing of withdrawal and the nature of any transition or successor agreements with the EU.

We may not be successful in implementing changes in our wealth management businesses to meet changing market, regulatory and other conditions

Our wealth and asset management businesses operate in an environment of increasing regulatory scrutiny and changing standards also with respect to fiduciary and other standards of care and the focus on mitigating or eliminating conflicts of interest between a manager or advisor and the client, which require effective implementation across the global systems and processes of investment managers and other industry participants. For example, the US Department of Labor has adopted a rule expanding the definition of "fiduciary" under the Employee Retirement Income Security Act (ERISA), which will require us to comply with fiduciary standards under ERISA when dealing with certain retirement plans. We will likely be required to materially change business processes, policies and the terms on which we interact with these clients in order to comply with these rules if and when they become effective.

We are exposed to possible outflows of client assets in our asset-gathering businesses and to changes affecting the profitability of our wealth management businesses and we may not be successful in implementing the business changes needed to address them.

We experienced substantial net outflows of client assets in our wealth management and asset management businesses in 2008 and 2009. The net outflows resulted from a number of different factors, including our substantial losses, damage to our reputation, the loss of client advisors, difficulty in recruiting qualified client advisors and tax, legal and regulatory developments concerning our cross-border private banking business. Many of these factors have been successfully addressed. However, long-term changes affecting the cross-border private banking business model will continue to affect client flows in the wealth management businesses for an extended period of time.

We have experienced cross-border outflows over a number of years as a result of heightened focus by fiscal authorities on cross-border investment and fiscal amnesty programs, in anticipation of the implementation in Switzerland of the global automatic exchange of tax information, and as a result of the measures we have implemented in response to these changes. Further changes in local tax laws or regulations and their enforcement, the implementation of cross-border tax information exchange regimes, national tax amnesty or enforcement programs or similar actions may affect our clients' ability or willingness to do business with us and result in additional cross-border outflows.

In recent years, our Wealth Management net new money inflows have come predominantly from clients in Asia Pacific and in the ultra high net worth segment globally. Over time, inflows from these lower-margin segments and markets have been replacing outflows from higher-margin segments and markets, in particular cross-border clients. This dynamic, combined with changes in client product preferences as a result of which low-margin products account for a larger share of our revenues than in the past, has put downward pressure on our Wealth Management's margins.

Initiatives that we may implement to overcome the effects of changes in the business environment on our profitability, balance sheet and capital positions give no assurance that we will be able to counteract those effects and may cause net new money outflows and reductions in client deposits, as happened with our balance sheet and capital optimization program in 2015. In addition, we have made changes to our business offerings and pricing practices in line with the Swiss Supreme Court case concerning retrocessions and other industry developments. These changes may adversely affect our margins on these products, and our current offering may be less attractive to clients than the products it replaces. There is no assurance that we will be successful in our efforts to offset the adverse effect of these or similar trends and developments.

We may be unable to identify or capture revenue or competitive opportunities, or retain and attract qualified employees

The financial services industry is characterized by intense competition, continuous innovation, restrictive, detailed, and sometimes fragmented, regulation and ongoing consolidation. We face competition at the level of local markets and individual business lines, and from global financial institutions that are comparable to us in their size and breadth. Barriers to entry in individual markets and pricing levels are being eroded by new technology. We expect these trends to continue and competition to increase. Our competitive strength and market position could be eroded if we are unable to identify market trends and developments, do not respond to them by devising and implementing adequate business strategies, adequately developing or updating our technology, particularly in trading businesses, and our digital channels and tools, or are unable to attract or retain the qualified people needed to carry them out.

The amount and structure of our employee compensation is affected not only by our business results but also by competitive factors and regulatory considerations.

In recent years, in response to the demands of various stakeholders, including regulatory authorities and shareholders, and in order to better align the interests of our staff with those of other stakeholders, we have made changes to the terms of compensation awards. Among other things, we have introduced individual caps on the proportion of fixed to variable pay for the GEB members, as well as certain other employees. We have increased average deferral periods for stock awards, expanded forfeiture provisions, and, to a more limited extent, introduced claw-back provisions for certain awards linked to business performance.

Constraints on the amount or structure of employee compensation, higher levels of deferral, performance conditions and other circumstances triggering the forfeiture of unvested awards may adversely affect our ability to retain and attract key employees. The loss of key staff and the inability to attract qualified replacements, depending on which and how many roles are affected, could seriously compromise our ability to execute our strategy and to successfully improve our operating and control environment and may affect our business performance.

We depend on our risk management and control processes to avoid or limit potential losses in our businesses

Controlled risk-taking is a major part of the business of a financial services firm. Some losses from risk-taking activities are inevitable, but to be successful over time, we must balance the risks we take against the returns we generate. We must, therefore, diligently identify, assess, manage and control our risks, not only in normal market conditions but also as they might develop under more extreme, stressed conditions, when concentrations of exposures can lead to severe losses.

As seen during the financial crisis of 2007–2009, we are not always able to prevent serious losses arising from extreme or sudden market events that are not anticipated by our risk measures and systems. The deterioration of financial markets since the beginning of the crisis was extremely severe by historical standards. Value-at-risk, a statistical measure for market risk, is derived from historical market data, and thus by definition could not have anticipated the losses suffered in the stressed conditions of the crisis. Moreover, stress loss and concentration controls and the dimensions in which we aggregated risk to identify potentially highly correlated exposures proved to be inadequate. As a result, we recorded substantial losses on fixed income trading positions, particularly in 2008 and 2009. Notwithstanding the steps we have taken to strengthen our risk management and control framework, we could suffer further losses in the future if, for example:

- we do not fully identify the risks in our portfolio, in particular risk concentrations and correlated risks;
- our assessment of the risks identified or our response to negative trends proves to be untimely, inadequate, insufficient or incorrect;
- markets move in ways that we do not expect – in terms of their speed, direction, severity or correlation – and our ability to manage risks in the resulting environment is, therefore, affected;
- third parties to whom we have credit exposure or whose securities we hold for our own account are severely affected by events not anticipated by our models, and accordingly we suffer defaults and impairments beyond the level implied by our risk assessment; or
- collateral or other security provided by our counterparties proves inadequate to cover their obligations at the time of their default.

We hold positions related to real estate in various countries, and could suffer losses on these positions. These positions include a substantial Swiss mortgage portfolio. Although management believes that this portfolio is prudently managed, we could nevertheless be exposed to losses if the concerns expressed by the Swiss National Bank and others about unsustainable price escalation in the Swiss real estate market come to fruition. In addition, we continue to hold substantial legacy risk positions, primarily in Corporate Center – Non-core and Legacy Portfolio. They remain illiquid in many cases, and we continue to be exposed to the risk that they may again deteriorate in value.

We also manage risk on behalf of our clients in our asset and wealth management businesses. The performance of assets we hold for our clients in these activities could be adversely affected by the same factors mentioned above. If clients suffer losses or the performance of their assets held with us is not in line with relevant benchmarks against which clients assess investment performance, we may suffer reduced fee income and a decline in assets under management, or withdrawal of mandates.

Investment positions, such as equity investments made as part of strategic initiatives and seed investments made at the inception of funds that we manage, may also be affected by market risk factors. These investments are often not liquid and generally are intended or required to be held beyond a normal trading horizon. They are subject to a distinct control framework. Deteriorations in the fair value of these positions would have a negative effect on our earnings.

Liquidity and funding management are critical to our ongoing performance

The viability of our business depends on the availability of funding sources, and our success depends on our ability to obtain funding at times, in amounts, for tenors and at rates that enable us to efficiently support our asset base in all market conditions. The volume of our funding sources has generally been stable, but could change in the future due to, among other things, general market disruptions or widening credit spreads, which could also influence the cost of funding. A substantial part of our liquidity and funding requirements is met using short-term unsecured funding sources, including retail and wholesale deposits and the regular issuance of money market securities. A change in the availability of short-term funding could occur quickly.

Moreover, more stringent capital and liquidity and funding requirements will likely lead to increased competition for both secured funding and deposits as a stable source of funding, and to higher funding costs. The addition of loss-absorbing debt as a component of capital requirements, the regulatory requirements to maintain minimum TLAC at holding company level and / or at subsidiaries level, as well as the power of resolution authorities to bail in TLAC and other debt obligations, and uncertainty as to how such powers will be exercised, will increase our cost of funding and could potentially increase the total amount of funding required absent other changes in our business.

Reductions in our credit ratings may adversely affect the market value of the securities and other obligations and increase our funding costs, in particular with regard to funding from wholesale unsecured sources, and can affect the availability of certain kinds of funding. In addition, as we experienced in connection with Moody's downgrade of our long-term rating in June 2012, rating downgrades can require us to post additional collateral or make additional cash payments under master trading agreements relating to its derivatives businesses. Our credit ratings, together with our capital strength and reputation, also contribute to maintaining client and counterparty confidence and it is possible that rating changes could influence the performance of some of our businesses.

Our financial results may be negatively affected by changes to assumptions and valuations, as well as changes to accounting standards

We prepare our consolidated financial statements in accordance with IFRS. The application of these accounting standards requires the use of judgment based on estimates and assumptions that may involve significant uncertainty at the time they are made. This is the case, for example, with respect to the measurement of fair value of financial instruments, the recognition of deferred tax assets, or the assessment of the impairment of goodwill. Such judgments, including the underlying estimates and assumptions, which encompass historical experience, expectations of the future and other factors are regularly evaluated to determine their continuing relevance based on current conditions. Using different assumptions could cause the reported results to differ. Changes in assumptions, or failure to make the changes necessary to reflect evolving market conditions, may have a significant effect on the financial statements in the periods when changes occur. Moreover, if the estimates and assumptions in future periods deviate from the current outlook, our financial results may also be negatively affected.

Changes to IFRS or interpretations thereof, may cause our future reported results and financial position to differ from current expectations, or historical results to differ from those previously reported due to the adoption of accounting standards on a retrospective basis. Such changes may also affect our regulatory capital and ratios. Currently, there are a number of issued but not yet effective IFRS changes, as well as potential IFRS changes, some of which could be expected to affect our reported results, financial position and regulatory capital in the future. For example, IFRS 9, when fully adopted, will require us to record loans at inception net of expected losses instead of recording credit losses on an incurred loss basis and is generally expected to result in an increase in recognized credit loss allowances.

→ **Refer to the "Critical accounting estimates and judgments" section and "Note 1 Summary of significant accounting policies" in the "Consolidated financial statements" section of this report for more information**

The effect of taxes on our financial results is significantly influenced by reassessments of our deferred tax assets

Our effective tax rate is highly sensitive both to our performance and our expectation of future profitability. Based on prior years' tax losses, we have recognized deferred tax assets (DTAs) reflecting the probable recoverable level based on future taxable profit as informed by our business plans. If our performance is expected to produce diminished taxable profit in future years, particularly in the US or the UK, we may be required to write down all or a portion of the currently recognized DTAs through the income statement. This would have the effect of increasing our effective tax rate in the year in which any write-downs are taken. Conversely, if our performance is expected to improve, particularly in the US or the UK, we could potentially recognize additional DTAs as a result of that assessment. The effect of doing so would be to significantly reduce our effective tax rate in years in which additional DTAs are recognized and to increase our effective tax rate in future years. We generally revalue our deferred tax assets in the second half of the financial year based on a reassessment of future profitability taking into account updated business plan forecasts. Our results in recent periods have demonstrated that changes in the recognition of DTAs can have a very significant effect on our reported results.

Our full-year effective tax rate could also change if aggregate tax expenses in respect of profits from branches and subsidiaries without loss coverage differ from what is expected, or in case of changes to the forecast period used for DTA recognition purposes as part of the aforementioned reassessment of future profitability. Moreover, tax laws or the tax authorities in countries where we have undertaken legal structure changes may prevent the transfer of tax losses incurred in one legal entity to newly organized or reorganized subsidiaries or affiliates or may impose limitations on the utilization of tax losses that relate to businesses formerly conducted by the transferor. Were this to occur in situations where there were also limited planning opportunities to utilize the tax losses in the originating entity, the DTAs associated with such tax losses could be written down through the income statement.

Our effective tax rate is also sensitive to any future reductions in statutory tax rates, particularly in the US and Switzerland, which would cause the expected future tax benefit from items such as tax loss carry-forwards in the affected locations to diminish in value. This in turn would cause a write-down of the associated DTAs. For example, for every percentage point reduction in the US federal corporate income tax rate, we would expect a CHF 0.2 billion decrease in the Group's deferred tax assets. In addition, statutory and regulatory changes, as well as changes to the way in which courts and tax authorities interpret tax laws could cause the amount of taxes ultimately paid by us to materially differ from the amount accrued.

Our stated capital returns objective is based, in part, on capital ratios that are subject to regulatory change and may fluctuate significantly

Our capital return policy envisages total capital returns to shareholders of at least 50% of net profit attributable to shareholders, provided that we maintain a fully applied CET1 capital ratio of at least 13% and consistent with our objective of maintaining a post-stress fully applied CET1 capital ratio of at least 10%.

Our ability to maintain a fully applied CET1 capital ratio of at least 13% is subject to numerous risks, including the financial results of our businesses, the effect of changes to capital standards such as those recently introduced in Switzerland, methodologies and interpretation that may adversely affect the calculation of our fully applied CET1 capital ratio, the imposition of risk add-ons or capital buffers, and the application of additional capital, liquidity and similar requirements to subsidiaries. Refer to the discussion of these risks earlier in this section and in particular to *"Continuing low or negative interest rates may have a detrimental effect on our capital strength, liquidity and funding position, and profitability"* above for more information on the effect on capital of changes to pension plan defined benefit obligations.

To calculate our post-stress CET1 capital ratio, we forecast capital one year ahead based on internal projections of earnings, expenses, distributions to shareholders and other factors affecting CET1 capital, including our net defined benefit plan assets and liabilities. We also forecast one-year developments in RWA. We adjust these forecasts based on assumptions as to how they may change as a result of a severe stress event. We then further deduct from capital the stress loss estimated using our combined stress test (CST) framework.

Our CST framework relies on various risk exposure measurement methodologies, which are predominantly proprietary, on our selection and definition of potential stress scenarios and on our assumptions regarding estimates of changes in a wide range of macroeconomic variables and certain idiosyncratic events for each of those scenarios. We periodically review these methodologies. Assumptions are also subject to periodic review and change on a regular basis. Our risk exposure measurement methodologies may change in response to developing market practice and enhancements to our own risk control environment, and input parameters for models may change due to changes in positions, market parameters and other factors.

Our stress scenarios, the events comprising a scenario and the assumed shocks and market and economic consequences applied in each scenario are subject to periodic review and change. Our business plans and forecasts are subject to inherent uncertainty, our choice of stress test scenarios and the market and macroeconomic assumptions used in each scenario are based on judgments and assumptions about possible future events. Our risk exposure measurement methodologies are subject to inherent limitations, rely on numerous assumptions as well as on data which may have inherent limitations. In particular, certain data is not available on a monthly basis and we may therefore rely on prior-month or prior-quarter data as an estimate. Changes to our results, business plans and forecasts, in the assumptions used to reflect the effect of a stress event on our business forecasts or in the results of our CST, could have a material effect on our stress scenario results and on the calculation of our post-stress fully applied CET1 capital ratio. In assessing whether our post-stress fully applied CET1 capital ratio objective has been met at any time, we may consider both the current ratio and our expectation as to its future developments.

As UBS Group AG is a holding company, its operating results, financial condition and ability to pay dividends and other distributions and / or to pay its obligations in the future depend on funding, dividends and other distributions received directly or indirectly from its subsidiaries, which may be subject to restrictions

UBS Group AG's ability to pay dividends and other distributions and to pay its obligations in the future will depend on the level of funding, dividends and other distributions, if any, received from UBS AG and other subsidiaries. The ability of such subsidiaries to make loans or distributions, directly or indirectly, to UBS Group AG may be restricted as a result of several factors, including restrictions in financing agreements and the requirements of applicable law and regulatory, fiscal or other restrictions. In particular, UBS Group AG's direct and indirect subsidiaries, including UBS AG, UBS Switzerland AG, UBS Limited and UBS Americas Holding LLC, are subject to laws and regulations that restrict dividend payments, authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to UBS Group AG, could impact their ability to repay any loans made to, or other investments in, such subsidiary by UBS Group AG or another member of the Group, or limit or prohibit transactions with affiliates, and could be subject to additional restrictions in the future. Restrictions and regulatory actions of this kind could impede access to funds that UBS Group AG may need to make payments. In addition, UBS Group AG's right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to all prior claims of the subsidiary's creditors.

Our capital instruments may contractually prevent UBS Group AG from proposing the distribution of dividends to shareholders, other than in the form of shares, if we do not pay interest on these instruments.

Furthermore, UBS Group AG may guarantee some of the payment obligations of certain of the Group's subsidiaries from time to time. These guarantees may require UBS Group AG to provide substantial funds or assets to subsidiaries or their creditors or counterparties at a time when UBS Group AG is in need of liquidity to fund its own obligations.

The credit ratings of UBS Group AG or its subsidiaries used for funding purposes could be lower than the ratings of the Group's operating subsidiaries, which may adversely affect the market value of the securities and other obligations of UBS Group AG or those subsidiaries on a standalone basis.

If we experience financial difficulties, FINMA has the power to open resolution or liquidation proceedings or impose protective measures in relation to UBS Group AG, UBS AG or UBS Switzerland AG, and such proceedings or measures may have a material adverse effect on our shareholders and creditors

Under the Swiss Banking Act, FINMA is able to exercise broad statutory powers with respect to Swiss banks and Swiss parent companies of financial groups, such as UBS AG, UBS Group AG and UBS Switzerland AG, if there is justified concern that the entity is over-indebted, has serious liquidity problems or, after the expiration of any relevant deadline, no longer fulfils capital adequacy requirements. Such powers include ordering protective measures, instituting restructuring proceedings (and exercising any Swiss resolution powers in connection therewith), and instituting liquidation proceedings, all of which may have a material adverse effect on our shareholders and creditors or may prevent UBS Group AG, UBS AG or UBS Switzerland AG from paying dividends or making payments on debt obligations.

Protective measures may include, but are not limited to, certain measures that could require or result in a moratorium on, or the deferment of, payments. We would have limited ability to challenge any such protective measures, and creditors would have no right under Swiss law or in Swiss courts to reject them, seek their suspension, or challenge their imposition, including measures that require or result in the deferment of payments.

If restructuring proceedings are opened with respect to UBS Group AG, UBS AG or UBS Switzerland AG, the resolution powers that FINMA may exercise include the power to (i) transfer all or some of the assets, debt and other liabilities, and contracts of the entity subject to proceedings to another entity, (ii) stay for a maximum of two business days the termination of, or the exercise of rights to terminate, netting rights, rights to enforce or dispose of certain types of collateral or rights to transfer claims, liabilities or certain collateral, under contracts to which the entity subject to proceedings is a party, and / or (iii) partially or fully write down the equity capital and, if such equity capital is fully written down, convert into equity or write down the capital and other debt instruments of the entity subject to proceedings. Shareholders and creditors would have no right to reject, or to seek the suspension of, any restructuring plan pursuant to which such resolution powers are exercised. They would have only limited rights to challenge any decision to exercise resolution powers or to have that decision reviewed by a judicial or administrative process or otherwise.

Upon full or partial write-down of the equity and of the debt of the entity subject to restructuring proceedings, the relevant shareholders and creditors would receive no payment in respect of the equity and debt that is written down, the write-down would be permanent, and the investors would not, at such time or at any time thereafter, receive any shares or other participation rights, or be entitled to any write-up or any other compensation in the event of a potential recovery of the debtor. If FINMA orders the conversion of debt of the entity subject to restructuring proceedings into equity, the securities received by the investors may be worth significantly less than the original debt and may have a significantly different risk profile, and such conversion would also dilute the ownership of existing shareholders. In addition, creditors receiving equity would be effectively subordinated to all creditors in the event of a subsequent winding up, liquidation or dissolution of the entity subject to restructuring proceedings, which would increase the risk that investors would lose all or some of their investment.

FINMA has broad powers and significant discretion in the exercise of its powers in connection with a resolution proceeding. Furthermore, certain categories of debt obligations, such as certain types of deposits, are subject to preferential treatment. As a result, holders of obligations of an entity subject to a Swiss restructuring proceeding may have their obligations written down or converted into equity even though obligations ranking on par with or junior to such obligations are not written down or converted.

Moreover, FINMA has expressed its preference for a "single-point-of-entry" resolution strategy for global systemically important financial groups, led by the bank's home supervisory and resolution authorities and focused on the top-level group company. This would mean that, if UBS AG or one of UBS Group AG's other subsidiaries faces substantial losses, FINMA could open restructuring proceedings with respect to UBS Group AG only and order a bail-in of its liabilities if there is a justified concern that in the near future such losses could impact UBS Group AG. In that case, it is possible that the obligations of UBS AG or any other subsidiary of UBS Group AG would remain unaffected and outstanding, while the equity capital and the capital and other debt instruments of UBS Group AG would be written down and / or converted into equity of UBS Group AG in order to recapitalize UBS AG or such other subsidiary.

Building a better working world

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of

UBS AG

We have audited the accompanying consolidated balance sheets of UBS AG and subsidiaries as of 31 December 2016 and 2015, and the related consolidated income statements, statements of comprehensive income, changes in equity and cash flows, and notes thereto, for each of the three years in the period ended 31 December 2016. These financial statements are the responsibility of the Company's Board of Directors. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of UBS AG and subsidiaries at 31 December 2016 and 2015, and the consolidated results of their operations and their cash flows for each of the three years in the period ended 31 December 2016, in conformity with International Financial Reporting Standards, as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), UBS AG and subsidiaries' internal control over financial reporting as of 31 December 2016, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated 9 March 2017 expressed an unqualified opinion thereon.

Ernst & Young Ltd

Ernst & Young Ltd

Basel, 9 March 2017

UBS AG consolidated financial statements

Primary financial statements

Audited I

Income statement

		For the year ended			% change from
CHF million	Note	31.12.16	31.12.15	31.12.14	31.12.15
Interest income	3	13,782	13,178	13,194	5
Interest expense	3	(7,399)	(6,449)	(6,639)	15
Net interest income	3	6,383	6,729	6,555	(5)
Credit loss (expense) / recovery	11	(37)	(117)	(78)	(68)
Net interest income after credit loss expense		6,346	6,612	6,477	(4)
Net fee and commission income	4	16,447	17,184	17,076	(4)
Net trading income	3	4,943	5,696	3,841	(13)
Other income	5	685	1,112	632	(38)
Total operating income		28,421	30,605	28,026	(7)
Personnel expenses	6	15,591	15,954	15,280	(2)
General and administrative expenses	7	7,690	8,219	9,377	(6)
Depreciation and impairment of property, equipment and software	14	980	918	817	7
Amortization and impairment of intangible assets	15	91	107	83	(15)
Total operating expenses		24,352	25,198	25,557	(3)
Operating profit / (loss) before tax		4,069	5,407	2,469	(25)
Tax expense / (benefit)	8	781	(908)	(1,180)	
Net profit / (loss)		3,288	6,314	3,649	(48)
Net profit / (loss) attributable to preferred noteholders		78	77	142	1
Net profit / (loss) attributable to non-controlling interests		4	3	5	33
Net profit / (loss) attributable to shareholders		3,207	6,235	3,502	(49)

Statement of comprehensive income

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Comprehensive income attributable to shareholders			
Net profit / (loss)	3,207	6,235	3,502
Other comprehensive income that may be reclassified to the income statement			
Foreign currency translation			
Foreign currency translation movements, before tax	251	(174)	1,839
Foreign exchange amounts reclassified to the income statement from equity	126	(90)	2
Income tax relating to foreign currency translation movements	(84)	(1)	(7)
Subtotal foreign currency translation, net of tax	293	(266)	1,834
Financial assets available for sale			
Net unrealized gains / (losses) on financial assets available for sale, before tax	240	180	335
Impairment charges reclassified to the income statement from equity	5	1	76
Realized gains reclassified to the income statement from equity	(372)	(298)	(244)
Realized losses reclassified to the income statement from equity	25	45	25
Income tax relating to net unrealized gains / (losses) on financial assets available for sale	28	8	(52)
Subtotal financial assets available for sale, net of tax	(73)	(64)	140
Cash flow hedges			
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	246	550	2,086
Net realized (gains) / losses reclassified to the income statement from equity	(1,082)	(1,199)	(1,197)
Income tax relating to cash flow hedges	170	131	(196)
Subtotal cash flow hedges, net of tax	(666)	(518)	693
Total other comprehensive income that may be reclassified to the income statement, net of tax	(447)	(848)	2,667
Other comprehensive income that will not be reclassified to the income statement			
Defined benefit plans			
Gains / (losses) on defined benefit plans, before tax	(876)	322	(1,454)
Income tax relating to defined benefit plans	52	(19)	247
Subtotal defined benefit plans, net of tax	(824)	304	(1,208)
Own credit on financial liabilities designated at fair value			
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	(120)		
Income tax relating to own credit on financial liabilities designated at fair value	5		
Subtotal own credit on financial liabilities designated at fair value, net of tax	(115)		
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(939)	304	(1,208)
Total other comprehensive income	(1,386)	(545)	1,459
Total comprehensive income attributable to shareholders	1,820	5,690	4,961

Table continues on the next page.

Statement of comprehensive income (continued)

Table continued from previous page.

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Comprehensive income attributable to preferred noteholders			
Net profit / (loss)	78	77	142
Other comprehensive income that will not be reclassified to the income statement			
Foreign currency translation movements, before tax	271	(59)	119
Income tax relating to foreign currency translation movements	0	0	0
Subtotal foreign currency translation, net of tax	271	(59)	119
Total other comprehensive income that will not be reclassified to the income statement, net of tax	271	(59)	119
Total comprehensive income attributable to preferred noteholders	349	18	260
Comprehensive income attributable to non-controlling interests			
Net profit / (loss)	4	3	5
Other comprehensive income that may be reclassified to the income statement			
Other comprehensive income that may be reclassified to the income statement, before tax	0	0	0
Income tax relating to other comprehensive income that may be reclassified to the income statement	0	0	0
Total other comprehensive income that may be reclassified to the income statement, net of tax	0	0	0
Other comprehensive income that will not be reclassified to the income statement			
Foreign currency translation movements, before tax	0	(2)	3
Income tax relating to foreign currency translation movements	0	0	0
Subtotal foreign currency translation, net of tax	0	(2)	3
Gains / (losses) on defined benefit plans, before tax	0	0	0
Income tax relating to defined benefit plans	0	0	0
Subtotal defined benefit plans, net of tax	0	0	0
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	(2)	3
Total other comprehensive income	0	(2)	3
Total comprehensive income attributable to non-controlling interests	3	1	7
Total comprehensive income			
Net profit / (loss)	3,288	6,314	3,649
Other comprehensive income	(1,115)	(606)	1,580
of which: other comprehensive income that may be reclassified to the income statement	*(447)*	*(848)*	*2,667*
of which: other comprehensive income that will not be reclassified to the income statement	*(669)*	*243*	*(1,087)*
Total comprehensive income	2,173	5,709	5,229

Balance sheet

CHF million	Note	31.12.16	31.12.15	% change from 31.12.15
Assets				
Cash and balances with central banks		107,767	91,306	18
Due from banks	10, 11	13,125	11,866	11
Cash collateral on securities borrowed	24	15,111	25,584	(41)
Reverse repurchase agreements	24	66,246	67,893	(2)
Trading portfolio assets	22	96,661	124,047	(22)
of which: assets pledged as collateral which may be sold or repledged by counterparties	*23*	*30,260*	*51,943*	*(42)*
Positive replacement values	12, 22, 24	158,411	167,435	(5)
Cash collateral receivables on derivative instruments	24	26,664	23,763	12
Loans	10, 11	307,004	312,723	(2)
Financial assets designated at fair value	22, 24, 25	65,024	5,808	
Financial assets available for sale	13, 22	15,676	62,543	(75)
Financial assets held to maturity	13	9,289		
Investments in associates	28	963	954	1
Property, equipment and software	14	8,297	7,683	8
Goodwill and intangible assets	15	6,556	6,568	0
Deferred tax assets	8	13,144	12,833	2
Other assets	16	25,412	22,249	14
Total assets		935,353	943,256	(1)
Liabilities				
Due to banks	17	10,645	11,836	(10)
Cash collateral on securities lent	24	2,818	8,029	(65)
Repurchase agreements	24	6,612	9,653	(32)
Trading portfolio liabilities	22	22,825	29,137	(22)
Negative replacement values	12, 22, 24	153,810	162,430	(5)
Cash collateral payables on derivative instruments	24	35,472	38,282	(7)
Due to customers	17	450,199	402,522	12
Financial liabilities designated at fair value	18, 22, 24	55,017	62,995	(13)
Debt issued	19	78,998	82,359	(4)
Provisions	20	4,169	4,163	0
Other liabilities	8, 21	60,443	74,606	(19)
Total liabilities		881,009	886,013	(1)
Equity				
Share capital		386	386	0
Share premium		29,505	29,477	0
Retained earnings		28,265	29,433	(4)
Other comprehensive income recognized directly in equity, net of tax		(4,494)	(4,047)	11
Equity attributable to shareholders		53,662	55,248	(3)
Equity attributable to preferred noteholders		642	1,954	(67)
Equity attributable to non-controlling interests		40	41	(2)
Total equity		54,343	57,243	(5)
Total liabilities and equity		935,353	943,256	(1)

Statement of changes in equity

CHF million	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 1 January 2014	**384**	**33,906**	**(1,031)**	**20,608**
Issuance of share capital	0			
Acquisition of treasury shares			(953)	
Delivery of treasury shares under share-based compensation plans		(266)	445	
Other disposal of treasury shares			61	
Premium on shares issued and warrants exercised		802		
Share-based compensation expensed in the income statement		870		
Tax (expense) / benefit		3		
Dividends		(938)		
Equity classified as obligation to purchase own shares		46		
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		(2,365)	1,440	
Total comprehensive income for the year				2,294
of which: net profit / (loss)				*3,502*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*(1,208)*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 December 2014	**384**	**32,057**	**(37)**	**22,902**
Issuance of share capital	1			
Acquisition of treasury shares			(292)	
Premium on shares issued and warrants exercised		290		
Tax (expense) / benefit		9		
Dividends		(2,914)		(8)
Equity classified as obligation to purchase own shares		0		
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		35	328	
Total comprehensive income for the year				6,538
of which: net profit / (loss)				*6,235*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*304*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				

Other comprehensive income recognized directly in equity, net of tax[1]	*of which: foreign currency translation*	*of which: financial assets available for sale*	*of which: cash flow hedges*	Total equity attributable to shareholders	Preferred noteholders	Non-controlling interests	Total equity
(5,866)	*(7,425)*	*95*	*1,463*	**48,002**	**1,893**	**41**	**49,936**
				0			0
				(953)			(953)
				179			179
				61			61
				802			802
				870			870
				3			3
				(938)	(142)	(4)	(1,084)
				46			46
				0	1		1
				(925)		1	(924)
2,667	*1,834*	*140*	*693*	4,961	260	7	5,229
				3,502	*142*	*5*	*3,649*
2,667	*1,834*	*140*	*693*	*2,667*			*2,667*
				(1,208)			*(1,208)*
				0	*119*	*3*	*121*
(3,199)	*(5,591)*	*236*	*2,156*	**52,108**	**2,013**	**45**	**54,165**
				1			1
				(292)			(292)
				290			290
				9			9
				(2,922)	(77)	(5)	(3,004)
				0			0
				0	1		1
				364		(1)	363
(848)	*(266)*	*(64)*	*(518)*	5,690	18	1	5,709
				6,235	*77*	*3*	*6,314*
(848)	*(266)*	*(64)*	*(518)*	*(848)*			*(848)*
				304			*304*
				0	*(59)*	*(2)*	*(61)*

Statement of changes in equity (continued)

CHF million	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 31 December 2015	**386**	**29,477**	**0**	**29,433**
Issuance of share capital				
Premium on shares issued and warrants exercised		4		
Tax (expense) / benefit		25		
Dividends				(3,434)
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		(2)		(1)
Total comprehensive income for the year				2,267
of which: net profit / (loss)				*3,207*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*(824)*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*(115)*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 December 2016	386	29,505	0	28,265

1 Excludes defined benefit plans and own credit that are recorded directly in retained earnings.

Other comprehensive income recognized directly in equity, net of tax[1]	*of which: foreign currency translation*	*of which: financial assets available for sale*	*of which: cash flow hedges*	Total equity attributable to shareholders	Preferred noteholders	Non-controlling interests	Total equity
(4,047)	*(5,857)*	*172*	*1,638*	**55,248**	**1,954**	**41**	**57,243**
				0			0
				4			4
				25			25
				(3,434)	(78)	(5)	(3,517)
				0	(1,583)		(1,583)
				(3)		0	(2)
(447)	293	(73)	(666)	1,820	349	3	2,173
				3,207	*78*	*4*	*3,288*
(447)	*293*	*(73)*	*(666)*	*(447)*			*(447)*
				(824)			*(824)*
				(115)			*(115)*
				0	*271*	*0*	*271*
(4,494)	*(5,564)*	*98*	*972*	53,662	642	40	54,343

UBS AG shares issued and treasury shares held

As of 31 December 2016, shares issued by UBS AG totaled 3,858,408,466 (31 December 2015: 3,858,408,466 shares).

No treasury shares were held as of 31 December 2016 and as of 31 December 2015.

Conditional share capital

As of 31 December 2016, UBS AG's share capital could have been increased through the issuance of 136,200,312 shares upon exercise of employee options.

Additional conditional capital up to a maximum number of 380,000,000 shares was available as of 31 December 2016 for conversion rights and warrants granted in connection with the issuance of bonds or similar financial instruments.

Statement of cash flows

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Cash flow from / (used in) operating activities			
Net profit / (loss)	3,288	6,314	3,649
Non-cash items included in net profit and other adjustments:			
Depreciation and impairment of property, equipment and software	980	918	817
Amortization and impairment of intangible assets	91	107	83
Credit loss expense / (recovery)	37	117	78
Share of net profits of associates	(106)	(169)	(94)
Deferred tax expense / (benefit)	2	(1,614)	(1,635)
Net loss / (gain) from investing activities	(1,176)	(934)	(227)
Net loss / (gain) from financing activities	9,647	(1,654)	2,135
Other net adjustments	(300)	3,628	(7,250)
Net change in operating assets and liabilities:			
Due from / to banks	(1,183)	1,768	(1,235)
Cash collateral on securities borrowed and reverse repurchase agreements	7,933	(2,712)	32,262
Cash collateral on securities lent and repurchase agreements	(6,637)	(2,909)	(3,698)
Trading portfolio and replacement values	6,024	6,853	(5,576)
Financial assets designated at fair value	(60,658)	(1,446)	2,697
Cash collateral on derivative instruments	(4,169)	3,285	(7,301)
Loans	3,740	841	(20,427)
Due to customers	33,925	(17,362)	8,803
Other assets, provisions and other liabilities	(8,204)	7,516	4,751
Income taxes paid, net of refunds	(649)	(551)	(600)
Net cash flow from / (used in) operating activities	(17,413)	1,997	7,231
Cash flow from / (used in) investing activities			
Purchase of subsidiaries, associates and intangible assets	(26)	(13)	(18)
Disposal of subsidiaries, associates and intangible assets[1]	93	477	70
Purchase of property, equipment and software	(1,746)	(1,841)	(1,915)
Disposal of property, equipment and software	209	547	350
Purchase of financial assets available for sale	(7,271)	(101,189)	(136,330)
Disposal and redemption of financial assets available for sale	54,097	93,584	140,438
Net (purchase) / redemption of financial assets held to maturity	(8,996)		
Net cash flow from / (used in) investing activities	36,359	(8,434)	2,596

Table continues on the next page.

Statement of cash flows (continued)

Table continued from previous page.

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Cash flow from / (used in) financing activities			
Net short-term debt issued / (repaid)	5,440	(6,404)	(2,921)
Net movements in treasury shares and own equity derivative activity	0	0	(719)
Distributions paid on UBS AG shares	(3,434)	(2,626)	(938)
Issuance of long-term debt, including financial liabilities designated at fair value	33,453	47,790	40,982
Repayment of long-term debt, including financial liabilities designated at fair value	(34,081)	(44,221)	(34,210)
Dividends paid and repayments of preferred notes	(1,366)	(108)	(110)
Net changes in non-controlling interests	(5)	(5)	(3)
Net cash flow from / (used in) financing activities	6	(5,573)	2,081
Total cash flow			
Cash and cash equivalents at the beginning of the year	102,962	116,715	96,284
Net cash flow from / (used in) operating, investing and financing activities	18,952	(12,011)	11,908
Effects of exchange rate differences on cash and cash equivalents	(807)	(1,742)	8,522
Cash and cash equivalents at the end of the year[2]	121,107	102,962	116,715
of which: cash and balances with central banks	107,715	91,306	104,073
of which: due from banks	11,927	10,732	11,772
of which: money market paper[3]	1,465	924	869
Additional information			
Net cash flow from / (used in) operating activities includes:			
Interest received in cash	12,223	11,144	11,321
Interest paid in cash	6,141	5,267	5,360
Dividends on equity investments, investment funds and associates received in cash[4]	1,595	2,120	1,961

1 Includes dividends received from associates. 2 CHF 2,662 million, CHF 3,963 million and CHF 4,178 million of cash and cash equivalents (mainly reflected in Due from banks) were restricted as of 31 December 2016, 31 December 2015 and 31 December 2014, respectively. Refer to Note 23 for more information. 3 Money market paper is included in the balance sheet under Trading portfolio assets (31 December 2016: CHF 75 million, 31 December 2015: CHF 795 million, 31 December 2014: CHF 835 million), Financial assets available for sale (31 December 2016: CHF 430 million, 31 December 2015: CHF 129 million, 31 December 2014: CHF 34 million) and Financial assets designated at fair value (31 December 2016: CHF 959 million, 31 December 2015: CHF 0 million, 31 December 2014: CHF 0 million). 4 Includes dividends received from associates (2016: CHF 50 million, 2015: CHF 114 million, 2014: CHF 54 million) reported within cash flow from / (used in) investing activities.

Notes to the UBS AG consolidated financial statements

Note 1 Summary of significant accounting policies

a) Significant accounting policies

This Note describes the significant accounting policies applied in the preparation of the consolidated financial statements (the "Financial Statements") of UBS AG and its subsidiaries ("UBS AG"). On 9 March 2017, the Financial Statements were authorized for issue by the Board of Directors.

Basis of accounting

The Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), the currency of Switzerland, where UBS AG is incorporated.

Disclosures provided in the "Risk, treasury and capital management" section of this report that are marked as audited form an integral part of the Financial Statements. These disclosures relate to requirements under IFRS 7, *Financial Instruments: Disclosures* and IAS 1, *Presentation of Financial Statements* and are not repeated in this section.

The accounting policies described in this Note have been applied consistently in all years presented unless otherwise stated in Note 1b.

Critical accounting estimates and judgments

Preparation of these Financial Statements under IFRS requires management to apply judgment and make estimates and assumptions that affect reported amounts of assets, liabilities, income and expenses and disclosure of contingent assets and liabilities, and may involve significant uncertainty at the time they are made. Such estimates and assumptions are based on the best available information. UBS AG regularly reassesses the estimates and assumptions, which encompass historical experience, expectations of the future and other pertinent factors, to determine their continuing relevance based on current conditions and it updates them as necessary. Changes in those estimates and assumptions may have a significant impact on the Financial Statements. Further, actual results may differ significantly from UBS AG's estimates, which could result in significant loss to it, beyond what it anticipated or provided for.

The following areas contain estimation uncertainty or require critical judgment and have a significant effect on the amounts recognized in the Financial Statements:

- consolidation of structured entities (refer to item 1 in this Note and to Note 28)
- fair value of financial instruments (refer to item 3f in this Note and to Note 22)
- allowances and provisions for credit losses for financial assets held at amortized cost (refer to item 3g in this Note and to Note 11)
- pension and other post-employment benefit plans (refer to item 7 in this Note and to Note 26)
- income taxes (refer to item 8 in this Note and to Note 8)
- goodwill (refer to item 11 in this Note and to Note 15)
- provisions and contingent liabilities (refer to item 12 in this Note and to Note 20).

1) Consolidation

a. Consolidation principles

The Financial Statements comprise the financial statements of UBS AG and its subsidiaries, including controlled structured entities (SEs), presented as a single economic entity, whereby intercompany transactions and balances have been eliminated. UBS AG consolidates all entities that it controls, which is the case when it has (i) power over the relevant activities of the entity, (ii) exposure to an entity's variable returns and (iii) the ability to use its power to affect an entity's returns.

Where an entity is governed by voting rights, control is generally indicated by a direct shareholding of more than one-half of the voting rights.

In other cases, the assessment of control is more complex and requires greater use of judgment. Where UBS AG has an interest in an entity that absorbs variability, UBS AG considers whether it has power over the relevant activities of the entity that allows it to affect the variability of its returns. Consideration is given to all facts and circumstances to determine whether UBS AG has power over another entity, that is, the current ability to direct the relevant activities of an entity when decisions about those activities need to be made. Factors such as the purpose and design of the entity, rights held through contractual arrangements such as call rights, put rights or liquidation rights, as well as potential decision-making rights are all considered in this assessment. Where UBS AG has power over the relevant activities, a further assessment is made to determine whether, through that power, it has the ability to affect its own returns by assessing whether power is held in a principal or agent capacity. Consideration is given to (i) the scope of decision-making authority, (ii) rights held by other parties, including removal or other participating rights and (iii) exposure to variability, including remuneration, relative to total variability of the entity as well as whether that exposure is different from that of other investors. If, after review of these factors, UBS AG concludes that it can exercise its power to affect its own returns, the entity is consolidated.

Subsidiaries, including SEs, are consolidated from the date when control is obtained and are deconsolidated from the date when control ceases. Control, or the lack thereof, is reassessed if facts and circumstances indicate that there is a change to one or more of the elements needed to establish that control is present.

→ **Refer to Note 28 for more information**

Note 1 Summary of significant accounting policies (continued)

b. Structured entities

UBS AG sponsors the formation of SEs and interacts with non-sponsored SEs for a variety of reasons, including allowing clients to obtain or be exposed to particular risk profiles, to provide funding or to sell or purchase credit risk. An SE is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity. Such entities generally have a narrow and well-defined objective and include those historically referred to as special purpose entities and some investment funds. UBS AG assesses whether an entity is an SE by considering the nature of the activities of the entity as well as the substance of voting or similar rights afforded to other parties, including investors and independent boards or directors. UBS AG considers rights such as the ability to liquidate the entity or remove the decision maker to be similar to voting rights when the holder has the substantive ability to exercise such rights without cause. In the absence of such rights or in cases where the existence of such rights cannot be fully established, the entity is considered to be an SE.

The classes of SEs UBS AG is involved with include:

- *Securitization structured entities* are established to issue securities to investors that are backed by assets held by the SE and whereby (i) significant credit risk associated with the securitized exposures has been transferred to third parties and (ii) there is more than one risk position or tranche issued by the securitization vehicle in line with the Basel III securitization definition. All securitization entities are classified as SEs.
- *Client investment structured entities* are established predominantly for clients to invest in specific assets or risk exposures through purchasing notes issued by the SE, predominantly on a fixed-term basis. The SE may source assets via a transfer from UBS AG or through an external market transaction. In some cases, UBS AG may enter into derivatives with the SE to either align the cash flows of the entity with the investor's intended investment objective or to introduce other desired risk exposures. In certain cases, UBS AG may have interests in a third-party-sponsored SE to hedge specific risks or participate in asset-backed financing.
- *Investment fund structured entities* have a collective investment objective, are managed by an investment manager and are either passively managed, so that any decision making does not have a substantive effect on variability, or are actively managed and investors or their governing bodies do not have substantive voting or similar rights. UBS AG creates and sponsors a large number of funds in which it may have an interest through the receipt of variable management fees and / or a direct investment. In addition, UBS AG has interests in a number of funds created and sponsored by third parties, including exchange-traded funds and hedge funds, to hedge issued structured products.

When UBS AG does not consolidate an SE, but has an interest in an SE or has sponsored an SE, disclosures are provided on the nature of these interests and sponsorship activities.

Critical accounting estimates and judgments

Each individual entity is assessed for consolidation in line with the aforementioned consolidation principles. The assessment of control can be complex and requires the use of significant judgment. As the nature and extent of UBS AG's involvement is unique to each entity, there is no uniform consolidation outcome by entity. Certain entities within a class may be consolidated while others may not.

→ **Refer to Note 28 for more information**

2) Segment reporting

UBS AG's businesses are organized globally into five business divisions: Wealth Management, Wealth Management Americas, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which are supported by Corporate Center. The five business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center, reflect the management structure of UBS AG. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Financial information about the five business divisions and Corporate Center (with its units: Services, Group Asset and Liability Management (Group ALM), Non-core and Legacy Portfolio) is presented separately in internal reporting to management.

UBS AG's internal accounting policies, which include management accounting policies and service level agreements, determine the revenues and expenses directly attributable to each reportable segment. Transactions between the reportable segments are carried out at internally agreed rates and are reflected in the operating results of the reportable segments. Revenue-sharing agreements are used to allocate external client revenues to reportable segments where several reportable segments are involved in the value creation chain. Commissions are credited to the reportable segments based on the corresponding client relationship. Total intersegment revenues for UBS AG are immaterial, as the majority of the revenues are allocated across the segments by means of revenue-sharing agreements. Net interest income is generally allocated to the reportable segments based on their balance sheet positions. Interest income earned from managing UBS AG's consolidated equity is allocated to the reportable segments based on average attributed equity. Assets and liabilities of the reportable segments are funded through and invested with Corporate Center – Group ALM, and the net interest margin is reflected in the results of each reportable segment.

Segment assets are based on a third-party view and do not include intercompany balances. This view is in line with internal reporting to management. Certain assets managed centrally by Corporate Center – Services and Corporate Center – Group ALM may be allocated to the segments on a basis different to that which the corresponding costs or revenues are allocated to. For example, certain assets that are reported in Corporate Center – Services or Corporate Center – Group ALM may be retained on the balance sheets of these components of Corporate Center notwithstanding that the costs or revenues associated with these assets may be entirely or partly allocated to the segments. Similarly, certain assets are reported in the business divisions, whereas the corresponding costs or revenues are entirely or partly allocated to Corporate Center – Services and Corporate Center – Group ALM.

→ **Refer to Note 2 for more information**

3) Financial instruments

a. Recognition

UBS AG recognizes financial instruments when it becomes a party to the contractual provisions of the instrument. UBS AG applies trade date accounting to derivatives and settlement date accounting to all non-derivative financial instruments.

UBS AG also acts in a fiduciary capacity, which results in the holding or placing of assets on behalf of individuals, trusts, retirement benefit plans and other institutions. Unless the recognition criteria are satisfied, these assets and the related income are excluded from UBS AG's Financial Statements, as they are not assets of UBS AG.

Client cash balances associated with derivatives clearing and execution services are not recognized on the balance sheet if, through contractual agreement, regulation or practice, UBS AG neither obtains benefits from nor controls the client cash balances.

b. Classification, measurement and presentation

Upon initial recognition, UBS AG records financial instruments at fair value plus directly attributable transaction costs in the case of financial instruments not subsequently accounted for at fair value through profit or loss. After initial recognition, UBS AG classifies, measures and presents its financial assets and liabilities in accordance with IAS 39, *Financial Instruments: Recognition and Measurement* as described in the following table.

→ **Refer to Note 25a for an overview of financial assets and liabilities by IAS 39 category**

→ **Refer to the balance sheet for references to Notes that provide information on the composition of individual financial asset and liability categories**

Note 1 Summary of significant accounting policies (continued)

Financial assets classification	Significant items included	Measurement and presentation
Held for trading	All derivatives with a positive replacement value, except those that are designated and effective hedging instruments. Any other financial asset acquired principally for the purpose of selling or repurchasing in the near term, or part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans), equity instruments, and assets held under unit-linked investment contracts.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Net trading income*, except interest and dividend income on non-derivatives (refer to item 3c in this Note), derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain short duration foreign exchange contracts, which are reported in *Net interest income.* Derivative assets are generally presented as *Positive replacement values.*
Designated at fair value through profit or loss	A financial asset may be designated at fair value through profit or loss only upon initial recognition and this designation is irrevocable. The fair value option can be applied only if one of the following criteria are met: – the financial instrument is a hybrid instrument that includes a substantive embedded derivative; – the financial instrument is part of a portfolio that is risk managed on a fair value basis and reported to senior management on that basis; or – the application of the fair value option eliminates or significantly reduces an accounting mismatch that would otherwise arise. UBS AG designated at fair value through profit or loss the following instruments: – Certain structured loans, reverse repurchase and securities borrowing agreements that are managed on a fair value basis. – Loans that are hedged predominantly with credit derivatives. These instruments are designated at fair value to eliminate an accounting mismatch. – As of 1 January 2016, certain newly purchased debt securities held as high-quality liquid assets (HQLA) and managed by Corporate Center – Group ALM on a fair value basis. – Assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets are designated at fair value in order to eliminate an accounting mismatch that would otherwise arise due to the liability being measured on a fair value basis.	Bifurcated embedded derivatives are measured at fair value, but presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to item 3k in this Note for more information). Held for trading assets (other than derivatives) are presented as *Trading portfolio assets.* Financial assets designated at fair value through profit or loss are presented as *Financial assets designated at fair value.*
Loans and receivables (amortized cost)	Non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and are not assets for which UBS AG may not recover substantially all of its initial net investment for reasons other than credit deterioration. This classification includes: – cash and balances with central banks – cash collateral receivables on derivative instruments – residential and commercial mortgages – secured loans, including reverse repurchase agreements, receivables under stock borrowing and lombard loans, and unsecured loans – certain securities held within Corporate Center - Non-core and Legacy Portfolio – trade and lease receivables.	Measured at amortized cost using the effective interest rate method less allowances for credit losses (refer to items 3c and 3g in this Note). Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments are deferred and amortized over the life of the loan using the effective interest rate method. Loans and receivables are presented on the balance sheet primarily as *Cash and balances with central banks*, *Due from banks*, *Loans*, *Cash collateral on securities borrowed*, *Reverse repurchase agreements* and *Cash collateral receivables on derivative instruments.* Exchange-traded derivatives and certain OTC derivatives cleared through central clearing counterparties which are either considered to be daily settled or qualify for netting (refer to items 3d and 3j in this Note) are presented within *Cash collateral receivables on derivative instruments.*

Note 1 Summary of significant accounting policies (continued)

Financial assets classification	Significant items included	Measurement and presentation
Available for sale	Financial assets classified as available for sale are non-derivative financial assets that are not classified as held for trading, designated at fair value through profit or loss, or loans and receivables. This classification mainly includes debt securities held as HQLA and managed by Corporate Center – Group ALM, as well as certain asset-backed securities managed by Corporate Center – Group ALM.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income*, net of applicable income taxes, until such investments are sold, collected or otherwise disposed of, or until any such investment is determined to be impaired (refer to item 3i in this Note). Upon disposal, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income*. Interest and dividend income are recognized in the income statement in accordance with item 3c in this Note. Refer to item 13 in this Note for information on the treatment of foreign exchange translation gains and losses.
Held to maturity	Non-derivative financial assets with fixed or determinable payments and fixed maturities for which UBS AG has the positive intention and ability to hold to maturity. As of 1 January 2016, UBS AG classified as held to maturity certain newly purchased debt securities held as HQLA and managed by Corporate Center – Group ALM.	Measured at amortized cost using the effective interest rate method less allowances for credit losses (refer to items 3c and 3g in this Note).

Financial liabilities classification	Significant items included	Measurement and presentation
Held for trading	– Obligations to deliver financial instruments, such as debt and equity instruments, which UBS AG has sold to third parties, but does not own (short positions). – Liabilities held under unit-linked investment contracts. – All derivatives with a negative replacement value, except those that are designated and effective hedging instruments.	Measurement of trading liabilities follows the same principles as held for trading assets and measurement of liabilities designated at fair value through profit or loss follows the same principles as assets designated at fair value through profit or loss. Presented as *Trading portfolio liabilities* and *Financial liabilities designated at fair value*, respectively. Derivative liabilities are generally presented as *Negative replacement values*. Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract. Derivatives that are designated and effective hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to item 3k in this Note for more information). Amounts due under unit-linked investment contracts are presented as *Other liabilities*.
Designated at fair value through profit or loss	– Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes. – Issued debt instruments managed on a fair value basis. – Loan commitments that are hedged predominantly with credit derivatives and hence eliminate an accounting mismatch.	
Amortized cost	– Demand and time deposits, retail savings / deposits, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit, covered bonds. – Cash collateral payables on derivative instruments.	Measured at amortized cost using the effective interest rate method Amortized cost liabilities are presented on the balance sheet primarily as *Due to banks*, *Due to customers*, *Cash collateral on securities lent*, *Repurchase agreements*, *Cash collateral payables on derivative instruments* and *Debt issued*. Exchange-traded derivatives and certain OTC derivatives cleared through central clearing counterparties which are either considered to be daily settled or qualify for netting (refer to items 3d and 3j of this Note) are presented within *Cash collateral payables on derivative instruments*.

c. Interest income and expense

Interest income or expense is determined by reference to a financial instrument's amortized-cost basis calculated using the effective interest rate (EIR) method. UBS AG also uses this method to determine the interest income and expense for financial instruments (excluding derivatives) measured at fair value through profit or loss that is presented within *Net interest income.*

Upfront fees, including loan commitment fees where a loan is expected to be issued, and direct costs are included within the initial measurement of a financial instrument measured at amortized cost or classified as available for sale. Such fees and costs are therefore recognized over the expected life of the instrument as part of its EIR.

Fees related to loan commitments where no loan is expected to be issued, as well as loan syndication fees where UBS AG does not retain a portion of the syndicated loan or where UBS AG does retain a portion of the syndicated loan at the same effective yield for comparable risk as other participants, are included in *Net fee and commission income.*

Interest income on financial assets, excluding derivatives, is included in *Interest income* when positive and in *Interest expense* when negative, because negative interest income arising on a financial asset does not meet the definition of revenue. Similarly, interest expense on financial liabilities, excluding derivatives, is included in *Interest expense,* except when interest rates are negative, in which case it is included in *Interest income.* Dividend income on all financial assets is included in *Interest income.*

→ **Refer to Note 3 for more information**

d. Derecognition

Financial assets

UBS AG derecognizes a financial asset, or a portion of a financial asset, from its balance sheet where the contractual rights to cash flows from the asset have expired, or have been transferred, usually by sale, thus exposing the purchaser to either substantially all the risks and rewards of the asset or a significant part of the risks and rewards combined with the unconditional ability to sell or pledge the asset.

A financial asset is considered to have been transferred when UBS AG (i) transfers the contractual rights to receive the cash flows of the financial asset or (ii) retains the contractual rights to receive the cash flows of that asset, but assumes a contractual obligation to pay the cash flows to one or more entities.

Where financial assets have been pledged as collateral or in similar arrangements, they are considered to have been transferred if the counterparty has received the contractual right to the cash flows of the pledged assets, as may be evidenced, for example, by the counterparty's right to sell or repledge the assets. Where the counterparty to the pledged financial assets has not received the contractual right to the cash flows, UBS AG does not consider this to be a transfer for the purposes of derecognition.

UBS AG enters into certain transactions where it transfers financial assets recognized on its balance sheet but retains either all or a portion of the risks and rewards of the transferred financial assets. If all or substantially all of the risks and rewards are retained, the transferred financial assets are not derecognized from the balance sheet; for example, securities lending and repurchase transactions or where financial assets are sold to a third party with a total return swap resulting in UBS AG retaining all or substantially all of the risks and rewards of the transferred assets. These types of transactions are accounted for as secured financing transactions as described in item 3e of this Note.

In transactions where substantially all of the risks and rewards of ownership of a financial asset are neither retained nor transferred, UBS AG derecognizes the financial asset if control over the asset is surrendered, and the rights and obligations retained following the transfer are recognized separately as assets and liabilities, respectively. In transfers where control over the financial asset is retained, UBS AG continues to recognize the asset to the extent of its continuing involvement, determined by the extent to which it is exposed to changes in the value of the transferred asset following the transfer.

Certain over-the-counter (OTC) derivative contracts and most exchange-traded futures and options contracts cleared through central clearing counterparties are considered to be settled on a daily basis through the daily margining process, as the payment or receipt of the variation margin represents legal or economic settlement of a derivative contract, which results in derecognition of the associated positive and negative replacement values.

→ **Refer to Notes 1b and 24 for more information**

Note 1 Summary of significant accounting policies (continued)

Financial liabilities

UBS AG derecognizes a financial liability from its balance sheet when it is extinguished, such as when the obligation specified in the contract is discharged, canceled or has expired. When an existing financial liability is exchanged for a new one from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification results in derecognition of the original liability and the recognition of a new liability with any difference in the respective carrying amounts being recognized in the income statement.

e. Securities borrowing / lending and repurchase / reverse repurchase transactions

Securities borrowing / lending and repurchase / reverse repurchase transactions are generally entered into on a collateralized basis. In such transactions, UBS AG typically borrows or lends equity and debt securities in exchange for securities or cash collateral. Additionally, UBS AG borrows securities from its clients' custody accounts in exchange for a fee.

These transactions are treated as collateralized financing transactions where the securities transferred / received are not derecognized or recognized on balance sheet. Securities transferred / received with the right to resell or repledge are disclosed separately.

In reverse repurchase and securities borrowing agreements, the cash delivered is derecognized and a corresponding receivable, including accrued interest, is recorded in the balance sheet lines *Reverse repurchase agreements* and *Cash collateral on securities borrowed,* respectively, representing UBS AG's right to receive the cash. Similarly, in repurchase and securities lending agreements, the cash received is recognized and a corresponding obligation, including accrued interest, is recorded in the balance sheet lines *Repurchase agreements* and *Cash collateral on securities lent,* respectively. Additionally, the sale of securities that is settled by delivering securities received in reverse repurchase or securities borrowing transactions triggers the recognition of a trading liability.

Repurchase and reverse repurchase transactions with the same counterparty, maturity, currency and Central Securities Depository (CSD) are generally presented net subject to meeting the netting requirements described in item 3j of this Note.

→ **Refer to Notes 23 and 24 for more information**

f. Fair value of financial instruments

UBS AG accounts for a significant portion of its assets and liabilities at fair value. Fair value is the price on the measurement date that would be received for the sale of an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market, or in the most advantageous market in the absence of a principal market.

All financial instruments measured at fair value are categorized into one of three fair value hierarchy levels. The fair values of Level 1 financial instruments are based on quoted prices in active markets. The fair values of Level 2 financial instruments are based on valuation techniques for which all significant inputs are, or are based on, observable market data. The fair values of Level 3 financial instruments are based on valuation techniques for which significant inputs are not based on observable market data.

Critical accounting estimates and judgments

The use of valuation techniques, modeling assumptions and estimates of unobservable market inputs require significant judgment and could affect the amount of gain or loss recorded for a particular position. Valuation techniques that rely more heavily on unobservable inputs require a higher level of judgment to calculate a fair value than those entirely based on observable inputs.

Valuation techniques, including models, that are used to determine fair values are periodically reviewed and validated by qualified personnel, independent of those who created them. Models are calibrated to ensure that outputs reflect observable market data, to the extent possible. Also, models prioritize the use of observable inputs, when available, over unobservable inputs. Judgment is required in selecting appropriate models as well as inputs for which observable data is less readily or not available.

UBS AG's valuation techniques may not fully reflect all the factors relevant to the fair value of financial instruments held. Valuations are therefore adjusted, where appropriate, to allow for additional factors, including credit risk, model risk, and liquidity risk.

UBS AG's governance framework over fair value measurement is described in Note 22b.

The level of subjectivity and the degree of management judgment involved in the development of estimates and the selection of assumptions is more significant for instruments valued using specialized and sophisticated models and where some or all of the parameter inputs are less observable (Level 3 instruments) and may require adjustment to reflect factors that market participants would consider in estimating fair value, such as close-out costs, credit exposure, model-driven valuation uncertainty, funding costs and benefits, trading restrictions and other factors which are presented in Note 22d. UBS AG provides a sensitivity analysis of the impact upon the Level 3 financial instruments of using reasonably possible alternative assumptions for the unobservable parameters within Note 22g.

→ **Refer to Note 22 for more information**

g. Allowances and provisions for credit losses for financial assets held at amortized cost

A claim is impaired and an allowance or provision for credit losses is recognized when objective evidence demonstrates that a loss event was incurred after the initial recognition and that the loss event has an impact on the future cash flows that can be reliably estimated. UBS AG considers a claim to be impaired if it will be unable to collect all amounts due on the claim based on the original contractual terms due to credit deterioration of the issuer or counterparty. A claim can be a loan or receivable carried at amortized cost, or a commitment, such as a letter of credit, a guarantee or a similar instrument.

An allowance for credit losses is reported as a decrease in carrying value of a claim on the balance sheet. For an off-balance sheet item, such as a commitment, a provision for credit loss is reported in *Provisions*. Changes to allowances and provisions for credit losses are recognized in *Credit loss expense / recovery*.

→ **Refer to Notes 10 and 11 for more information**

Critical accounting estimates and judgments

Allowances and provisions for credit losses are evaluated at both a counterparty-specific level and collectively. Judgment is used in making assumptions about the timing and amount of impairment losses.

Counterparty-specific allowances and provisions

Loans are evaluated individually for impairment if objective evidence indicates that a loan may be impaired. Individual credit exposures are evaluated on the basis of the borrower's overall financial condition, resources and payment record, the prospects of support from contractual guarantors and, where applicable, the realizable value of any collateral. The impairment loss for a loan is the excess of the carrying value of the financial asset over the estimated recoverable amount. The estimated recoverable amount is the present value, calculated using the loan's original effective interest rate, of expected future cash flows, including amounts that may result from restructuring or the liquidation of collateral. If a loan has a variable interest rate, the discount rate for calculating the recoverable amount is the current effective interest rate. Upon impairment, the accrual of interest income based on the original terms of the loan is discontinued. Instead, the increase in the present value of the impaired loan due to the passage of time is calculated and reported within *Interest income*.

Collective allowances and provisions

Collective allowances and provisions are calculated for portfolios with similar credit risk characteristics, taking into account historical loss experience and current conditions. The methodology and assumptions used are reviewed regularly to reduce any differences between estimated and actual loss experience. For all of its portfolios, UBS AG also assesses whether there have been any unforeseen developments that might result in impairments but are not immediately observable at a counterparty level. To determine whether an event-driven collective allowance for credit losses is required, UBS AG considers global economic drivers to assess the most vulnerable countries and industries. As the allowance cannot be allocated to individual loans, the loans are not considered to be impaired and interest is accrued on each loan according to its contractual terms. If objective evidence becomes available that indicates that an individual financial asset is impaired, it is removed from the group of financial assets assessed for impairment on a collective basis and is assessed separately as counterparty-specific.

All impaired loans are reviewed and analyzed at least annually. Any subsequent changes to the amounts and timing of the expected future cash flows compared with prior estimates result in a change in the allowance for credit losses and are charged or credited to *Credit loss expense / recovery*. An allowance for impairment is reversed only when the credit quality has improved to such an extent that there is reasonable assurance of timely collection of principal and interest in accordance with the original contractual terms of the claim, or the equivalent value thereof. A write-off is made when all or part of a claim is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are credited to *Credit loss expense / recovery.*

Note 1 Summary of significant accounting policies (continued)

h. Renegotiated loans

A renegotiated or restructured loan is a loan for which the terms have been modified or for which additional collateral has been requested that was not contemplated in the original contract.

Typical key features of terms and conditions granted through renegotiation to avoid default include special interest rates, postponement of interest or amortization payments, modification of the schedule of repayments or amendment of loan maturity. There is no change in the EIR following a renegotiation.

If a loan is renegotiated with preferential conditions (i.e., new or modified terms and conditions are agreed upon which do not meet the normal market criteria for the quality of the obligor and the type of loan), it is still classified as non-performing. It will remain so until the loan is collected or written off and will be assessed for impairment on an individual basis.

Concessions granted where there is no evidence of financial difficulty, or where any changes to terms and conditions are within UBS AG's usual risk appetite, are not deemed restructured.

A restructuring of a loan could lead to a fundamental change in the terms and conditions of a loan, resulting in the original loan being derecognized and a new loan being recognized.

If a loan is derecognized in these circumstances, the new loan is measured at fair value at initial recognition. Any allowance taken to date against the original loan is derecognized and is not attributed to the new loan. Consequently, the new loan is assessed for impairment on an individual basis. If the loan is not impaired, the loan is included within the general collective loan assessment for the purpose of measuring credit losses.

i. Impairment of financial assets classified as available for sale

At each balance sheet date, UBS AG assesses whether indicators of impairment are present. Available-for-sale debt instruments are impaired when there is objective evidence, using the same criteria described in item 3g, that, as a result of one or more events that occurred after the initial recognition of the asset, the estimated future cash flows have decreased.

Objective evidence that there has been an impairment of an available-for-sale equity instrument is a significant or prolonged decline in the fair value of the asset. UBS AG uses a rebuttable presumption that such instruments are impaired where there has been a decline in fair value of more than 20% below its original cost or fair value has been below original cost for more than six months.

To the extent a financial asset classified as available for sale is determined to be impaired, the related cumulative net unrealized loss previously recognized in *Other comprehensive income* is reclassified to the income statement within *Other income*. For equity instruments, any further loss is recognized directly in the income statement, whereas for debt instruments, any further loss is recognized in the income statement only if there is additional objective evidence of impairment. After the recognition of an impairment on a financial asset classified as available for sale, increases in the fair value of equity instruments are reported in *Other comprehensive income*. For debt instruments, such increases in the fair value, up to amortized cost in the transaction currency, are recognized in *Other income,* provided that the fair value increase is related to an event occurring after the impairment loss was recorded. Increases in excess of that amount are reported in *Other comprehensive income*.

j. Netting

UBS AG nets financial assets and liabilities on its balance sheet if (i) it has the unconditional and legally enforceable right to set off the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS AG and all of the counterparties, and (ii) intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. Netted positions include, for example, certain derivatives and repurchase and reverse repurchase transactions with various counterparties, exchanges and clearing houses.

In assessing whether UBS AG intends to either settle on a net basis or to realize the asset and settle the liability simultaneously, emphasis is placed on the effectiveness of operational settlement mechanics in eliminating substantially all credit and liquidity exposure between the counterparties. This condition precludes offsetting on the balance sheet for substantial amounts of UBS AG's financial assets and liabilities, even though they may be subject to enforceable netting arrangements. For OTC derivative contracts, balance sheet offsetting is generally only permitted in circumstances in which a market settlement mechanism exists via an exchange or central clearing counterparty, that effectively accomplishes net settlement through a daily exchange of collateral via a cash margining process. For repurchase arrangements and securities financing transactions, balance sheet offsetting may be permitted only to the extent that the settlement mechanism eliminates, or results in insignificant, credit and liquidity risk, and processes the receivables and payables in a single settlement process or cycle.

→ **Refer to Notes 1b and 24 for more information**

Note 1 Summary of significant accounting policies (continued)

k. Hedge accounting

UBS AG uses derivative instruments to manage exposures to interest rate and foreign currency risks, including exposures arising from forecast transactions. Qualifying derivative and non-derivative instruments may be designated as hedging instruments in (i) hedges of the change in fair value of recognized assets or liabilities (fair value hedges), (ii) hedges of the variability in future cash flows attributable to a recognized asset or liability or highly probable forecast transactions (cash flow hedges) or (iii) hedges of a net investment in a foreign operation (net investment hedges).

At the time a financial instrument is designated in a hedge relationship, UBS AG formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction and the methods that will be used to assess the effectiveness of the hedging relationship. Accordingly, UBS AG assesses, both at the inception of the hedge and on an ongoing basis, whether the hedging instruments, primarily derivatives, have been "highly effective" in offsetting changes in the fair value or cash flows associated with the designated risk of the hedged items. A hedge is considered highly effective if the following criteria are met: (i) at inception of the hedge and throughout its life, the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk and (ii) actual results of the hedge are within a range of 80–125%. In the case of hedging forecast transactions, the transaction must have a high probability of occurring and must present an exposure to variations in cash flows that could ultimately affect the reported net profit or loss. UBS AG discontinues hedge accounting when (i) it determines that a hedging instrument is not, or has ceased to be, highly effective as a hedge, (ii) the derivative expires or is sold, terminated or exercised, (iii) the hedged item matures, is sold or repaid or (iv) forecast transactions are no longer deemed highly probable. UBS AG may also discontinue hedge accounting voluntarily.

Hedge ineffectiveness represents the amount by which the changes in the fair value of the hedging instrument differ from changes in the fair value of the hedged item attributable to the hedged risk, or the amount by which changes in the present value of future cash flows of the hedging instrument exceed changes in the present value of expected cash flows of the hedged item. Such ineffectiveness is recorded in current period earnings in *Net trading income.* Interest income and expense on derivatives designated as hedging instruments in effective hedge relationships is included in *Interest income.*

Fair value hedges

For qualifying fair value hedges, the change in the fair value of the hedging instrument is recognized in the income statement along with the change in the fair value of the hedged item that is attributable to the hedged risk. In fair value hedges of interest rate risk, the fair value change of the hedged item attributable to the hedged risk is reflected as an adjustment to the carrying value of the hedged item. If the hedge accounting relationship is terminated for reasons other than the derecognition of the hedged item, the adjustment to the carrying value is amortized to the income statement over the remaining term to maturity of the hedged item using the effective interest rate method. For a portfolio hedge of interest rate risk, the equivalent change in fair value is reflected within *Other assets* or *Other liabilities*. If the hedge relationship is terminated for reasons other than the derecognition of the hedged item, the amount included in *Other assets* or *Other liabilities* is amortized to the income statement over the remaining term to maturity of the hedged items using the straight-line method.

Cash flow hedges

Fair value gains or losses associated with the effective portion of derivatives designated as cash flow hedges for cash flow repricing risk are recognized initially in *Other comprehensive income* within *Equity.* When the hedged forecast cash flows affect profit or loss, the associated gains or losses on the hedging derivatives are reclassified from *Equity* to the income statement.

If a cash flow hedge of forecasted transactions is no longer considered effective, or if the hedge relationship is terminated, the cumulative gains or losses on the hedging derivatives previously reported in *Equity* remain there until the committed or forecasted transactions occur and affect profit or loss. If the forecasted transactions are no longer expected to occur, the deferred gains or losses are reclassified immediately to the income statement.

Hedges of net investments in foreign operations

Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges. Gains or losses on the hedging instrument relating to the effective portion of the hedge are recognized directly in *Equity* (and presented in the statement of changes in equity and statement of comprehensive income under *Foreign currency translation*), while any gains or losses relating to the ineffective and / or undesignated portion (for example, the interest element of a forward contract) are recognized in the income statement. Upon disposal or partial disposal of the foreign operation, the cumulative value of any such gains or losses recognized in *Equity* associated with the entity is reclassified to the income statement.

Economic hedges that do not qualify for hedge accounting

Derivative instruments that are transacted as economic hedges, but do not qualify for hedge accounting, are treated in the same way as derivative instruments used for trading purposes (i.e., realized and unrealized gains and losses are recognized in *Net trading income*), except for the forward points on certain short duration foreign exchange contracts, which are reported in *Net interest income*.

→ **Refer to Note 12 for more information**

Note 1 Summary of significant accounting policies (continued)

l. Embedded derivatives

Derivatives may be embedded in other financial instruments (host contracts). For example, they could be represented by the conversion feature embedded in a convertible bond. Such hybrid instruments arise predominantly from the issuance of certain structured debt instruments. An embedded derivative is generally required to be separated from the host contract and accounted for as a standalone derivative instrument at fair value through profit or loss if (i) the host contract is not carried at fair value with changes in fair value reported in the income statement, (ii) the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract and (iii) the terms of the embedded derivative would meet the definition of a standalone derivative, were they contained in a separate contract.

Typically, UBS AG applies the fair value option to hybrid instruments (refer to item 3b in this Note for more information), in which case bifurcation of an embedded derivative component is not required.

m. Debt issued

Debt issued is carried at amortized cost, including contingent capital instruments that contain contractual provisions under which the principal amounts would be written down upon either a specified CET1 ratio breach or a determination by FINMA that a viability event has occurred. Such contractual provisions are not derivatives as the underlying is deemed to be a non-financial variable specific to a party to the contract. In contrast, where there is a legal "bail-in" mechanism for write-down or conversion into equity (as is the case, for instance, with senior unsecured debt issued by UBS AG that is subject to write-down or conversion under resolution authority granted to FINMA under Swiss law), such mechanism does not form part of the contractual terms and, therefore, does not affect the amortized cost accounting treatment applied to these instruments. If the debt were to be written down or converted into equity in a future period, this would result in the full or partial derecognition of the financial liabilities, with the difference between the carrying value of the debt written down or converted into equity and the fair value of any equity shares issued recognized in the income statement.

In cases where, as part of UBS AG's risk management activity, fair value hedge accounting is applied to fixed-rate debt instruments carried at amortized cost, their carrying amount is adjusted for changes in fair value related to the hedged exposure. Refer to item 3k for more information on hedge accounting.

Debt issued and subsequently repurchased in relation to market-making or other activities is treated as redeemed. A gain or loss on redemption (depending on whether the repurchase price of the bond is lower or higher than its carrying value) is recorded in *Other income*. A subsequent sale of own bonds in the market is treated as a reissuance of debt.

n. Own credit

From 1 January 2016 onward, changes in the fair value of financial liabilities designated at fair value through profit or loss related to own credit are recognized in *Other comprehensive income* directly within *Retained earnings* and will not be reclassified to the income statement in future periods.

→ **Refer to Note 1b for more information**

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS AG at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS AG once the commitments are communicated to the beneficiary, or which are revocable only due to automatic cancelation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) derivative loan commitments measured at fair value through profit or loss, (ii) loan commitments designated at fair value through profit or loss or (iii) other loan commitments. Other loan commitments are not recorded on the balance sheet, but a provision is recognized through profit or loss if it is probable that a loss has been incurred and a reliable estimate of the amount of the obligation can be made. Any change in the liability relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is presented under *Loans*, except for cases where designation at fair value through profit or loss applies.

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS AG issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss.

Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of the amount initially recognized less cumulative amortization, and to the extent a payment under the guarantee has become probable, the present value of the expected payment. Any change in the liability relating to probable expected payments resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

Note 1 Summary of significant accounting policies (continued)

4) Fee income

UBS AG earns fee income from a diverse range of services it provides to its clients. Fee income can be divided into two broad categories: (i) fees earned from services that are provided over a certain period of time, such as portfolio management and advisory fees, and (ii) fees earned from providing transaction-type services, such as underwriting fees, corporate finance fees and brokerage fees.

Fees earned from services that are provided over a certain period of time are recognized ratably over the service period, with the exception of performance-linked fees or fee components with specific performance criteria. Such fees are recognized when the performance criteria are fulfilled and when collectibility is reasonably assured.

Fees earned from providing transaction-type services are recognized when the service has been completed and the fee is fixed or determinable, i.e., not subject to refund or adjustment.

Fee income generated from providing a service which does not result in the recognition of a financial instrument is presented within *Net fee and commission income.* Fees generated from the acquisition, issue or disposal of a financial instrument are presented in the income statement in line with the balance sheet classification of that financial instrument.

→ **Refer to Note 4 for more information**

5) Cash and cash equivalents

For the purposes of the statement of cash flows, cash and cash equivalents comprise balances with an original maturity of three months or less, including cash, money market paper and balances with central and other banks.

6) Equity participation and other compensation plans

Transfer of deferred compensation plans

As part of the Group reorganization in 2014, UBS Group AG assumed obligations of UBS AG as grantor in connection with certain outstanding awards under employee share, option, notional fund and deferred cash compensation plans. This section describes the accounting policies applied to these plans during the periods prior to and post the Group reorganization and transfer of deferred compensation plans.

Equity participation plans

Periods prior to the Group reorganization and transfer of deferred compensation plans

UBS AG has established several equity participation plans that are settled in UBS AG's equity instruments or an amount that is based on the value of such instruments. These awards are generally subject to conditions that require employees to complete a specified period of service and, for performance shares, to satisfy specified performance targets. Compensation expense is recognized, on a per tranche basis, over the service period based on an estimate of the number of instruments expected to vest and is adjusted to reflect actual outcomes. Where the service period is shortened, for example in the case of employees affected by restructuring programs or mutually agreed termination provisions, recognition of expense is accelerated to the termination date.

Where no future service is required, such as for employees who are retirement eligible or who have met certain age and years-of-service criteria, the services are presumed to have been received and compensation expense is recognized immediately on, or prior to, the date of grant. Such awards may remain forfeitable until the legal vesting date if certain non-vesting conditions are not met, such as breach of good-leaver clauses or harmful acts. For equity-settled awards, forfeiture events resulting from breach of a non-vesting condition do not result in an adjustment to expense.

Compensation expense is measured by reference to the fair value of the equity instruments on the date of grant adjusted, when relevant, to take into account the terms and conditions inherent in the award, including dividend rights, transfer restrictions in effect beyond the vesting date, and non-vesting conditions. For equity-settled instruments, fair value is determined at the date of grant and is not remeasured unless its terms are modified such that the fair value immediately after modification exceeds the fair value immediately prior to modification. Any increase in fair value resulting from a modification is recognized as compensation expense, either over the remaining service period or, for vested awards, immediately. For cash-settled awards, fair value is remeasured at each reporting date such that the cumulative expense recognized equals the cash distributed.

→ **Refer to Note 27 for more information**

Periods post the Group reorganization and transfer of deferred compensation plans

UBS Group AG has established, and maintains the obligation to settle, several equity participation plans that are granted to employees of UBS AG. UBS AG recognizes the fair value of awards granted to its employees. These awards are generally subject to conditions that require employees to complete a specified period of service and, for performance shares, to satisfy specified performance targets. Compensation expense is recognized, on a per tranche basis, over the service period based on an estimate of the number of instruments expected to vest and is adjusted to reflect actual outcomes. Where the service period is shortened, for example in the case of employees affected by restructuring programs or mutually agreed terminations provisions, recognition of expense is accelerated to the termination date.

Where no future service is required, such as for employees who are retirement eligible or who have met certain age and years-of-service criteria, the services are presumed to have been received and compensation expense is recognized immediately on, or prior to, the date of grant. Such awards may remain forfeitable until the legal vesting date if certain non-vesting conditions are not met, such as breach of good-leaver clauses or harmful acts. Forfeiture events resulting from breach of a non-vesting condition do not result in an adjustment to expense.

UBS AG has no obligation to settle the awards and therefore awards over UBS Group AG shares are classified as equity settled share-based payment transactions. Compensation expense is measured by reference to the fair value of UBS Group AG equity instruments on the date of grant adjusted, when relevant, to take into account the terms and conditions inherent in the award, including dividend rights, transfer restrictions in effect beyond the vesting date, and non-vesting conditions. Fair value is determined at the date of grant and is not remeasured unless its terms are modified such that the fair value immediately after modification exceeds the fair value immediately prior to modification. Any increase in fair value resulting from a modification is recognized as compensation expense, either over the remaining service period or, for vested awards, immediately.

→ **Refer to Note 27 for more information**

Other compensation plans

The employees of UBS AG are granted deferred compensation plans which are settled in cash or other financial instruments, the amount of which may be fixed or may vary based on the achievement of specified performance conditions or the value of specified underlying assets. Compensation expense is recognized over the period that the employee provides services to become entitled to the award. Where the service period is shortened, for example in the case of employees affected by restructuring programs or mutually agreed termination provisions, recognition of expense is accelerated to the termination date. Where no future service is required, such as for employees who are retirement eligible or who have met certain age and years-of-service criteria, the services are presumed to have been received and compensation expense is recognized immediately on, or prior to, the date of grant. The amount recognized is based on the present value of the amount expected to be paid under the plan and is remeasured at each reporting date, so that the cumulative expense recognized equals the cash or the fair value of respective financial instruments distributed.

→ **Refer to Note 27 for more information**

7) Pension and other post-employment benefit plans

UBS AG sponsors various post-employment benefit plans for its employees worldwide, which include defined benefit and defined contribution pension plans, and other post-employment benefits such as medical and life insurance benefits that are payable after the completion of employment.

→ **Refer to Note 26 for more information**

Defined benefit pension plans

Defined benefit pension plans specify an amount of benefit that an employee will receive, which usually depends on one or more factors, such as age, years of service and compensation. The defined benefit liability recognized in the balance sheet is the present value of the defined benefit obligation less the fair value of the plan assets at the balance sheet date with changes resulting from remeasurements recorded immediately in *Other comprehensive income*. If the fair value of the plan assets is higher than the present value of the defined benefit obligation, the recognition of the resulting net defined benefit asset is limited to the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. UBS AG applies the projected unit credit method to determine the present value of its defined benefit obligations, the related current service cost and, where applicable, past service cost. The projected unit credit method sees each period of service as giving rise to an additional unit of benefit entitlement and measures each unit separately to build up the final obligation. These amounts, which take into account the specific features of each plan, including risk sharing between employee and employer, are calculated periodically by independent qualified actuaries.

Critical accounting estimates and judgments

The net defined benefit liability or asset at the balance sheet date and the related personnel expense depend on the expected future benefits to be provided, determined using a number of economic and demographic assumptions. A range of assumptions could be applied and different assumptions could significantly alter the defined benefit liability or asset and pension expense recognized. The most significant assumptions include life expectancy, the discount rate, expected salary increases, pension increases, and in addition, for the Swiss plan and one of the US defined benefit pension plans, interest credits on retirement savings account balances. Life expectancy is determined by reference to published mortality tables. The discount rate is determined by reference to the rates of return on high-quality fixed-income investments of appropriate currency and term at the measurement date. The assumption for salary increases reflects the long-term expectations for salary growth and takes into account inflation, seniority, promotion and other relevant factors such as supply and demand in the labor market. A sensitivity analysis for reasonable possible movements in each significant assumption for UBS AG's post-employment obligations is provided within Note 26.

Defined contribution plans

A defined contribution plan is a pension plan under which UBS AG pays fixed contributions into a separate entity from which post-employment and other benefits are paid. UBS AG has no legal or constructive obligation to pay further contributions if the plan does not hold sufficient assets to pay employees the benefits relating to employee service in the current and prior periods. UBS AG's contributions are expensed when the employees have rendered services in exchange for such contributions. This is generally in the year of contribution. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

Other post-employment benefits

UBS AG also provides post-employment medical and life insurance benefits to certain retirees in the US and the UK. The expected costs of these benefits are recognized over the period of employment using the same accounting methodology used for defined benefit pension plans.

8) Income taxes

UBS AG is subject to the income tax laws of Switzerland and those of the non-Swiss jurisdictions in which UBS AG has business operations.

UBS AG's provision for income taxes is composed of current and deferred taxes. Current income taxes represent taxes to be paid or refunded for the current period or previous periods.

Deferred taxes are recognized for temporary differences between the carrying amounts and tax bases of assets and liabilities that will result in deductible amounts in future periods and are measured using the applicable tax rates and laws that will be in effect when such differences are expected to reverse

Deferred tax assets arise from a variety of sources, the most significant being: (i) tax losses that can be carried forward to be used against profits in future years and (ii) expenses recognized in UBS AG's income statement that are not deductible until the associated cash flows occur. Deferred tax assets are recognized only to the extent that it is probable that sufficient taxable profits will be available against which these differences can be used. When an entity or tax group has a history of recent losses, deferred tax assets are only recognized to the extent there are sufficient taxable temporary differences or there is convincing other evidence that sufficient taxable profit will be available against which the unused tax losses can be utilized.

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Deferred tax liabilities are recognized for temporary differences between the carrying amounts of assets and liabilities in the balance sheet that reflect the expectation that certain items will give rise to taxable income in future periods.

Deferred and current tax assets and liabilities are offset when (i) they arise in the same tax reporting group, (ii) they relate to the same tax authority, (iii) the legal right to offset exists and (iv) they are intended to be settled net or realized simultaneously.

Current and deferred taxes are recognized as income tax benefit or expense in the income statement except for current and deferred taxes recognized (i) upon the acquisition of a subsidiary, (ii) for unrealized gains or losses on financial instruments that are classified as available for sale, (iii) for changes in fair value of derivative instruments designated as cash flow hedges, (iv) for remeasurements of defined benefit plans, (v) for certain foreign currency translations of foreign operations, and (vi) for gains and losses on the sale of treasury shares. Amounts relating to points (ii), (iii), (iv) and (v) are recognized in *Other comprehensive income* within *Equity*.

Critical accounting estimates and judgments

Tax laws are complex and judgment and interpretations about the application of such laws are required when accounting for income taxes. UBS AG considers the performance of its businesses and the accuracy of historical forecasts and other factors in evaluating the recoverability of its deferred tax assets, including the remaining tax loss carry-forward period, and its assessment of expected future taxable profits in the forecast period used for recognizing deferred tax assets. Estimating future profitability is inherently subjective and is particularly sensitive to future economic, market and other conditions, which are difficult to predict.

The level of deferred tax asset recognition is influenced by management's assessment of UBS AG's future profitability based on relevant business plan forecasts. Existing assessments are reviewed and, if necessary, revised to reflect changed circumstances. This review is conducted annually, in the second half of each year, but adjustments may be made at other times, if required. In a situation where recent losses have been incurred, convincing evidence that there will be sufficient future profitability is required.

If profit forecast assumptions in future periods deviate from the current outlook, the value of UBS AG's deferred tax assets may be affected. Recognition of any decrease in the carrying amount of deferred tax assets in the income statement would reduce net profit and equity but would not affect cash flows.

Judgment is also required to forecast the expected outcome of uncertain tax positions that may require the interpretation of tax laws and the resolution of any income tax-related appeals or litigation that are incorporated into the estimate of income and deferred tax.

→ **Refer to Note 8 for more information**

Note 1 Summary of significant accounting policies (continued)

9) Investment in associates

Entities where UBS AG has significant influence over the financial and operating policies of the entity, but does not have control, are classified as investments in associates and accounted for under the equity method of accounting. Typically, UBS AG has significant influence when it holds or has the ability to hold between 20% and 50% of a company's voting rights. Investments in associates are initially recognized at cost, and the carrying amount is increased or decreased after the date of acquisition to recognize UBS AG's share of the investee's comprehensive income and any impairment losses.

→ **Refer to Note 28 for more information**

10) Property, equipment and software

Property, equipment and software includes own-used properties, leasehold improvements, information technology hardware, externally purchased and internally generated software, as well as communication and other similar equipment. Property, equipment and software is carried at cost less accumulated depreciation and impairment losses, and is reviewed at each reporting date for indication for impairment. Software development costs are capitalized only when the costs can be measured reliably and it is probable that future economic benefits will arise. Depreciation of property, equipment and software begins when they are available for use, that is, when they are in the location and condition necessary for them to be capable of operating in the manner intended by management. Depreciation is calculated on a straight-line basis over an asset's estimated useful life. The estimated useful economic lives of UBS AG's property, equipment and software are:

- properties, excluding land: ≤ 67 years
- IT hardware and communication equipment: ≤ 7 years
- other machines and equipment: ≤ 10 years
- software: ≤ 10 years
- leasehold improvements: shorter of the lease term or the economic life of asset (typically ≤ 20 years)

→ **Refer to Notes 1b and 14 for more information**

11) Goodwill and intangible assets

Goodwill represents the excess of the cost of an acquisition over the fair value of UBS AG's share of net identifiable assets of the acquired entity at the date of the acquisition. Goodwill is not amortized, but at the end of each reporting period, UBS AG assesses whether there is any indication that goodwill is impaired. If such indicators exist, UBS AG is required to test the goodwill for impairment. Irrespective of whether there is any indication of impairment, UBS AG tests goodwill for impairment annually. UBS AG considers the segments, as reported in Note 2a, as separate cash-generating units, since this is the level at which the performance of investments is reviewed and assessed by management. The impairment test is performed for each segment to which goodwill is allocated by comparing the recoverable amount, based on its value-in-use, to the carrying amount of the respective segment. An impairment charge is recognized if the carrying amount exceeds the recoverable amount.

If the estimated earnings and other assumptions in future periods deviate from the current outlook, the value of UBS AG's goodwill may become impaired in the future, giving rise to losses in the income statement. Recognition of any impairment of goodwill would reduce net profit and equity, but would not affect cash flows.

Intangible assets are comprised of separately identifiable intangible items arising from business combinations and certain purchased trademarks and similar items. Intangible assets are recognized at cost. The cost of an intangible asset acquired in a business combination is its fair value at the date of acquisition. Intangible assets with a finite useful life are amortized using the straight-line method over their estimated useful life, generally not exceeding 20 years. In rare cases, intangible assets can have an indefinite useful life, in which case they are not amortized. At each reporting date, intangible assets are reviewed for indications of impairment. If such indications exist, the intangible assets are analyzed to assess whether their carrying amount is fully recoverable. An impairment loss is recognized if the carrying amount exceeds the recoverable amount.

Critical accounting estimates and judgments

UBS AG's methodology for goodwill impairment testing is based on a model which is most sensitive to the following key assumptions: (i) forecasts of earnings available to shareholders in years one to three, (ii) changes in the discount rates and (iii) changes in the long-term growth rate. Key assumptions used to determine the recoverable amounts of each segment are tested for sensitivity by applying a reasonably possible change to those assumptions. Refer to Note 15 for the discussion of how the reasonably possible changes in those key assumptions may affect the results delivered by UBS AG's model for goodwill impairment testing.

→ **Refer to Notes 2 and 15 for more information**

12) Provisions and contingent liabilities

Provisions are liabilities of uncertain timing or amount, and are recognized when (i) UBS AG has a present obligation as a result of a past event, (ii) it is probable that an outflow of resources will be required to settle the obligation and (iii) a reliable estimate of the amount of the obligation can be made.

The majority of UBS AG's provisions relate to litigation, regulatory and similar matters, restructuring, employee benefits, real estate and loan commitments and guarantees. Provisions that are similar in nature are aggregated to form a class, while the remaining provisions, including those of less significant amounts, are presented under *Other provisions*. Provisions are presented separately on the balance sheet and, when they are no longer considered uncertain in timing or amount, are reclassified to *Other liabilities – Other*.

UBS AG recognizes provisions for litigation, regulatory and similar matters when, in the opinion of management after seeking legal advice, it is more likely than not that UBS AG has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS AG, but are nevertheless expected to be, based on UBS AG's experience with similar asserted claims.

Restructuring provisions are recognized when a detailed and formal restructuring plan has been approved and a valid expectation has been raised that the restructuring will be carried out, either through commencement of the plan or announcements to affected employees.

Provisions are recognized for lease contracts if the unavoidable costs of a contract exceed the benefits expected to be received under it (onerous lease contracts). For example, this may occur when a significant portion of a leased property is expected to be vacant for an extended period.

Provisions for employee benefits are recognized mainly in respect of service anniversaries and sabbatical leave.

Provisions are recognized at the best estimate of the consideration required to settle the present obligation at the balance sheet date. Such estimates are based on all available information and are revised over time as more information becomes available. If the effect of the time value of money is material, provisions are discounted and measured at the present value of the expenditure expected to settle or discharge the obligation, using a rate that reflects the current market assessments of the time value of money and the risks specific to the obligation.

When all conditions required to recognize a provision are not met, a contingent liability is disclosed, unless the likelihood of an outflow of resources is remote. Contingent liabilities are also disclosed for possible obligations that arise from past events whose existence will be confirmed only by uncertain future events not wholly within the control of UBS AG. Such disclosures are not made if it is not practicable to do so.

Critical accounting estimates and judgments

Recognition of provisions often involves significant judgment in assessing the existence of an obligation that results from past events and in estimating the probability, timing and amount of any outflows of resources. This is particularly the case for litigation, regulatory and similar matters, which, due to their nature, are subject to many uncertainties making their outcome difficult to predict. Such matters may involve unique fact patterns or novel legal theories, proceedings that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Determining whether an obligation exists as a result of a past event and estimating the probability, timing and amount of any potential outflows is based on a variety of assumptions, variables, and known and unknown uncertainties.

The amount of any provision recognized is sensitive to the assumptions used and there could be a wide range of possible outcomes for any particular matter.

Statistical or other quantitative analytical tools are of limited use in determining whether to establish or determine the amount of provisions in the case of litigation, regulatory or similar matters. Furthermore, information currently available to management may be incomplete or inaccurate, increasing the risk of erroneous assumptions with regard to the future development of such matters. Management regularly reviews all the available information regarding such matters, including legal advice which is a significant consideration, to assess whether the recognition criteria for provisions have been satisfied and to determine the timing and amount of any potential outflows.

→ **Refer to Note 20 for more information**

13) Foreign currency translation

Transactions denominated in a foreign currency are translated into the functional currency of the reporting entity at the spot exchange rate on the date of the transaction. At the balance sheet date, all monetary assets and liabilities denominated in foreign currency are translated into the functional currency using the closing exchange rate. Non-monetary items measured at historical cost are translated at the exchange rate on the date of the transaction. Foreign currency translation differences on non-monetary financial assets classified as available for sale are generally recorded directly in *Equity* until the asset is sold or becomes impaired. However, translation differences on available for sale monetary financial assets are reported in *Net trading income* on an amortized-cost basis, along with all other foreign currency translation differences on monetary assets and liabilities.

Upon consolidation, assets and liabilities of foreign operations are translated into Swiss francs (CHF), UBS AG's presentation currency, at the closing exchange rate on the balance sheet date, and income and expense items are translated at the average rate for the period. The resulting foreign currency translation differences attributable to shareholders are recognized directly in *Foreign currency translation* within *Equity,* which forms part of *Total equity attributable to shareholders*, whereas the foreign currency translation differences attributable to non-controlling interests are shown within *Equity attributable to non-controlling interests*.

Note 1 Summary of significant accounting policies (continued)

When a foreign operation is disposed or partially disposed of and UBS AG loses control over the foreign operation, the cumulative amount of foreign currency translation differences within *Total equity attributable to shareholders* and *Equity attributable to non-controlling interests* related to that foreign operation is reclassified to the income statement as part of the gain or loss on disposal. When UBS AG disposes of a portion of its interest in a subsidiary that includes a foreign operation but retains control, the related portion of the cumulative currency translation balance is reclassified to *Equity attributable to non-controlling interests*.

→ **Refer to Note 34 for more information**

14) Equity, treasury shares and contracts on UBS AG shares

Non-controlling interests and preferred noteholders

Net profit and *Equity* are presented including non-controlling interests and preferred noteholders. *Net profit* is split into *Net profit attributable to shareholders, Net profit attributable to non-controlling interests* and *Net profit attributable to preferred noteholders. Equity* is split into *Equity attributable to shareholders, Equity attributable to non-controlling interests* and *Equity attributable to preferred noteholders.*

UBS AG shares held (treasury shares)

UBS AG shares held by UBS AG are presented in *Equity* as *Treasury shares* at their acquisition cost and are deducted from *Equity* until they are canceled or reissued. The difference between the proceeds from sales of treasury shares and their weighted average cost (net of tax, if any) is reported as *Share premium*.

Net cash settlement contracts

Prior to the share-for-share exchange that took place in 2014, UBS AG issued contracts on own shares that required net cash settlement, or provided the counterparty or UBS AG with a settlement option which included a choice of settling net in cash. These contracts were classified as held for trading, with changes in fair value reported in the income statement as *Net trading income*.

Following the share-for-share exchange, these contracts continue to be accounted for in the same manner, however, they are no longer classified as contracts on own shares.

15) Leasing

UBS AG enters into lease contracts, or contracts that include lease components, predominantly of premises and equipment, and primarily as lessee. Leases that transfer substantially all the risks and rewards, but not necessarily legal title in the underlying assets, are classified as finance leases. All other leases are classified as operating leases. UBS AG is not a lessee in any material finance leases.

Lease contracts classified as operating leases where UBS AG is the lessee include non-cancellable long-term leases of office buildings in most UBS AG locations. Operating lease rentals payable are recognized as an expense on a straight-line basis over the lease term, which commences with control of the physical use of the property. Lease incentives are treated as a reduction of rental expense and are recognized on a consistent basis over the lease term.

Where UBS AG acts as lessor under a finance lease, a receivable is recognized in *Loans* at an amount equal to the present value of the aggregate of the minimum lease payments plus any unguaranteed residual value that UBS AG expects to recover at the end of the lease term. Initial direct costs are also included in the initial measurement of the lease receivable. Lease payments received during the lease term are allocated to repayment of the outstanding receivable and interest income to reflect a constant periodic rate of return on UBS AG's net investment using the interest rate implicit in the lease. UBS AG reviews the estimated unguaranteed residual value annually, and if the estimated residual value to be realized is less than the amount assumed at lease inception, a loss is recognized for the expected shortfall.

Certain arrangements do not take the legal form of a lease but convey a right to use an asset in return for a payment or series of payments. For such arrangements, UBS AG determines at the inception of the arrangement whether the fulfillment of the arrangement is dependent on the use of a specific asset or assets and, if so, the arrangement is accounted for as a lease.

→ **Refer to Notes 10 and 31 for more information**

Note 1 Summary of significant accounting policies (continued)

b) Changes in accounting policies, comparability and other adjustments

Own credit

On 1 January 2016, UBS AG adopted the own credit presentation requirements of IFRS 9, *Financial Instruments*. From this date onward, changes in the fair value of financial liabilities designated at fair value through profit or loss related to own credit are recognized in *Other comprehensive income* directly within *Retained earnings*. As UBS AG does not hedge changes in own credit arising on financial liabilities designated at fair value, presenting own credit within *Other comprehensive income* does not create or increase an accounting mismatch in the income statement. The unrealized and any realized own credit recognized in *Other comprehensive income* will not be reclassified to the income statement in future periods. Changes in own credit presented in prior periods have not been restated and remain within *Net trading income*.

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Balance sheet classification of newly purchased high-quality liquid debt securities

Starting 2016, UBS AG generally classifies newly purchased debt securities held as high-quality liquid assets (HQLA), and managed by Corporate Center – Group Asset and Liability Management (Group ALM), as either financial assets designated at fair value through profit or loss or financial assets held to maturity. Debt securities acquired prior to 2016 and held for liquidity purposes remain classified as available for sale financial assets.

Most of the HQLA debt securities purchased since the beginning of 2016 are classified as financial assets designated at fair value through profit or loss and are intended to reduce accounting mismatches by ensuring that changes in the fair value of the securities are recognized in the income statement in line with the associated interest rate derivatives used for risk management purposes. A portion of HQLA debt securities are classified as financial assets held to maturity.

Note 1 Summary of significant accounting policies (continued)

Interest rate swaps converted to a settlement model

In 2016, UBS AG elected to convert its interest rate swaps (IRS) transacted with the London Clearing House and Japan Securities Clearing Corporation from the previous collateral model to a settlement model. The IRS are now legally settled on a daily basis, resulting in derecognition of the associated assets and liabilities. Previously, UBS AG applied IAS 32 netting principles to offset the fair value of IRS with the associated variation margin. Gross cash collateral receivables and payables on derivative instruments and corresponding netting presented in Note 24 decreased by CHF 64 billion as of 31 December 2016, with no change to net cash collateral receivables and payables on derivative instruments recognized on the balance sheet. Consequently, the move to a settlement model resulted in a significant decrease in the fair value of interest rate swaps with the London Clearing House designated as hedging instruments.

→ **Refer to Notes 12 and 24 for more information**

Derecognition of exchange-traded derivative client cash balances from UBS AG's balance sheet

In accordance with UBS AG's accounting policy, client cash balances associated with derivatives clearing and execution services are not recognized on the balance sheet if, through contractual agreement, regulation or practice, UBS AG neither obtains benefits from nor controls the client cash balances. These conditions are considered to have been met when (i) UBS AG is not permitted to reinvest client cash balances, (ii) interest paid by central counterparties (CCPs), brokers or deposit banks on cash deposits forms part of the client cash balances with deductions being made solely as compensation for clearing and execution services provided, (iii) UBS AG does not guarantee and is not liable to clients for the performance of the CCP, broker or deposit bank and (iv) the client cash balances are legally isolated from UBS AG's estate.

During 2016, UBS AG formally and legally waived certain rights available to it under the rules of the US Commodity Futures Trading Commission that had previously enabled it to invest certain client cash balances in other assets, making them a source of benefit to UBS AG. As a result, UBS AG derecognized related client cash balances. Consequently, *Cash collateral receivables on derivative instruments* decreased by CHF 2.5 billion, *Due from banks* decreased by CHF 0.2 billion and *Cash collateral payables on derivative instruments* decreased by CHF 2.7 billion as of 31 December 2016.

Transfer of the Risk Exposure Management function from Corporate Center – Non-core and Legacy Portfolio to Corporate Center – Group ALM

Consistent with changes in the manner in which operating segment performance is assessed, UBS AG transferred in 2016 the Risk Exposure Management (REM) function from Corporate Center – Non-core and Legacy Portfolio to Corporate Center – Group ALM to further harmonize REM risk management responsibility with the reporting structure and align it more closely with other activities performed by Corporate Center – Group ALM.

REM primarily performs risk management over credit, debit and funding valuation adjustments for UBS AG's over-the-counter derivatives portfolio. Prior-period segment profit and loss information was restated to reflect this transfer, which had no impact at a UBS AG level. In Note 2, gross revenues from REM activities are now presented in Corporate Center – Group ALM within *Net interest income* and *Non-interest income*. Revenue allocations from REM to business divisions and other Corporate Center units are presented within Allocations from Corporate Center – Group ALM to business divisions and other Corporate Center units. There was no effect on operating profit before tax for any segment for any period from this restatement. Prior-period information for balance sheet assets has not been restated, as the effect would not have been material.

Changes to statement of changes in equity

In 2016, UBS AG refined the presentation of effects from share-based compensation on share premium and treasury shares in the statement of changes in equity.

The new disclosure line *Delivery of treasury shares under share-based compensation plans,* reflecting the average cost of treasury shares, provides the effect on share premium and treasury shares resulting from the delivery of treasury shares to employees. Also, the effects from *Share-based compensation expensed in the income statement* and *Other disposal of treasury shares* are now presented separately. The former disclosure lines *Disposal of treasury shares, Treasury share gains / (losses)* and *Employee share and share option plans* have been removed.

These changes did not affect total equity or any components of equity. Prior-period information has been adjusted accordingly.

Changes to the estimated useful life of certain IT hardware and communication equipment and software

In 2016, UBS AG extended the estimated useful life for certain IT hardware and communication equipment and software from five to seven years, resulting in CHF 16 million and CHF 26 million lower depreciation expenses in 2016, respectively. These changes are expected to result in approximately CHF 120 million and CHF 60 million lower depreciation expenses in 2017 and 2018, respectively.

Annual Improvements to IFRSs 2012 – 2014 Cycle; Amendments to IFRS 11, Joint Arrangements; IAS 16, Property, Plant and Equipment; IAS 38, Intangible Assets; and IAS 1, Presentation of Financial Statements

In 2016, UBS AG adopted a number of interpretations and amendments to standards, that did not have a material impact on UBS AG's financial statements.

Note 1 Summary of significant accounting policies (continued)

c) International Financial Reporting Standards and Interpretations to be adopted in 2017 and later and other adjustments

IFRS 9, Financial Instruments

In July 2014, the IASB published the final version of IFRS 9, *Financial Instruments*. The standard reflects the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39, Financial Instruments: Recognition and Measurement.

IFRS 9 requires all financial assets, except equity instruments, to be classified at amortized cost, fair value through other comprehensive income (OCI) or fair value through profit or loss, on the basis of the entity's business model for managing the financial assets and its contractual cash flow characteristics. If a financial asset meets the criteria to be measured at amortized cost or at fair value through OCI measurement, it can be designated at fair value through profit or loss under the fair value option if doing so would significantly reduce or eliminate an accounting mismatch. Equity instruments that are not held for trading may be accounted for at fair value through OCI, with no subsequent reclassification of realized gains or losses to the income statement, while all other equity instruments will be accounted for at fair value through profit or loss. IFRS 9 classification and measurement requirements for liabilities are unchanged except that any gain or loss arising on a financial liability designated at fair value through profit or loss that is attributable to changes in the issuer's own credit risk (own credit) is presented in OCI and not recognized in the income statement.

IFRS 9 introduces a forward-looking expected credit loss (ECL) approach, replacing the incurred loss impairment approach for financial instruments in IAS 39, and the loss-provisioning approach for financial guarantees and loan commitments in IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*. Expected credit losses are required to be recognized in profit or loss for all financial assets measured at amortized cost, debt instruments measured at fair value through OCI, lease receivables, financial guarantees and loan commitments. A 12-month expected credit loss is generally recognized on inception, with a lifetime credit loss required if a significant increase in credit risk (SICR) arises. A lifetime loss allowance is always recognized for credit-impaired financial assets.

IFRS 9 also includes an optional revised hedge accounting model, which further aligns the accounting treatment with the risk management practices.

UBS AG early adopted the own credit presentation change in the first quarter of 2016 and will adopt the classification and measurement and impairment changes on 1 January 2018 in line with the mandatory effective date. UBS AG is still assessing whether it will adopt the optional IFRS 9 hedge accounting requirements pending the IASB completing their project on macro hedge accounting strategies. In line with IFRS 9, UBS AG does not intend to restate prior periods and will recognize the difference between carrying amounts as of 31 December 2017 and those on adoption of IFRS 9 on 1 January 2018 in opening retained earnings.

UBS AG has assessed all material positions under the revised classification and measurement requirements and has identified certain debt instruments that will not qualify for amortized cost accounting but will be measured at fair value through profit or loss under IFRS 9. However, this is not expected to have significant effects on UBS AG's financial statements as the instruments are predominantly collateralized short-term lending arrangements with no material differences between their amortized cost value and fair value. In addition, UBS AG is monitoring the IASB's project to amend IFRS 9 to allow for basic lending arrangements with symmetrical break clauses to continue to qualify for amortized cost accounting. These clauses are common features in Swiss private mortgages as a consequence of Swiss law and in Swiss corporate lending due to market practice, and may result in compensation for early termination being paid by either the borrower or UBS AG. The IASB is expected to issue an exposure draft in April 2017, effective 1 January 2018 in line with IFRS 9's effective date. Based on the anticipated amendments, UBS AG expects that its private mortgages and corporate loans can continue to be measured at amortized cost.

Overall, the level of credit losses is expected to increase under IFRS 9 alongside additional income statement volatility due to the use of uncertain forward-looking assumptions and the application of the SICR approach. Initial ECL results calculated for key portfolios in a prototype environment with preliminary models and scenarios, indicate an increase in credit losses that should not have a significant impact on equity on adoption, due to the relatively short contractual maturities, the high quality of UBS AG's loan book and the current benign credit environment. Actual results on 1 January 2018 may differ significantly given the preliminary status of the models and data included in the prototype and the possibility of changes in the macroeconomic environment. UBS AG continues to monitor the potential effects of IFRS 9 on its regulatory capital requirements, but does not expect any impact to be material.

→ **Refer to Note 1b for more information on own credit**

IFRS 15, Revenue from Contracts with Customers

In May 2014, the IASB issued IFRS 15, *Revenue from Contracts with Customers* replacing IAS 18 *Revenue.* IFRS 15 establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied. In particular, the standard now specifies that variable consideration is only recognized to the extent that it is highly probable that a significant reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved. This may affect when certain performance-based and asset-based fees can be recognized.

It also provides guidance on when revenues and expenses should be presented on a gross or net basis and establishes a cohesive set of disclosure requirements for information on the nature, amount, timing and uncertainty of revenue and cash flows from contracts with customers.

UBS AG will adopt the standard as of its mandatory effective date on 1 January 2018 and will apply it on a modified retrospective basis, recognizing the cumulative effect of initially applying the standard as an adjustment to the opening balance of retained earnings. UBS AG continues to assess the impact of the new standard on its financial statements, but currently does not expect any impact to be material.

IFRS 16, Leases

In January 2016, the IASB issued IFRS 16*, Leases,* which replaces IAS 17, *Leases,* and will come into effect on 1 January 2019. The standard substantially changes how lessees must account for operating lease commitments, requiring an on-balance sheet liability with a corresponding right-of-use asset to be recognized on the balance sheet, compared with the current off-balance sheet treatment of such leases. Early adoption is permitted for companies that also apply IFRS 15, *Revenue from Contracts with Customers*. UBS AG expects to report an increase in assets and liabilities from adoption in line with its operating lease commitments as at 1 January 2019.

→ **Refer to Note 31 for more information**

Amendments to IAS 12, Income Taxes

In January 2016, the IASB issued narrow-scope amendments to IAS 12*, Income Taxes,* clarifying how to account for deferred tax assets related to debt instruments measured at fair value. Entities are required to apply the amendments for annual periods beginning on or after 1 January 2017. UBS AG expects that the adoption of these amendments will not have a material impact on its financial statements.

Amendments to IAS 7, Statement of Cash Flows

In January 2016, the IASB issued amendments to IAS 7, *Statement of Cash Flows,* which, among other things, require companies to provide information about changes in their financial liabilities arising from financing activities, including changes from cash flows and non-cash changes, such as foreign exchange gains or losses. UBS AG will adopt the amendments in the first quarter of 2017.

Amendments to IFRS 2, Share-based Payment

In June 2016, the IASB issued amendments to IFRS 2, *Share-based Payment*, which are mandatorily effective as of 1 January 2018, with early adoption permitted. The amendments require that the approach used to account for vesting and non-vesting conditions when measuring cash-settled share-based payments is consistent with that used for equity-settled share-based payments. The amendments also clarify the classification of share-based payments settled net of withholding tax as well as the accounting consequences resulting from a modification of share-based payments from cash-settled to equity-settled. UBS AG expects that the adoption of these amendments will not have a material impact on its financial statements.

IFRIC 22, Foreign Currency Transactions and Advance Consideration

In December 2016, the IFRS Interpretations Committee of the IASB issued IFRIC Interpretation 22, *Foreign Currency Transactions and Advance Consideration*, which clarifies that the date of the transaction for the purpose of determining the exchange rate to apply on initial recognition of the related asset, expense or income, is the date on which the entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. Entities are required to apply IFRIC 22 for annual periods beginning on or after 1 January 2018. UBS AG expects that the adoption of this IFRS Interpretation will not have a material impact on its financial statements.

Note 2a Segment reporting

The operational structure of UBS AG is comprised of Corporate Center and five business divisions: Wealth Management, Wealth Management Americas, Personal & Corporate Banking, Asset Management and the Investment Bank.

Wealth Management

Wealth Management provides comprehensive advice and tailored financial services to wealthy private clients around the world, except those served by Wealth Management Americas. Its clients benefit from the full spectrum of resources that UBS AG as a global firm can offer, including banking and lending solutions, wealth planning, investment management solutions and corporate finance advice. Wealth Management's guided architecture model gives clients access to a wide range of products from the world's leading third-party institutions that complement its own products.

Wealth Management Americas

Wealth Management Americas provides advice-based solutions through financial advisors who deliver a fully integrated set of products and services specifically designed to address the needs of their clients. Its business is primarily domestic US but includes Canada and international business booked in the US.

Personal & Corporate Banking

Personal & Corporate Banking provides comprehensive financial products and services to private, corporate and institutional clients in Switzerland and is among the leading players in the private and corporate loan market in Switzerland, with a well-collateralized and conservatively managed lending portfolio.

Its business is a central element of UBS AG's universal bank delivery model in Switzerland. Personal & Corporate Banking works with the wealth management, investment bank and asset management businesses to ensure that clients receive the best products and solutions for their specific financial needs. Personal & Corporate Banking is also an important source of growth for other business divisions in Switzerland through client referrals. In addition, Personal & Corporate Banking manages a substantial part of UBS AG's Swiss infrastructure and banking products platform, both of which are leveraged across UBS AG.

Asset Management

Asset Management provides investment management products and services, platform solutions and advisory support to institutions, wholesale intermediaries and wealth management clients around the world, with an onshore presence in 22 countries. Asset management is a leading fund house in Europe, the largest mutual fund manager in Switzerland and one of the largest fund of hedge funds and real estate investment managers in the world. Its global investment capabilities include all major traditional and alternative asset classes.

Investment Bank

The Investment Bank is present in over 35 countries, with principal offices in all major financial centers, providing investment advice, financial solutions and capital markets access. It serves corporate, institutional and wealth management clients across the globe and forms a synergetic partnership with UBS AG's wealth management, personal and corporate banking and asset management businesses.

The business division is organized into Corporate Client Solutions and Investor Client Services and also includes UBS AG Securities Research.

Corporate Center

Corporate Center is comprised of Services, Group Asset and Liability Management (Group ALM) and Non-core and Legacy Portfolio.

Services consists of the Group Chief Operating Officer area (Group Corporate Services, Group Operations, Group Sourcing, Group Technology), Group Finance, Group Legal, Group Human Resources, Group Risk Control, Group Communications and Branding, Group Regulatory and Governance, and UBS and Society.

Group ALM manages the structural risks of UBS AG's balance sheet, including interest rate risk in the banking book, currency risk and collateral risk, as well as the risks associated with UBS AG's liquidity and funding portfolios. Group ALM also seeks to optimize UBS AG's financial performance by better matching assets and liabilities within the context of UBS AG's liquidity, funding and capital targets. Group ALM serves all business divisions and other Corporate Center units through three main risk management areas, and its risk management is fully integrated into UBS AG's risk governance framework.

Non-core and Legacy Portfolio is comprised of the positions from businesses that were part of the Investment Bank prior to its restructuring and is overseen by a committee chaired by the Chief Risk Officer.

Note 2a Segment reporting (continued)

CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
						Services	Group ALM	Non-core and Legacy Portfolio	
For the year ended 31 December 2016									
Net interest income	1,932	1,347	1,892	(33)	1,006	(322)	559	3	6,383
Non-interest income	4,975	6,320	1,768	1,957	6,951	250	(229)	84	22,075
Allocations from CC – Group ALM to business divisions and other CC units	389	118	332	7	(260)	36	(512)	(110)	0
Income[1]	7,296	7,785	3,990	1,931	7,697	(36)	(183)	(23)	28,458
Credit loss (expense) / recovery	(5)	(3)	(6)	0	(11)	0	0	(13)	(37)
Total operating income	7,291	7,782	3,984	1,931	7,686	(36)	(183)	(36)	28,421
Personnel expenses	2,348	4,819	843	727	3,081	3,674	31	66	15,591
General and administrative expenses	653	597	286	242	852	4,312	17	731	7,690
Services (to) / from Corporate Center and other business divisions	2,348	1,235	1,079	505	2,757	(8,156)	(49)	280	0
of which: services from CC – Services	*2,256*	*1,221*	*1,186*	*530*	*2,667*	*(8,196)*	*110*	*225*	*0*
Depreciation and impairment of property, equipment and software	2	2	15	1	21	938	0	0	980
Amortization and impairment of intangible assets[2]	4	50	0	4	12	21	0	0	91
Total operating expenses[3]	5,355	6,702	2,224	1,480	6,724	790	(1)	1,077	24,352
Operating profit / (loss) before tax	**1,936**	**1,081**	**1,761**	**451**	**962**	**(826)**	**(182)**	**(1,113)**	**4,069**
Tax expense / (benefit)									781
Net profit / (loss)									**3,288**
Additional Information									
Total assets	115,539	65,882	139,945	12,026	242,388	23,813	267,275	68,485	935,353
Additions to non-current assets	26	4	23	1	3	1,741	0	0	1,798

1 Impairments of financial assets available for sale for the year ended 31 December 2016 totaled CHF 5 million, of which CHF 3 million was recorded in Asset Management. 2 Refer to Note 15 for more information.
3 Refer to Note 30 for information on restructuring expenses.

Note 2a Segment reporting (continued)[1]

CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
						Services	Group ALM	Non-core and Legacy Portfolio	
For the year ended 31 December 2015									
Net interest income	1,825	1,067	1,890	(34)	1,573	(337)	724	21	6,729
Non-interest income	5,859	6,213	1,603	2,077	7,525	434	383	(101)	23,993
Allocations from CC – Group ALM to business divisions and other CC units	471	104	421	15	(211)	145	(832)	(114)	0
Income[2]	8,155	7,384	3,913	2,057	8,889	243	275	(195)	30,721
Credit loss (expense) / recovery	0	(4)	(37)	0	(68)	0	0	(8)	(117)
Total operating income	8,155	7,381	3,876	2,057	8,821	243	275	(203)	30,605
Personnel expenses	2,532	4,579	873	729	3,220	3,875	30	116	15,954
General and administrative expenses	650	848	264	233	882	4,517	21	804	8,219
Services (to) / from Corporate Center and other business divisions	2,289	1,209	1,077	502	2,816	(8,214)	(57)	379	0
of which: services from CC – Services	*2,209*	*1,193*	*1,180*	*523*	*2,730*	*(8,243)*	*96*	*313*	*0*
Depreciation and impairment of property, equipment and software	5	3	17	2	26	866	0	0	918
Amortization and impairment of intangible assets[3]	3	51	0	8	24	21	0	0	107
Total operating expenses[4]	5,478	6,689	2,231	1,475	6,969	1,065	(6)	1,298	25,198
Operating profit / (loss) before tax	**2,676**	**692**	**1,646**	**583**	**1,852**	**(822)**	**281**	**(1,501)**	**5,407**
Tax expense / (benefit)									(908)
Net profit / (loss)									**6,314**
Additional Information									
Total assets	119,850	60,993	141,174	12,874	253,571	22,866	237,560	94,369	943,256
Additions to non-current assets	6	4	14	1	18	1,844	0	1	1,888

1 Figures in this table may differ from those originally published in quarterly and annual reports due to adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period. Refer to Note 1b for more information. 2 Impairments of financial assets available for sale for the year ended 31 December 2015 totaled CHF 1 million, all in Wealth Management. 3 Refer to Note 15 for more information. 4 Refer to Note 30 for information on restructuring expenses.

Note 2a Segment reporting (continued)[1]

CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center Services	Corporate Center Group ALM	Corporate Center Non-core and Legacy Portfolio	UBS AG
For the year ended 31 December 2014									
Net interest income	1,693	864	1,801	(39)	1,583	(338)	731	258	6,555
Non-interest income	5,726	6,004	1,575	1,914	6,823	157	101	(751)	21,549
Allocations from CC – Group ALM to business divisions and other CC units	481	116	461	27	(100)	217	(831)	(371)	0
Income[2]	7,902	6,984	3,836	1,902	8,306	35	2	(863)	28,104
Credit loss (expense) / recovery	(1)	15	(95)	0	2	0	0	2	(78)
Total operating income	7,901	6,998	3,741	1,902	8,308	35	2	(862)	28,026
Personnel expenses	2,467	4,363	850	643	2,964	3,843	26	124	15,280
General and administrative expenses	918	550	293	305	2,671	4,113	22	505	9,377
Services (to) / from Corporate Center and other business divisions	2,180	1,137	1,074	478	2,711	(8,046)	(48)	514	0
of which: services from CC – Services	*2,122*	*1,121*	*1,196*	*495*	*2,658*	*(8,084)*	*88*	*404*	*0*
Depreciation and impairment of property, equipment and software	4	0	17	2	32	762	0	0	817
Amortization and impairment of intangible assets[3]	5	48	0	9	15	6	0	0	83
Total operating expenses[4]	5,574	6,099	2,235	1,435	8,392	679	0	1,144	25,557
Operating profit / (loss) before tax	**2,326**	**900**	**1,506**	**467**	**(84)**	**(643)**	**2**	**(2,005)**	**2,469**
Tax expense / (benefit)									(1,180)
Net profit / (loss)									**3,649**
Additional Information									
Total assets	127,588	56,026	143,711	15,207	292,347	19,720	237,901	169,826	1,062,327
Additions to non-current assets	7	6	9	2	7	1,677	0	0	1,708

1 Figures in this table may differ from those originally published in quarterly and annual reports due to adjustments following organizational changes, restatements due to the retrospective adoption of new accounting standards or changes in accounting policies, and events after the reporting period. Refer to Note 1b for more information. 2 Impairments of financial assets available for sale for the year ended 31 December 2014 totaled CHF 76 million, of which CHF 49 million was recorded in the Investment Bank and CHF 23 million in Corporate Center – Non-core and Legacy Portfolio. 3 Refer to Note 15 for more information. 4 Refer to Note 30 for information on restructuring expenses.

Note 2b Segment reporting by geographic location

The operating regions shown in the table below correspond to the regional management structure of UBS AG. The allocation of operating income to these regions reflects, and is consistent with, the basis on which the business is managed and its performance is evaluated. These allocations involve assumptions and judgments that management considers to be reasonable, and may be refined to reflect changes in estimates or management structure. The main principles of the allocation methodology are that client revenues are attributed to the domicile of the client and trading and portfolio management revenues are attributed to the country where the risk is managed. This revenue attribution is consistent with the mandate of the regional Presidents. Certain revenues, such as those related to Corporate Center – Non-core and Legacy Portfolio, are managed at a global level. These revenues are included in the *Global* line.

The geographic analysis of non-current assets is based on the location of the entity in which the assets are recorded.

For the year ended 31 December 2016

	Total operating income		Total non-current assets	
	CHF billion	Share %	CHF billion	Share %
Americas	11.7	41	7.4	47
of which: US	*11.1*	*39*	*7.0*	*44*
Asia Pacific	4.1	14	0.6	4
Europe, Middle East and Africa	6.1	21	1.8	11
Switzerland	6.8	24	6.0	38
Global	(0.3)	(1)	0.0	0
Total	28.4	100	15.8	100

For the year ended 31 December 2015

	Total operating income		Total non-current assets	
	CHF billion	Share %	CHF billion	Share %
Americas	11.3	37	7.1	47
of which: US	*10.7*	*35*	*6.7*	*44*
Asia Pacific	5.0	16	0.5	3
Europe, Middle East and Africa	6.8	22	1.7	11
Switzerland	7.1	23	5.9	39
Global	0.5	2	0.0	0
Total	30.6	100	15.2	100

For the year ended 31 December 2014

	Total operating income		Total non-current assets	
	CHF billion	Share %	CHF billion	Share %
Americas	10.7	38	7.0	48
of which: US	*10.1*	*36*	*6.6*	*45*
Asia Pacific	4.6	16	0.4	3
Europe, Middle East and Africa	6.8	24	1.5	10
Switzerland	6.8	24	5.6	38
Global	(0.9)	(3)	0.0	0
Total	28.0	100	14.6	100

Income statement notes

Note 3 Net interest and trading income

	For the year ended			% change from
CHF million	31.12.16	31.12.15	31.12.14	31.12.15
Net interest and trading income				
Net interest income	6,383	6,729	6,555	(5)
Net trading income	4,943	5,696	3,841	(13)
Total net interest and trading income	11,326	12,425	10,396	(9)
Wealth Management	2,998	3,034	2,845	(1)
Wealth Management Americas	1,839	1,537	1,352	20
Personal & Corporate Banking	2,532	2,613	2,536	(3)
Asset Management	(29)	(5)	0	480
Investment Bank	4,275	5,186	4,517	(18)
of which: Corporate Client Solutions	*822*	*1,001*	*1,030*	*(18)*
of which: Investor Client Services	*3,453*	*4,185*	*3,487*	*(17)*
Corporate Center	(289)	61	(855)	
of which: Services	*(92)*	*(1)*	*33*	
of which: Group ALM	*(134)*	*375*	*16*	
of which: own credit on financial liabilities designated at fair value[1]		*553*	*292*	*(100)*
of which: Non-core and Legacy Portfolio	*(62)*	*(313)*	*(904)*	*(80)*
Total net interest and trading income	11,326	12,425	10,396	(9)
Net interest income				
Interest income				
Interest income from loans and deposits[2,3]	9,566	8,626	8,722	11
Interest income from securities financing transactions[4]	1,136	896	752	27
Interest income from trading portfolio[5]	2,465	3,071	3,196	(20)
Interest income from financial assets and liabilities designated at fair value	361	194	208	86
Interest income from financial assets available for sale and held to maturity[5]	253	391	315	(35)
Total	13,782	13,178	13,194	5
Interest expense				
Interest expense on loans and deposits[6]	1,664	774	708	115
Interest expense on securities financing transactions[7]	1,233	976	827	26
Interest expense on trading portfolio[8]	1,614	1,670	1,804	(3)
Interest expense on financial assets and liabilities designated at fair value	841	730	919	15
Interest expense on debt issued	2,046	2,299	2,382	(11)
Total	7,399	6,449	6,639	15
Net interest income	6,383	6,729	6,555	(5)
Net trading income				
Investment Bank Corporate Client Solutions	188	321	276	(41)
Investment Bank Investor Client Services	3,330	3,494	2,760	(5)
Other business divisions and Corporate Center	1,425	1,882	806	(24)
Net trading income	4,943	5,696	3,841	(13)
of which: net gains / (losses) from financial assets designated at fair value	*(186)*	*(119)*	*(81)*	*56*
of which: net gains / (losses) from financial liabilities designated at fair value[9]	*(1,362)*	*3,701*	*(2,380)*	

1 Refer to Note 1b for more information. 2 Includes interest income on impaired loans and advances of CHF 21 million for 2016, CHF 16 million for 2015 and CHF 15 million for 2014. 3 Consists of interest income from balances with central banks, amounts due from banks and loans, and negative interest on amounts due to banks and customers. 4 Includes interest income on securities borrowed and reverse repurchase agreements and negative interest, including fees, on securities lent and repurchase agreements. 5 Includes dividend income. 6 Consists of interest expense on amounts due to banks and customers, and negative interest on balances with central banks, amounts due from banks and loans. 7 Includes interest expense on securities lent and repurchase agreements and negative interest, including fees, on securities borrowed and reverse repurchase agreements. 8 Includes expense related to dividend payment obligations on trading liabilities. 9 Excludes fair value changes of hedges related to financial liabilities designated at fair value and foreign currency translation effects arising from translating foreign currency transactions into the respective functional currency, both of which are reported within net trading income.

Note 4 Net fee and commission income

	For the year ended			% change from
CHF million	31.12.16	31.12.15	31.12.14	31.12.15
Underwriting fees	994	1,290	1,470	(23)
of which: equity underwriting fees	*516*	*836*	*947*	*(38)*
of which: debt underwriting fees	*478*	*455*	*522*	*5*
M&A and corporate finance fees	733	737	731	(1)
Brokerage fees	3,544	3,930	3,918	(10)
Investment fund fees	3,155	3,567	3,717	(12)
Portfolio management and advisory fees	8,035	7,858	7,343	2
Other	1,747	1,678	1,760	4
Total fee and commission income	18,207	19,060	18,940	(4)
Brokerage fees paid	757	869	818	(13)
Other	1,003	1,007	1,045	0
Total fee and commission expense	1,760	1,876	1,863	(6)
Net fee and commission income	16,447	17,184	17,076	(4)
of which: net brokerage fees	*2,786*	*3,060*	*3,100*	*(9)*

Note 5 Other income

	For the year ended			% change from
CHF million	31.12.16	31.12.15	31.12.14	31.12.15
Associates and subsidiaries				
Net gains / (losses) from disposals of subsidiaries[1]	(150)[2]	264[2]	56	
Net gains / (losses) from disposals of investments in associates	0	0	69	
Share of net profits of associates	106	169	94	(37)
Total	(44)	433	219	
Financial assets available for sale				
Net gains / (losses) from disposals	346	252	219	37
Impairment charges	(5)	(1)	(76)	400
Total	342	251	143	36
Net income from properties (excluding net gains / (losses) from disposals)[3]	25	28	30	(11)
Net gains / (losses) from disposals of properties held for sale	125	378	44	(67)
Net gains / (losses) from disposals of loans and receivables	(3)	26	39	
Other	240	(5)[4]	157	
Total other income	685	1,112	632	(38)

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to disposed foreign subsidiaries and branches. 2 2016 includes a loss on sale of a subsidiary of CHF 23 million in Wealth Management. 2015 includes a net gain on sale of subsidiaries of CHF 113 million in Wealth Management and a net gain on sale of subsidiaries of CHF 56 million in Asset Management. Refer to Note 30 for more information. 3 Includes net rent received from third parties and net operating expenses. 4 Includes a net gain on sale of businesses of CHF 56 million in Wealth Management. Refer to Note 30 for more information.

Note 6 Personnel expenses

	For the year ended			% change from
CHF million	31.12.16	31.12.15	31.12.14	31.12.15
Salaries[1]	6,136	6,260	6,269	(2)
Variable compensation – performance awards[2]	2,963	3,209	2,820	(8)
of which: guarantees for new hires	*30*	*38*	*48*	*(21)*
Variable compensation – other[2]	418	346	466	21
of which: replacement payments[3]	*86*	*76*	*81*	*13*
of which: forfeiture credits	*(73)*	*(86)*	*(70)*	*(15)*
of which: severance payments[4]	*217*	*157*	*162*	*38*
of which: retention plan and other payments	*188*	*198*	*292*	*(5)*
Wealth Management Americas: Financial advisor compensation[2, 5]	3,697	3,552	3,385	4
Contractors	420	365	234	15
Social security	734	817	791	(10)
Pension and other post-employment benefit plans[6]	669	807	711	(17)
Other personnel expenses	554	597	605	(7)
Total personnel expenses[7]	15,591	15,954	15,280	(2)

1 Includes role-based allowances. 2 Refer to Note 27 for more information. 3 Replacement payments are payments made to compensate employees for deferred awards forfeited as a result of joining UBS AG. 4 Includes legally obligated and standard severance payments. 5 Financial advisor compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated based on financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 6 Refer to Note 26 for more information. 7 Includes net restructuring expenses of CHF 731 million, CHF 458 million and CHF 327 million for the years ended 31 December 2016, 31 December 2015 and 31 December 2014, respectively. Refer to Note 30 for more information.

Note 7 General and administrative expenses

	For the year ended			% change from
CHF million	31.12.16	31.12.15	31.12.14	31.12.15
Occupancy	921	928	1,005	(1)
Rent and maintenance of IT and other equipment	511	510	479	0
Communication and market data services	624	610	608	2
Administration	1,069	855	608	25
Marketing and public relations	465	484	468	(4)
Travel and entertainment	411	456	458	(10)
Professional fees	1,225	1,351	1,306	(9)
Outsourcing of IT and other services	1,592	1,742	1,603	(9)
Provisions for litigation, regulatory and similar matters[1]	795	1,087	2,594	(27)
Other	78	195	248	(60)
Total general and administrative expenses[2]	7,690	8,219	9,377	(6)

1 Reflects the net increase in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 20 for more information. Also includes recoveries from third parties of CHF 13 million, CHF 10 million and CHF 10 million for the years ended 31 December 2016, 31 December 2015 and 31 December 2014, respectively. 2 Includes net restructuring expenses of CHF 700 million, CHF 760 million and CHF 319 million for the years ended 31 December 2016, 31 December 2015 and 31 December 2014, respectively. Refer to Note 30 for more information.

Note 8 Income taxes

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Tax expense / (benefit)			
Swiss			
Current	429	230	46
Deferred	635	329	1,348
Non-Swiss			
Current	350	476	409
Deferred	(633)	(1,943)	(2,983)
Total income tax expense / (benefit) recognized in the income statement	781	(908)	(1,180)

Income tax recognized in the income statement

The Swiss current tax expense of CHF 429 million related to taxable profits, mainly earned by Swiss subsidiaries, against which no losses were available to offset. The Swiss deferred tax expense of CHF 635 million reflected a decrease of deferred tax assets previously recognized in relation to tax losses carried forward and temporary differences.

The non-Swiss current tax expense of CHF 350 million related to taxable profits earned by non-Swiss subsidiaries and branches, against which no losses were available to offset. The non-Swiss net deferred tax benefit of CHF 633 million was primarily due to an increase in US deferred tax assets, reflecting updated profit forecasts.

UBS AG considers the performance of its businesses and the accuracy of historical forecasts and other factors in evaluating the recoverability of its deferred tax assets, including the remaining tax loss carry-forward period, and its assessment of expected future taxable profits in the forecast period used for recognizing deferred tax assets. Estimating future profitability is inherently subjective and is particularly sensitive to future economic, market and other conditions, which are difficult to predict.

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Operating profit / (loss) before tax	4,069	5,407	2,469
of which: Swiss	*2,607*	*3,665*	*1,181*
of which: Non-Swiss	*1,462*	*1,742*	*1,288*
Income taxes at Swiss tax rate of 21%	854	1,135	519
Increase / (decrease) resulting from:			
Non-Swiss tax rates differing from Swiss tax rate	71	(69)	68
Tax effects of losses not recognized	185	107	325
Previously unrecognized tax losses now utilized	(39)	(107)	(285)
Non-taxable and lower taxed income	(343)	(273)	(384)
Non-deductible expenses and additional taxable income	914	519	1,069
Adjustments related to prior years - current tax	22	29	5
Adjustments related to prior years - deferred tax	2	(48)	(9)
Change in deferred tax valuation allowances	(978)	(2,419)	(2,373)
Adjustments to deferred tax balances arising from changes in tax rates	19	191	(183)
Other items	72	26	69
Income tax expense / (benefit)	781	(908)	(1,180)

Note 8 Income taxes (continued)

The components of operating profit before tax, and the differences between income tax expense reflected in the financial statements and the amounts calculated at the Swiss tax rate, are provided in the table on the previous page and explained below.

Non-Swiss tax rates differing from Swiss tax rate

To the extent that UBS AG profits or losses arise outside Switzerland, the applicable local tax rate may differ from the Swiss tax rate. This item reflects, for such profits or losses, an adjustment from the tax expense / benefit that would arise at the Swiss tax rate and the tax expense / benefit that would arise at the applicable local tax rate. If an entity generates a profit, a tax expense arises where the local tax rate is in excess of the Swiss tax rate and a tax benefit arises where the local tax rate is below the Swiss tax rate. Conversely, if an entity incurs a loss, a tax benefit arises where the local tax rate is in excess of the Swiss tax rate and a tax expense arises where the local tax rate is less than the Swiss tax rate.

Tax effects of losses not recognized

This item relates to tax losses of entities arising in the year, which are not recognized as deferred tax assets. Consequently, no tax benefit arises in relation to those losses. Therefore, the tax benefit calculated by applying the local tax rate to those losses as described above is reversed.

Previously unrecognized tax losses now utilized

This item relates to taxable profits of the year, which are offset by tax losses of previous years, for which no deferred tax assets were previously recorded. Consequently, no current tax or deferred tax expense arises in relation to those taxable profits. Therefore, the tax expense calculated by applying the local rate on those profits is reversed.

Non-taxable and lower taxed income

This item relates to profits for the year, which are either permanently not taxable or are taxable, but at a lower rate of tax than the local tax rate. It also includes any permanent deductions made for tax purposes, which are not reflected in the accounts, thereby effectively ensuring that profits covered by the deduction are not taxable.

Non-deductible expenses and additional taxable income

This item mainly relates to income for the year, which is imputed for tax purposes for an entity, but is not included in its operating profit. In addition, it includes expenses for the year that are permanently non-deductible.

Adjustments related to prior years – current tax

This item relates to adjustments to current tax expense for prior years, for example, if the tax payable for a year agreed with the tax authorities is expected to differ from the amount previously reflected in the financial statements.

Adjustments related to prior years – deferred tax

This item relates to adjustments to deferred tax positions recognized in prior years, for example, if a tax loss for a year is fully recognized and the amount of the tax loss agreed with the tax authorities is expected to differ from the amount previously recognized as deferred tax assets in the accounts.

Note 8 Income taxes (continued)

Change in deferred tax valuation allowances

This item includes revaluations of deferred tax assets previously recognized resulting from reassessments of expected future taxable profits. It also includes changes in temporary differences in the year, for which deferred tax is not recognized. The amount in the year mainly relates to the upward revaluation of deferred tax assets.

Adjustments to deferred tax balances arising from changes in tax rates

This item relates to remeasurements of deferred tax assets and liabilities recognized due to changes in tax rates. These have the effect of changing the future tax saving that is expected from tax losses or deductible tax differences and therefore the amount of deferred tax assets recognized or, alternatively, changing the tax cost of additional taxable income from taxable temporary differences and therefore the deferred tax liability.

Other items

Other items include other differences between profits or losses at the local tax rate and the actual local tax expense or benefit, including increases in provisions for uncertain positions in relation to the current year, interest accruals for such provisions in relation to prior years and other items.

Income tax recognized directly in equity

Certain tax expenses and benefits were recognized directly in equity. These included a tax benefit of CHF 170 million related to cash flow hedges (2015: benefit of CHF 131 million), a tax benefit of CHF 28 million related to financial assets classified as available for sale (2015: benefit of CHF 8 million), a tax expense of CHF 84 million related to foreign currency translation gains and losses (2015: expense of CHF 1 million), a tax benefit of CHF 52 million related to defined benefit plans (2015: expense of CHF 19 million) and a tax benefit of CHF 5 million (2015: CHF 0 million) related to own credit. In addition, they included a tax benefit of CHF 25 million recognized in share premium (2015: benefit of CHF 9 million). Furthermore, there were net foreign currency translation movements related to the effects of exchange rate changes on tax assets and liabilities denominated in currencies other than Swiss francs.

Deferred tax assets and liabilities

UBS AG has deferred tax assets related to tax loss carry-forwards and other items as shown in the table below. As of 31 December 2016, deferred tax assets of CHF 1,689 million (31 December 2015: CHF 2,094 million) were recognized by entities that incurred losses in either the current or preceding year based on projections of future taxable profits. The valuation allowance reflects deferred tax assets that were not recognized because it was not considered probable that future taxable profits will be available to utilize the related tax loss carry-forwards and deductible temporary differences.

CHF million	31.12.16			31.12.15		
Deferred tax assets[1]	Gross	Valuation allowance	Recognized	Gross	Valuation allowance	Recognized
Tax loss carry-forwards	24,627	(16,430)	8,197	25,471	(18,378)	7,093
Temporary differences	6,335	(1,388)	4,947	7,023	(1,284)	5,739
of which: related to compensation and benefits	*1,419*	*(208)*	*1,211*	*1,576*	*(267)*	*1,310*
of which: related to trading assets	*935*	*(118)*	*817*	*1,116*	*(77)*	*1,038*
of which: related to investments in subsidiaries and goodwill	*2,059*	*0*	*2,059*	*2,310*	*0*	*2,310*
of which: other	*1,922*	*(1,062)*	*859*	*2,021*	*(940)*	*1,081*
Total deferred tax assets	30,962	(17,818)	13,144	32,494	(19,661)	12,833

Deferred tax liabilities		
Goodwill and intangible assets	24	28
Financial assets	2	1
Investments in associates and other	18	27
Total deferred tax liabilities	44	56

1 Less deferred tax liabilities as applicable.

Note 8 Income taxes (continued)

As of 31 December 2016, tax loss carry-forwards totaling CHF 49,477 million (31 December 2015: CHF 56,973 million), which are not recognized as deferred tax assets, were available to be offset against future taxable profits. These tax losses expire as outlined in the table below.

Unrecognized tax loss carry-forwards

CHF million	31.12.16	31.12.15
Within 1 year	0	3,727
From 2 to 5 years	66	33
From 6 to 10 years	909	753
From 11 to 20 years	32,603	34,833
No expiry	15,899	17,627
Total	49,477	56,973

In general, Swiss tax losses can be carried forward for seven years, US federal tax losses for 20 years and UK and Jersey tax losses for an unlimited period.

UBS AG recognizes deferred tax liabilities on undistributed earnings of subsidiaries, except to the extent that those earnings are indefinitely invested. As of 31 December 2016, no such earnings were considered indefinitely invested.

The financial statements have been prepared on the basis that UBS Limited is able to offset part of its taxable profits against losses transferred from UBS AG. During 2016, the UK tax authorities indicated that they do not agree with this tax return filing position. If the authorities ultimately prevail on this point, UBS Limited would incur a further reduction in recognized deferred tax assets of approximately CHF 60 million, as well as additional current tax expenses for periods from 2014 onward of approximately CHF 70 million.

Note 9 Earnings per share (EPS) and shares outstanding

During 2015, UBS AG shares were delisted from the SIX and the NYSE. As of 31 December 2016, 100% of UBS AG's issued shares were held by UBS Group AG and therefore were not publicly traded. Accordingly, earnings per share information is not provided for UBS AG.

Balance sheet notes: assets

Note 10 Due from banks and loans (held at amortized cost)

CHF million	31.12.16	31.12.15
By type of exposure		
Due from banks, gross	13,128	11,869
Allowance for credit losses	(3)	(3)
Due from banks, net	13,125	11,866
Loans, gross		
Residential mortgages	142,197	141,608
Commercial mortgages	19,765	21,509
Lombard loans	104,999	107,084
Other loans[1]	37,160	39,321
Finance lease receivables[2]	986	1,083
Securities	2,494	2,807
Subtotal	307,601	313,413
Allowance for credit losses	(596)	(689)
Loans, net	307,004	312,723
Total due from banks and loans, net[3]	320,129	324,590

1 Includes corporate loans. 2 Refer to Note 31 for more information. 3 Refer to Note 25b for more information on collateral and credit enhancements.

Note 11 Allowances and provisions for credit losses

CHF million

By movement	Specific allowances	Collective allowances	Total allowances	Provisions[1]	Total 31.12.16	Total 31.12.15
Balance at the beginning of the year	686	6	692	35	727	735
Write-offs / usage of provisions	(143)	(2)	(145)	0	(145)	(164)
Recoveries	21	0	22	0	22	48
Increase / (decrease) recognized in the income statement	21	6	28	9	37	117
Reclassifications	(10)	0	(10)	10	0	0
Foreign currency translation	(1)	0	0	0	0	(11)
Other	12	0	12	0	12	2
Balance at the end of the year	587	12	599	54	653	727

1 Represents provisions for loan commitments and guarantees. Refer to Note 20 for more information. Refer to the "Treasury management" section of this report for the maximum irrevocable amount of loan commitments and guarantees.

By balance sheet line	Specific allowances	Collective allowances	Total allowances	Provisions	Total 31.12.16	Total 31.12.15
Due from banks	3	0	3		3	3
Loans	585	12	596		596	689
Provisions[1]				54	54	35
Balance at the end of the year	587	12	599	54	653	727

1 Represents provisions for loan commitments and guarantees.

Note 12 Derivative instruments and hedge accounting

Derivatives: overview

A derivative is a financial instrument of which the value is derived from one or more variables (underlyings). Underlyings may be indices, foreign currency exchange or interest rates, or the value of shares, commodities, bonds or other financial instruments. A derivative commonly requires little or no initial net investment by either counterparty to the trade.

The majority of derivative contracts are negotiated with respect to notional amounts, tenor, price and settlement mechanisms, as is customary with other financial instruments.

Over-the-counter (OTC) derivative contracts are usually traded under a standardized International Swaps and Derivatives Association (ISDA) master agreement between UBS and its counterparties. Terms are negotiated directly with counterparties and the contracts will have industry-standard settlement mechanisms prescribed by ISDA. Recent rules, introduced by regulators in various jurisdictions, require or will soon require the payment and collection of initial and variation margin on certain OTC derivative contracts which may have a bearing on their price and other relevant terms.

The industry continues to promote the use of central counterparties (CCPs) to clear OTC trades. The trend toward CCP clearing and settlement will generally facilitate the reduction of systemic credit exposures.

Other derivative contracts are standardized in terms of their amounts and settlement dates, and are bought and sold on regulated exchanges. These are commonly referred to as exchange-traded derivatives (ETD) contracts. Exchanges offer the benefits of pricing transparency, standardized daily settlement of changes in value and consequently reduced credit risk.

For presentation purposes, UBS AG's derivative contracts are subject to IFRS netting provisions. Derivative instruments are measured at fair value and generally classified as *Positive replacement values* and *Negative replacement values* on the balance sheet. However, ETD that are economically settled on a daily basis and OTC derivatives that are either legally settled or in substance net settled on a daily basis are classified as *Cash collateral receivables on derivative instruments* or *Cash collateral payables on derivative instruments*. Changes in the replacement values of derivatives are recorded in *Net trading income* unless the derivatives are designated and effective as hedging instruments in certain types of hedge accounting relationships.

→ **Refer to Note 1a item 3j for more information**

→ **Refer to Note 24 for more information on the values of positive and negative replacement values after consideration of netting potential allowed under enforceable netting arrangements**

UBS AG uses various derivative instruments for both trading and hedging purposes. Derivative product types as well as valuation principles and techniques applied by UBS AG are described in Note 22. *Positive replacement values* represent the estimated amount UBS AG would receive if the derivative contract were sold on the balance sheet date. *Negative replacement values* indicate the estimated amount UBS AG would pay to transfer its obligations in respect of the underlying contract were it required or entitled to do so on the balance sheet date.

Derivatives embedded in other financial instruments are not included in the "Derivative instruments" table within this Note. Bifurcated embedded derivatives are presented on the same balance sheet line as the host contract. In cases where UBS applies the fair value option to hybrid instruments, bifurcation of an embedded derivative component is not required and as such this component is also not included in the "Derivative instruments" table.

→ **Refer to Notes 18 and 22 for more information**

Risks of derivative instruments

Derivative instruments are transacted in many trading portfolios, which generally include several types of instruments, not just derivatives. The market risk of derivatives is predominantly managed and controlled as an integral part of the market risk of these portfolios. UBS AG's approach to market risk is described in the audited sections of the "Risk management and control" section of this report.

Derivative instruments are also transacted with many different counterparties, most of whom are also counterparties for other types of business. The credit risk of derivatives is managed and controlled in the context of UBS AG's overall credit exposure to its counterparties. UBS AG's approach to credit risk is described in the audited portions of "Credit risk" in the "Risk management and control" section of this report. It should be noted that, although the positive replacement values shown on the balance sheet can be an important component of UBS AG's credit exposure, the positive replacement values related to a respective counterparty are rarely an adequate reflection of UBS AG's credit exposure in its derivatives business with that counterparty. This is generally the case because, on the one hand, replacement values can increase over time (potential future exposure), while on the other hand, exposure may be mitigated by entering into master netting agreements and bilateral collateral arrangements. Both the exposure measures used internally by UBS AG to control credit risk and the capital requirements imposed by regulators reflect these additional factors.

Note 12 Derivative instruments and hedge accounting (continued)

Derivative instruments[1]

	31.12.16					31.12.15				
CHF billion	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3]	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3]
Interest rate contracts										
Over-the-counter (OTC) contracts										
Forward contracts[6]	0.1	29.6	0.1	21.9	2,242.8	0.1	48.6	0.2	51.9	2,351.4
Swaps	45.2	599.3	38.3	552.6	7,064.2	57.0	840.1	48.2	782.0	5,904.7
Options	12.6	478.1	13.9	480.6		17.3	581.7	19.1	549.8	
Exchange-traded contracts										
Futures					326.4					346.0
Options	0.0	45.4	0.0	4.5	96.2	0.0	22.7	0.0	15.5	169.4
Agency transactions[7]	0.2		0.2			0.1		0.1		
Total	58.0	1,152.4	52.5	1,059.6	9,729.6	74.5	1,493.1	67.6	1,399.3	8,771.4
Credit derivative contracts										
Over-the-counter (OTC) contracts										
Credit default swaps	3.7	116.9	3.9	135.2		6.1	152.7	6.0	165.7	
Total return swaps	0.2	3.3	0.9	4.3		0.6	5.0	0.6	4.1	
Options and warrants	0.0	2.9	0.0	0.1		0.0	4.2	0.0	0.1	
Total	3.9	123.1	4.8	139.6		6.7	161.9	6.7	169.8	
Foreign exchange contracts										
Over-the-counter (OTC) contracts										
Forward contracts	21.8	715.6	19.0	650.9		17.8	727.6	16.6	673.9	
Interest and currency swaps	43.2	1,220.8	42.0	1,115.0		38.3	1,429.9	37.6	1,330.1	
Options	11.1	530.3	11.0	513.7		9.5	496.8	9.3	478.0	
Exchange-traded contracts										
Futures					6.1					8.1
Options	0.0	2.9	0.1	6.0		0.0	3.4	0.0	4.6	
Agency transactions[7]	0.0		0.0			0.0		0.0		
Total	76.1	2,469.6	72.1	2,285.6	6.1	65.7	2,657.7	63.5	2,486.6	8.1
Equity / index contracts										
Over-the-counter (OTC) contracts										
Forward contracts	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Swaps	3.6	76.5	4.8	69.0		2.9	64.1	4.3	87.0	
Options	3.7	49.6	5.8	92.8		4.8	59.1	6.7	92.6	
Exchange-traded contracts										
Futures					33.0					30.0
Options	3.8	142.5	4.6	155.8	21.6	4.3	107.2	5.2	126.0	13.4
Agency transactions[7]	6.9		6.9			5.0		4.9		
Total	18.0	268.6	22.1	317.6	54.5	16.9	230.3	21.2	305.6	43.3

Table continues on the next page.

Note 12 Derivative instruments and hedge accounting (continued)

Derivative instruments[1] (continued)

Table continued from the previous page.

	31.12.16					31.12.15				
CHF billion	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3]	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3]
Commodity contracts										
Over-the-counter (OTC) contracts										
Forward contracts	0.3	4.8	0.1	2.7		0.3	2.8	0.3	2.3	
Swaps	0.4	10.9	0.5	13.4		0.7	9.9	0.5	9.4	
Options	0.5	14.1	0.2	9.9		0.9	11.8	0.6	7.5	
Exchange-traded contracts										
Futures					9.1					8.2
Forward contracts	0.1	5.9	0.0	4.6		0.0	4.4	0.2	3.7	
Options	0.0	3.2	0.1	5.3	0.0	0.0	1.0	0.1	1.9	0.1
Agency transactions[7]	0.9		0.9			1.5		1.5		
Total	2.3	39.0	2.0	35.9	9.1	3.4	30.0	3.2	24.6	8.3
Unsettled purchases of non-derivative financial instruments[8]	0.1	18.4	0.1	9.7		0.1	9.6	0.2	16.7	
Unsettled sales of non-derivative financial instruments[8]	0.1	13.0	0.2	11.5		0.2	20.1	0.1	6.4	
Total derivative instruments, based on IFRS netting[9]	158.4	4,084.0	153.8	3,859.6	9,799.3	167.4	4,602.7	162.4	4,409.0	8,831.1

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. As of 31 December 2016, these derivatives amounted to a PRV of CHF 0.1 billion (related notional values of CHF 1.9 billion) and an NRV of CHF 0.0 billion (related notional values of CHF 3.1 billion). As of 31 December 2015, these derivatives amounted to a PRV of CHF 0.1 billion (related notional values of CHF 0.6 billion) and an NRV of CHF 0.2 billion (related notional values of CHF 3.4 billion). 2 PRV: Positive replacement value. 3 In cases where replacement values are presented on a net basis on the balance sheet, the respective notional values of the netted replacement values are still presented on a gross basis. 4 NRV: Negative replacement value. 5 Other notional values relate to derivatives that are cleared through either a central clearing counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for the periods presented. 6 Negative replacement values as of 31 December 2016 include CHF 0.1 billion related to derivative loan commitments (31 December 2015: CHF 0.1 billion). No notional amounts related to these replacement values are included the table. The maximum irrevocable amount related to these commitments was CHF 14.3 billion as of 31 December 2016 (31 December 2015: CHF 15.8 billion). 7 Notional values of exchange-traded agency transactions and OTC cleared transactions entered into on behalf of clients are not disclosed due to their significantly different risk profile. 8 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as replacement values. 9 Refer to Note 24 for more information on netting arrangements.

The notional amount of a derivative is generally the quantity of the underlying instrument on which the derivative contract is based and is the reference against which changes in the value of the derivative are measured. Notional values in themselves are generally not a direct indication of the values that are exchanged between parties, and are therefore not a direct measure of risk or financial exposure but are viewed as an indication of the scale of the different types of derivatives entered into by UBS AG.

The maturity profile of OTC interest rate contracts held as of 31 December 2016, based on notional values, was: approximately 52% (31 December 2015: 53%) mature within one year, 29% (31 December 2015: 29%) within one to five years and 19% (31 December 2015: 18%) after five years. Notional values of interest rate contracts cleared with a clearing house that qualify for IFRS balance sheet netting or are legally settled on a daily basis are presented under *Other notional values* and are categorized into maturity buckets on the basis of contractual maturities of the cleared underlying derivative contracts.

Derivatives transacted for trading purposes

Most of UBS AG's derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities include market-making to directly support the facilitation and execution of client activity. Market-making involves quoting bid and offer prices to other market participants with the intention of generating revenues based on spread and volume.

Credit derivatives

UBS is an active dealer in the fixed income market, including credit default swaps (CDS) and related products, with respect to a large number of issuers' securities. The primary purposes of these activities are market-making, primarily on behalf of clients, and ongoing hedging of trading book exposures.

Note 12 Derivative instruments and hedge accounting (continued)

Market-making activity, which is undertaken within the Investment Bank, consists of buying and selling single-name CDS, index CDS, loan CDS and related referenced cash instruments to facilitate client trading activity. UBS also actively utilizes CDS to economically hedge specific counterparty credit risks in its accrual and traded loan portfolios (including off-balance sheet loan commitments) with the aim of reducing concentrations in individual names, sectors or specific portfolios.

In addition, UBS actively utilizes CDS to economically hedge specific counterparty credit risks in its OTC derivative portfolios, including financial instruments that are designated at fair value through profit or loss.

The tables below provide more information on credit protection bought and sold, including replacement and notional value information by instrument type and counterparty type. The value of protection bought and sold is not, in isolation, a measure of UBS's credit risk. Counterparty relationships are viewed in terms of the total outstanding credit risk, which relates to other instruments in addition to CDS, and in connection with collateral arrangements in place. On a notional value basis, approximately 29% of credit protection bought and sold as of 31 December 2016 matures within one year (31 December 2015: 22%), approximately 61% within one to five years (31 December 2015: 68%) and approximately 10% after five years (31 December 2015: 10%).

Credit derivatives by type of instrument

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Single-name credit default swaps	1.6	1.3	91.4	1.3	1.4	81.3
Multi-name index-linked credit default swaps	0.2	0.8	38.4	0.5	0.4	38.3
Multi-name other credit default swaps	0.0	0.0	1.5	0.0	0.0	1.1
Total rate of return swaps	0.1	0.7	5.5	0.0	0.2	2.1
Options and warrants	0.0	0.0	2.9	0.0	0.0	0.1
Total 31 December 2016	2.0	2.8	139.7	1.9	2.0	122.9
of which: credit derivatives related to economic hedges	*1.4*	*2.4*	*111.7*	*1.5*	*1.5*	*96.2*
of which: credit derivatives related to market-making	*0.5*	*0.3*	*28.0*	*0.4*	*0.5*	*26.7*

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Single-name credit default swaps	3.1	1.9	115.5	1.9	2.9	105.1
Multi-name index-linked credit default swaps	0.3	0.6	48.0	0.6	0.5	45.6
Multi-name other credit default swaps	0.1	0.1	2.4	0.0	0.1	1.8
Total rate of return swaps	0.5	0.2	6.3	0.1	0.4	2.8
Options and warrants	0.0	0.0	4.2	0.0	0.0	0.1
Total 31 December 2015	4.0	2.8	176.4	2.6	3.9	155.3
of which: credit derivatives related to economic hedges	*2.7*	*2.4*	*152.8*	*2.2*	*2.5*	*132.8*
of which: credit derivatives related to market-making	*1.4*	*0.4*	*23.6*	*0.4*	*1.3*	*22.5*

Note 12 Derivative instruments and hedge accounting (continued)

Credit derivatives by counterparty

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Broker-dealers	0.4	0.2	20.9	0.2	0.3	16.1
Banks	0.9	1.0	60.8	0.8	1.0	52.6
Central clearing counterparties	0.3	0.9	47.2	0.8	0.4	47.1
Other	0.4	0.8	10.9	0.2	0.3	7.1
Total 31 December 2016	2.0	2.8	139.7	1.9	2.0	122.9

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Broker-dealers	0.8	0.3	27.3	0.2	0.6	19.5
Banks	1.9	1.3	78.0	1.2	1.6	68.3
Central clearing counterparties	0.4	0.8	55.3	0.9	0.9	58.9
Other	0.8	0.4	15.8	0.3	0.8	8.7
Total 31 December 2015	4.0	2.8	176.4	2.6	3.9	155.3

UBS AG's CDS trades are documented using industry standard forms of documentation or equivalent terms documented in a bespoke agreement. The agreements that govern CDS generally do not contain recourse provisions that would enable UBS to recover from third parties any amounts paid out by UBS.

The types of credit events that would require UBS to perform under a CDS contract are subject to agreement between the parties at the time of the transaction. However, nearly all transactions are traded using credit events that are applicable under certain market conventions based on the type of reference entity to which the transaction relates. Applicable credit events by market conventions include bankruptcy, failure to pay, restructuring, obligation acceleration and repudiation / moratorium.

Contingent collateral features of derivative liabilities

Certain derivative instruments contain contingent collateral or termination features triggered upon a downgrade of the published credit ratings of UBS AG in the normal course of business. Based on UBS AG's credit ratings as of 31 December 2016, CHF 0.1 billion, CHF 0.3 billion and CHF 1.1 billion would have been required for contractual obligations related to OTC derivatives in the event of a one-notch, two-notch and three-notch reduction in long-term credit ratings, respectively. In evaluating UBS AG's liquidity requirements, UBS AG considers additional collateral or termination payments that would be required in the event of a reduction in UBS AG's long-term credit ratings, and a corresponding reduction in UBS AG's short-term ratings.

Derivatives transacted for hedging purposes

UBS AG enters into derivative transactions for the purposes of hedging risks inherent in assets, liabilities and forecasted transactions. The accounting treatment of hedge transactions varies according to the nature of the instrument hedged and whether the hedge qualifies as such for accounting purposes.

Derivative transactions that qualify and are designated as hedges for accounting purposes are described under the corresponding headings in this Note (fair value hedges, cash flow hedges and hedges of net investments in foreign operations). UBS AG's accounting policies for derivatives designated and accounted for as hedging instruments are described in Note 1a item 3k, where terms used in the following sections are explained.

UBS AG has also entered into various hedging strategies utilizing derivatives for which hedge accounting has not been applied. These include interest rate swaps and other interest rate derivatives (e.g., futures) for day-to-day economic interest rate risk management purposes. In addition, UBS AG has used equity futures, options and, to a lesser extent, swaps for economic hedging in a variety of equity trading strategies to offset underlying equity and equity volatility exposure. UBS AG has also entered into CDS that provide economic hedges for credit risk exposures (refer to "Credit derivatives" in this Note). Fair value changes of derivatives that are part of economic relationships, but do not qualify for hedge accounting treatment, are reported in *Net trading income*, except for the forward points on certain short duration foreign exchange contracts, which are reported in *Interest income*.

Effective 30 June 2016, UBS elected to convert its interest rate swaps transacted with the London Clearing House from the previous collateral model to a settlement model. As a result, the fair value of outstanding derivatives designated as hedging instruments decreased significantly compared with the prior-year comparatives.

Note 12 Derivative instruments and hedge accounting (continued)

Fair value hedges: interest rate risk related to debt instruments

UBS AG's fair value hedges principally consist of interest rate swaps that are used to protect against changes in the fair value of fixed-rate debt instruments, such as non-structured fixed-rate bonds, covered bonds and subordinated debt, due to movements in market interest rates. The fair values of outstanding interest rate derivatives designated as fair value hedges were assets of CHF 152 million and liabilities of CHF 1 million as of 31 December 2016 and assets of CHF 1,656 million and liabilities of CHF 11 million as of 31 December 2015.

Fair value hedges of interest rate risk

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Gains / (losses) on hedging instruments	140	554	1,113
Gains / (losses) on hedged items attributable to the hedged risk	(144)	(552)	(1,111)
Net gains / (losses) representing ineffective portions of fair value hedges	(4)	2	2

Fair value hedges: portfolio interest rate risk related to loans

UBS AG also applies fair value hedge accounting to mortgage loan portfolio interest rate risk. The change in fair value of the hedged items is recorded separately from the hedged item and is included within *Other assets* on the balance sheet. The fair values of outstanding interest rate derivatives designated for these hedges as of 31 December 2016 were liabilities of CHF 44 million (31 December 2015: assets of CHF 7 million and liabilities of CHF 327 million).

Fair value hedges of portfolio interest rate risk

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Gains / (losses) on hedging instruments	(128)	(176)	(694)
Gains / (losses) on hedged items attributable to the hedged risk	116	147	676
Net gains / (losses) representing ineffective portions of fair value hedges	(12)	(29)	(18)

Cash flow hedges of forecasted transactions

UBS AG is exposed to variability in future interest cash flows on non-trading financial assets and liabilities that bear interest at variable rates or are expected to be refinanced or reinvested in the future. The amounts and timing of future cash flows, representing both principal and interest flows, are projected on the basis of contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate principal balances and interest cash flows across all portfolios over time form the basis for identifying the non-trading interest rate risk of UBS AG, which is hedged with interest rate swaps, the maximum maturity of which is 12 years. The table on the following page shows forecasted principal balances on which expected interest cash flows arise as of 31 December 2016. Amounts shown represent, by time bucket, average assets and liabilities subject to forecasted cash flows designated as hedged items in cash flow hedge accounting relationships.

As of 31 December 2016, the fair values of outstanding derivatives designated as cash flow hedges of forecasted transactions were CHF 68 million assets and CHF 5 million liabilities (31 December 2015: CHF 2,176 million assets and CHF 195 million liabilities).

In 2016, a gain of CHF 11 million was recognized in *Net trading income* due to hedge ineffectiveness, compared with a gain of CHF 150 million in 2015 and a gain of CHF 87 million in 2014.

Note 12 Derivative instruments and hedge accounting (continued)

Principal balances subject to cash flow forecasts

CHF billion	Within 1 year	1–3 years	3–5 years	5–10 years	Over 10 years
Assets	57	75	48	51	0
Liabilities	4	5	3	4	0
Net balance	**53**	**70**	**45**	**47**	**0**

Hedges of net investments in foreign operations

UBS AG applies hedge accounting for certain net investments in foreign operations. As of 31 December 2016, the positive replacement values and negative replacement values of FX derivatives (mainly FX swaps) designated as hedging instruments in net investment hedge accounting relationships were CHF 122 million and CHF 79 million, respectively (31 December 2015: positive replacement values of CHF 170 million and negative replacement values of CHF 79 million). As of 31 December 2016, the underlying hedged structural exposures in several currencies amounted to CHF 7.5 billion (31 December 2015: CHF 5.5 billion).

Hedges of structural FX exposures in currencies other than the US dollar may be comprised of two jointly designated derivatives as the foreign currency risk may be hedged against the US dollar first and then converted into Swiss francs, the presentation currency of UBS AG, as part of a separate FX derivative transaction. The aggregated notional amount of designated hedging derivatives as of 31 December 2016 was CHF 12.5 billion in total (31 December 2015: CHF 11.2 billion), including CHF 7.5 billion notional values related to US dollar versus Swiss franc swaps and CHF 5.0 billion notional values related to derivatives hedging foreign currencies (other than the US dollar) versus the US dollar. The effective portion of gains and losses of these FX swaps is transferred directly to OCI to offset foreign currency translation (FCT) gains and losses on the net investments in foreign branches and subsidiaries. As such, these FX swaps hedge the structural FX exposure resulting in the accumulation of FCT on the level of individual foreign branches and subsidiaries and hence on the total FCT OCI of UBS AG.

UBS designates certain non-derivative foreign currency financial assets and liabilities of foreign branches or subsidiaries as hedging instruments in net investment hedge accounting arrangements. The FX translation difference recorded in FCT OCI of the non-derivative hedging instrument of one foreign entity offsets the structural FX exposure of another foreign entity. Therefore, the aggregated FCT OCI of UBS AG is unchanged from this hedge designation. As of 31 December 2016, the nominal amount of non-derivative financial assets and liabilities designated as hedging instruments in such net investment hedges was CHF 1.5 billion and CHF 1.5 billion, respectively (31 December 2015: CHF 3.1 billion non-derivative financial assets and CHF 3.1 billion non-derivative financial liabilities).

Ineffectiveness of hedges of net investments in foreign operations was not material in 2016, 2015 and 2014.

Undiscounted cash flows

The table below provides undiscounted cash flow information for derivative instruments designated in hedge accounting relationships.

Derivatives designated in hedge accounting relationships (undiscounted cash flows)

CHF billion	On demand	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Interest rate swaps[1]							
FX swaps / forwards							
Cash inflows	0	2	10	0	0	0	11
Cash outflows	0	2	10	0	0	0	11
Net cash flows	**0**	**0**	**0**	**0**	**0**	**0**	**0**

1 Undiscounted cash inflows and cash outflows of interest rate swaps as of 31 December 2016 were not material as the majority of interest rate swaps designated in hedge accounting relationships are legally settled on a daily basis.

Note 13 Financial assets available for sale and held to maturity

a) Financial assets available for sale

CHF million	31.12.16	31.12.15
Financial assets available for sale by issuer type[1]		
Debt instruments		
Government and government agencies	11,650	47,245
of which: US	*7,779*	*21,424*
of which: Germany	*1,774*	*8,583*
of which: UK	*373*	*2,782*
of which: France	*355*	*3,566*
of which: Netherlands	*319*	*2,934*
Banks	1,845	12,268
Corporates and other	1,554	2,385
Total debt instruments	15,048	61,898
Equity instruments	628	645
Total financial assets available for sale	15,676	62,543
Unrealized gains – before tax	309	462
Unrealized (losses) – before tax	(117)	(171)
Net unrealized gains / (losses) – before tax	193	291
Net unrealized gains / (losses) – after tax	96	167

1 Refer to Note 22c for more information on product type and fair value hierarchy categorization.

b) Financial assets held to maturity

CHF million	31.12.16	31.12.15
Financial assets held to maturity by issuer type		
Debt instruments		
Government and government agencies	7,416	0
of which: US	*4,688*	*0*
of which: Germany	*1,708*	*0*
of which: France	*867*	*0*
Banks	1,873	0
Total financial assets held to maturity	9,289	0

Note 14 Property, equipment and software

At historical cost less accumulated depreciation

CHF million	Own-used properties	Leasehold improvements	IT hardware and communication	Internally generated software	Purchased software	Other machines and equipment	Projects in progress	31.12.16	31.12.15
Historical cost									
Balance at the beginning of the year	7,863	3,169	1,872	2,375	411	862	1,270	17,823	17,442
Additions	58	34	198	3	99	32	1,347	1,770	1,846
Disposals / write-offs[1]	(71)	(276)	(568)	(16)	(89)	(83)	0	(1,102)	(1,322)
Reclassifications	(103)	522	57	711	0	39	(1,440)	(214)[6]	(35)
Foreign currency translation	(15)	(9)	(47)	(36)	(14)	3	(53)	(171)	(108)
Balance at the end of the year	7,732	3,440	1,512	3,037	408	853	1,123	18,106	17,823
Accumulated depreciation									
Balance at the beginning of the year	4,356	2,206	1,420	1,275	276	606	0	10,140	10,593
Depreciation	164	191	200	286	49	64	0	954	901
Impairment[2]	11	1	1	9	5	0	0	26	18
Disposals / write-offs[1]	(71)	(264)	(568)	(16)	(89)	(83)	0	(1,090)	(1,270)
Reclassifications	(152)	6	(1)	0	0	1	0	(147)[6]	(25)
Foreign currency translation	(8)	(15)	(32)	(13)	(9)	2	0	(74)	(77)
Balance at the end of the year	4,300	2,124	1,021	1,542	233	589	0	9,809	10,140
Net book value at the end of the year[3], [4]	**3,432**	**1,316**	**492**	**1,495**	**175**	**264**	**1,123[5]**	**8,297**	**7,683**

1 Includes write-offs of fully depreciated assets. 2 Impairment charges recorded in 2016 relate to assets for which the recoverable amount was determined based on value-in-use (recoverable amount of the impaired assets: CHF 31 million Own-used properties, CHF 2 million Leasehold improvements, CHF 28 million Internally generated software, CHF 3 million Purchased software). 3 As of 31 December 2016, contractual commitments to purchase property in the future amounted to approximately CHF 0.3 billion. 4 Includes CHF 21 million related to leased assets, mainly IT hardware and communication. 5 Includes CHF 994 million related to Internally generated software, CHF 110 million related to Own-used properties and CHF 19 million related to Leasehold improvements. 6 Reflects reclassifications to Properties held for sale (CHF 54 million on a net basis) reported within Other assets.

Note 15 Goodwill and intangible assets

Introduction

UBS AG performs an impairment test on its goodwill assets on an annual basis or when indicators of impairment exist. UBS AG considers the segments, as reported in Note 2a, as separate cash-generating units (CGUs). The impairment test is performed for each segment to which goodwill is allocated by comparing the recoverable amount, based on its value-in-use, with the carrying amount of the respective segment. An impairment charge is recognized if the carrying amount exceeds the recoverable amount. As of 31 December 2016, total goodwill recognized on the balance sheet was CHF 6.3 billion, of which CHF 1.3 billion, CHF 3.6 billion and CHF 1.4 billion was carried by Wealth Management, Wealth Management Americas and Asset Management, respectively. Based on the impairment testing methodology described below, UBS AG concluded that the goodwill balances as of 31 December 2016 allocated to these segments remain recoverable and thus were not impaired.

Methodology for goodwill impairment testing

The recoverable amounts are determined using a discounted cash flow model, which has been adapted to use inputs that consider features of the banking business and its regulatory environment. The recoverable amount of a segment is the sum of the discounted earnings attributable to shareholders from the first three forecasted years and the terminal value. The terminal value, which covers all periods beyond the third year, is calculated on the basis of the forecast of third-year profit, the discount rate and the long-term growth rate and is adjusted for the effect of the capital assumed to be needed to support the perpetual growth implied by the long-term growth rate.

The carrying amount for each segment is determined by reference to the Group's equity attribution framework. Within this framework, which is described in the "Capital management" section of this report, we attribute equity to the businesses on the basis of their risk-weighted assets and leverage ratio denominator, their goodwill and intangible assets as well as equity directly associated with activity that Group ALM manages centrally on behalf of the business divisions. The total amount of equity attributed to CGUs can differ from equity attributable to shareholders. The framework is primarily used for purposes of measuring the performance of the businesses and includes certain management assumptions. Attributed equity equals the capital that a segment requires to conduct its business and is considered an appropriate starting point from which to determine the carrying value of the segments. The attributed equity methodology is aligned with the business planning process, the inputs from which are used in calculating the recoverable amounts of the respective CGU. The revision of the equity attribution methodology effective as of 1 January 2017 would have no impact on the outcome of the goodwill impairment test as of 31 December 2016.

→ **Refer to the "Capital management" section of this report for more information on the equity attribution framework**

Assumptions

Valuation parameters used within UBS AG's impairment test model are linked to external market information, where applicable. The model used to determine the recoverable amount is most sensitive to changes in the forecast earnings available to shareholders in years one to three, to changes in the discount rates and to changes in the long-term growth rate. The applied long-term growth rate is based on long-term economic growth rates for different regions worldwide. Earnings available to shareholders are estimated on the basis of forecast results, which are part of the business plan approved by the BoD.

The discount rates are determined by applying a capital asset pricing model-based approach, as well as considering quantitative and qualitative inputs from both internal and external analysts and the view of management. The discount rates were unchanged between 2015 and 2016.

Key assumptions used to determine the recoverable amounts of each segment are tested for sensitivity by applying a reasonably possible change to those assumptions. Forecast earnings available to shareholders were changed by 20%, the discount rates were changed by 1.5 percentage points and the long-term growth rates were changed by 0.75 percentage points, reflecting the current market environment. Under all scenarios, the recoverable amounts for each segment exceeded the respective carrying amount, such that the reasonably possible changes in key assumptions would not result in impairment.

If the estimated earnings and other assumptions in future periods deviate from the current outlook, the value of goodwill may become impaired in the future, giving rise to losses in the income statement. Recognition of any impairment of goodwill would reduce IFRS equity and net profit. It would not affect cash flows and, as goodwill is required to be deducted from capital under the Basel III capital framework, no effect would be expected on UBS AG's total capital ratios.

Note 15 Goodwill and intangible assets (continued)

Discount and growth rates

	Discount rates		Growth rates	
In %	31.12.16	31.12.15	31.12.16	31.12.15
Wealth Management	9.0	9.0	1.7	1.7
Wealth Management Americas	9.0	9.0	2.4	2.4
Asset Management	9.0	9.0	2.4	2.4
Investment Bank	11.0	11.0	2.4	2.4

	Goodwill	Intangible assets				
CHF million	Total	Infrastructure	Customer relationships, contractual rights and other	Total	31.12.16	31.12.15
Historical cost						
Balance at the beginning of the year	6,240	761	820	1,581	7,821	7,957
Additions	16		8	8	24	30
Disposals	(2)		(2)	(2)	(3)	(32)
Write-offs			(75)	(75)	(75)	(20)
Foreign currency translation	57	12	(12)	0	57	(114)
Balance at the end of the year	6,311	773	739	1,512	7,823	7,821
Accumulated amortization and impairment						
Balance at the beginning of the year		578	675	1,253	1,253	1,171
Amortization		38	53	91	91	94
Impairment[1]			0	0	0	13
Disposals			(1)	(1)	(1)	(1)
Write-offs			(75)	(75)	(75)	(20)
Foreign currency translation		10	(11)	(1)	(1)	(5)
Balance at the end of the year		626	641	1,267	1,267	1,253
Net book value at the end of the year	6,311	147	98	245	6,556	6,568

1 Impairment charges recorded in 2016 and 2015 relate to assets for which the recoverable amount was determined based on value-in-use (recoverable amount of the impaired assets: CHF 3 million for 2016 and CHF 4 million for 2015).

The table below presents goodwill and intangible assets by segment for the year ended 31 December 2016.

CHF million	Wealth Management	Wealth Management Americas	Investment Bank	Asset Management	Corporate Center – Services	Total
Goodwill						
Balance at the beginning of the year	1,312	3,514	29	1,385		6,240
Additions	16					16
Disposals	(2)					(2)
Foreign currency translation	(23)	57	7	17		57
Balance at the end of the year	1,303	3,571	36	1,401		6,311
Intangible assets						
Balance at the beginning of the year	38	199	53	8	30	328
Additions / transfers	8	0				8
Disposals			0			0
Amortization	(4)	(49)	(12)	(4)	(21)	(91)
Impairment		0				0
Foreign currency translation	(1)	2				1
Balance at the end of the year	40	152	41	4	9	245

Note 15 Goodwill and intangible assets (continued)

The table below presents estimated, aggregated amortization expenses for intangible assets.

CHF million	Intangible assets
Estimated, aggregated amortization expenses for:	
2017	68
2018	58
2019	47
2020	38
2021	6
Thereafter	19
Not amortized due to indefinite useful life	9
Total	245

Note 16 Other assets

CHF million	31.12.16	31.12.15
Prime brokerage receivables[1]	9,828	11,341
Recruitment loans to financial advisors	3,087	3,184
Other loans to financial advisors	471	418
Bail deposit[2]	1,213	1,221
Accrued interest income	526	462
Accrued income – other	822	844
Prepaid expenses	1,008	1,032
Net defined benefit pension and post-employment assets[3]	0	50
Settlement and clearing accounts	516	402
VAT and other tax receivables	261	397
Properties and other non-current assets held for sale	111	134
Assets of disposal group held for sale[4]	5,137	279
Other	2,433	2,485
Total other assets	25,412	22,249

1 Prime brokerage services include clearance, settlement, custody, financing and portfolio reporting services for corporate clients trading across multiple asset classes. Prime brokerage receivables are mainly comprised of margin lending receivables. 2 Refer to Note 20b item 1 for more information. 3 Refer to Note 26 for more information. 4 Refer to Note 30 for more information.

Balance sheet notes: liabilities

Note 17 Due to banks and customers

CHF million	31.12.16	31.12.15
Due to banks	10,645	11,836
Due to customers	450,199	402,522
of which: demand deposits	*195,756*	*174,262*
of which: retail savings / deposits	*170,729*	*161,848*
of which: time deposits	*77,531*	*60,274*
of which: fiduciary deposits	*6,184*	*6,139*
Total due to banks and customers	460,844	414,358

Note 18 Financial liabilities designated at fair value

CHF million	31.12.16	31.12.15
Issued debt instruments		
Equity-linked[1]	29,831	30,965
Rates-linked	10,150	16,587
Credit-linked	4,101	3,652
Fixed-rate	2,972	4,098
Other	2,875	1,231
Total issued debt instruments	49,930	56,534
of which: issued by UBS AG with original maturity greater than one year[2], [3]	*36,347*	*40,081*
Over-the-counter debt instruments		
Equity-linked[1]	1,992	2,885
Other	2,671	2,608
Total over-the-counter debt instruments	4,663	5,493
of which: issued by UBS AG with original maturity greater than one year[2], [4]	*4,210*	*4,497*
Repurchase agreements	395	849
Loan commitments and guarantees[5]	29	119
Total	55,017	62,995
of which: life-to-date own credit (gain) / loss	*(141)*	*(287)*

1 Includes investment fund unit-linked instruments issued. 2 Issued by the standalone legal entity UBS AG. Based on original contractual maturity without considering any early redemption features. 3 More than 99% of the balance as of 31 December 2016 was unsecured (31 December 2015: more than 98% of the balance was unsecured). 4 More than 35% of the balance as of 31 December 2016 was unsecured (31 December 2015: more than 35% of the balance was unsecured). 5 Loan commitments recognized as Financial liabilities designated at fair value until drawn and recognized as Loans. See Note 1a item 3o for more information.

As of 31 December 2016 and 31 December 2015, the contractual redemption amount at maturity of financial liabilities designated at fair value through profit or loss was not materially different from the carrying value.

The table on the following page shows the residual contractual maturity of the carrying value of financial liabilities designated at fair value, split between fixed-rate and floating-rate instruments based on the contractual terms, and does not consider any early redemption features. Interest rate ranges for future interest payments related to these financial liabilities designated at fair value have not been included in the table on the following page as a majority of these liabilities are structured products, and therefore the future interest payments are highly dependent upon the embedded derivative and prevailing market conditions at the time each interest payment is made.

→ **Refer to Note 25d for maturity information on an undiscounted cash flow basis**

Note 18 Financial liabilities designated at fair value (continued)

Contractual maturity of carrying value

CHF million	2017	2018	2019	2020	2021	2022-2026	Thereafter	Total 31.12.16	Total 31.12.15
UBS AG[1]									
Non-subordinated debt									
Fixed-rate	3,979	984	644	262	400	807	2,429	9,505	10,702
Floating-rate	17,904	4,136	3,739	3,363	1,653	4,156	7,805	42,757	49,824
Subtotal	21,884	5,120	4,383	3,625	2,053	4,963	10,234	52,262	60,526
Other subsidiaries[2]									
Non-subordinated debt									
Fixed-rate	197	171	842	31	67	68	390	1,768	993
Floating-rate	495	136	119	0	0	87	150	987	1,475
Subtotal	692	307	961	31	67	155	540	2,755	2,469
Total	22,576	5,427	5,345	3,656	2,121	5,118	10,774	55,017	62,995

1 Comprises instruments issued by the standalone legal entity UBS AG. 2 Comprises instruments issued by subsidiaries of UBS AG.

Note 19 Debt issued held at amortized cost

CHF million	31.12.16	31.12.15
Certificates of deposit	20,207	11,967
Commercial paper	1,653	3,824
Other short-term debt	4,318	5,424
Short-term debt[1]	26,178	21,215
Senior fixed-rate bonds	27,008	31,240
of which: issued by UBS AG with original maturity greater than one year[2]	*26,850*	*31,078*
Covered bonds	5,836	8,490
Subordinated debt	11,554	12,600
of which: low-trigger loss-absorbing tier 2 capital instruments	*10,429*	*10,346*
of which: non-Basel III-compliant tier 2 capital instruments	*1,125*	*2,254*
Debt issued through the central bond institutions of the Swiss regional or cantonal banks	8,302	*8,237*
Other long-term debt	121	577
of which: issued by UBS AG with original maturity greater than one year[2]	*94*	*278*
Long-term debt[3]	52,820	61,144
Total debt issued held at amortized cost[4]	78,998	82,359

1 Debt with an original maturity of less than one year. 2 Issued by the standalone legal entity UBS AG. Based on original contractual maturity without considering any early redemption features. 100% of the balance as of 31 December 2016 was unsecured (31 December 2015: 100% of the balance was unsecured). 3 Debt with original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 4 Net of bifurcated embedded derivatives with a net positive fair value of CHF 38 million as of 31 December 2016 (31 December 2015: net negative fair value of CHF 130 million).

UBS AG uses interest rate and foreign exchange derivatives to manage the risks inherent in certain debt instruments held at amortized cost. In certain cases, UBS AG applies hedge accounting for interest rate risk as discussed in Note 1a item 3k and Note 12. As a result of applying hedge accounting, the carrying value of debt issued increased by CHF 821 million and by CHF 1,024 million as of 31 December 2016 and 2015, respectively, reflecting changes in fair value due to interest rate movements.

Note 19 Debt issued held at amortized cost (continued)

Subordinated debt consists of unsecured debt obligations that are contractually subordinated in right of payment to all other present and future non-subordinated obligations of the respective issuing entity. All of the subordinated debt instruments outstanding as of 31 December 2016 pay a fixed rate of interest.

The table below shows the residual contractual maturity of the carrying value of debt issued, split between fixed-rate and floating-rate based on the contractual terms, and does not consider any early redemption features. The effects from interest rate swaps, which are used to hedge various fixed-rate debt issuances by changing the repricing characteristics into those similar to floating-rate debt, are also not considered in the table below.

→ **Refer to Note 25d for maturity information on an undiscounted cash flow basis**

Contractual maturity of carrying value

CHF million, except where indicated	2017	2018	2019	2020	2021	2022-2026	Thereafter	Total 31.12.16	Total 31.12.15
UBS AG[1]									
Non-subordinated debt									
Fixed-rate	22,624	7,662	4,026	4,356	2,779	1,550	3	42,999	40,153
Interest rates (range in %)	0-5.9	0.5-6.6	2.4-4.0	0-4.9	1.3-1.4	4.0-4.0	0		
Floating-rate	12,113	1,017	1,017	254	0	0	1,536	15,937	17,907
Subordinated debt									
Fixed-rate	418	0	0	0	0	11,136	0	11,554	12,600
Interest rates (range in %)	4.1-7.4					4.8-8.8			
Subtotal	35,154	8,679	5,043	4,610	2,779	12,686	1,539	70,490	70,659
Other subsidiaries[2]									
Non-subordinated debt									
Fixed-rate	736	793	745	731	975	3,537	990	8,507	11,692
Interest rates (range in %)	0-8.1	0-3.8	0-2.9	0-3.2	0-2.4	0-4.1	0-2.8		
Floating-rate	0	1	0	0	0	0	0	1	8
Subtotal	736	793	745	731	975	3,537	990	8,507	11,700
Total	35,890	9,473	5,788	5,342	3,754	16,223	2,529	78,998	82,359

1 Comprises debt issued by the standalone legal entity UBS AG. 2 Comprises debt issued by subsidiaries of UBS AG.

Note 20 Provisions and contingent liabilities

a) Provisions

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restruc-turing	Loan com-mitments and guarantees	Real estate	Employee benefits[5]	Other	Total 31.12.16	Total 31.12.15
Balance at the beginning of the year	47	2,983	624	35	157	198	120	4,163	4,366
Increase in provisions recognized in the income statement	34	906	408	18	11	5	48	1,430	1,778
Release of provisions recognized in the income statement	(3)	(98)	(113)	(9)	(5)	(30)	(29)	(288)	(337)
Provisions used in conformity with designated purpose	(26)	(554)	(415)	0	(23)	(85)	(49)	(1,152)	(1,660)
Capitalized reinstatement costs	0	0	(1)	0	0	0	0	(1)	5
Reclassifications	0	0	0	10	(2)	0	0	7	9
Foreign currency translation / unwind of discount	(1)	25	(5)	0	1	(11)	2	10	3
Balance at the end of the year	50	3,261	498[3]	54	138[4]	77	91	4,169	4,163

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Includes personnel related restructuring provisions of CHF 150 million as of 31 December 2016 (31 December 2015: CHF 110 million) and provisions for onerous lease contracts of CHF 348 million as of 31 December 2016 (31 December 2015: CHF 514 million). 4 Includes reinstatement costs for leasehold improvements of CHF 85 million as of 31 December 2016 (31 December 2015: CHF 94 million) and provisions for onerous lease contracts of CHF 53 million as of 31 December 2016 (31 December 2015: CHF 62 million). 5 Includes provisions for sabbatical and anniversary awards as well as provisions for severance which are not part of restructuring provisions.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 20b. There are no material contingent liabilities associated with the other classes of provisions.

Note 20 Provisions and contingent liabilities (continued)

b) Litigation, regulatory and similar matters

UBS operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where UBS may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which UBS believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. UBS makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that UBS has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS, but are nevertheless expected to be, based on UBS's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to select matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

Note 20 Provisions and contingent liabilities (continued)

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in Note 20a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a USD 203 million fine and is subject to a three-year term of probation. A guilty plea to, or conviction of, a crime (including as a result of termination of the NPA) could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of this report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1], [2]

CHF million	Wealth Manage-ment	Wealth Manage-ment Americas	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Total 31.12.16	Total 31.12.15
Balance at the beginning of the year	245	459	83	16	585	310	0	1,284	2,983	3,053
Increase in provisions recognized in the income statement	76	113	7	5	43	5	0	606	856	1,263
Release of provisions recognized in the income statement	(6)	(15)	(4)	(6)	(2)	(3)	0	(11)	(48)	(166)
Provisions used in conformity with designated purpose	(19)	(137)	(9)	(9)	(13)	(49)	0	(318)	(554)	(1,174)
Foreign currency translation / unwind of discount	(4)	6	0	0	3	(4)	0	24	25	7
Balance at the end of the year	292	425	78	5	616	259	0	1,585	3,261	2,983

1 Provisions, if any, for the matters described in this disclosure are recorded in Wealth Management (item 3), Wealth Management Americas (item 4), the Investment Bank (item 8), CC – Services (item 7) and CC – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in this disclosure in items 1 and 6 are allocated between Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this disclosure in item 5 are allocated between the Investment Bank, CC – Services and CC – Non-core and Legacy Portfolio. 2 Provision movements are grouped by item for purposes of this table and may therefore differ from those shown in the table in Note 20a.

Note 20 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests. In addition, the Swiss Federal Supreme Court ruled in September 2016 that the double taxation agreement between the Netherlands and Switzerland provides a sufficient legal basis for an administrative assistance group request without specifying the names of the targeted taxpayers, which makes it more likely that similar requests for administrative assistance will be granted by the FTA.

In 2013, as a result of investigations in France, UBS (France) S.A. and UBS AG were put under formal examination ("*mise en examen*") for complicity in having illicitly solicited clients on French territory and were declared witness with legal assistance ("*témoin assisté*") regarding the laundering of proceeds of tax fraud and of banking and financial solicitation by unauthorized persons. In 2014, UBS AG was placed under formal examination with respect to the potential charges of laundering of proceeds of tax fraud, and the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion. UBS AG appealed the determination of the bail amount, but both the appeal court ("*Cour d'Appel*") and the French Supreme Court ("*Cour de Cassation")* upheld the bail amount and rejected the appeal in full in late 2014. UBS AG filed an application to the European Court of Human Rights (ECHR) to challenge various aspects of the French court's decision. In January 2017, the ECHR denied UBS's application. The Swiss Federal Administrative Court ruled in October 2016 that in the administrative assistance proceedings related to the French bulk request, UBS has the right to appeal all final FTA client data disclosure orders. In September 2015, the former CEO of UBS Wealth Management was placed under formal examination in connection with these proceedings. In addition, the investigating judges have sought to issue arrest warrants against three Swiss-based former employees of UBS AG who did not appear when summoned by the investigating judge.

In 2015, UBS (France) S.A. was placed under formal examination for complicity regarding the laundering of proceeds of tax fraud and of banking and financial solicitation by unauthorized persons for the years 2004 until 2008 and declared witness with legal assistance for the years 2009 to 2012. A bail of EUR 40 million was imposed and subsequently reduced by the Court of Appeals to EUR 10 million.

In February 2016, the investigating judge notified UBS AG and UBS (France) S.A. that he has closed his investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). As permitted, the parties have commented on the recommendation. The next procedural step will be for the judge to issue his final decree ("*ordonnance de renvoi en correctionnelle*"), which would set out any charges for which UBS AG and UBS (France) S.A. will be tried, both legally and factually, and transfer the case to court.

UBS has been notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud and of banking, financial solicitation by unauthorized persons and serious tax fraud.

In 2015, UBS received inquiries from the US Attorney's Office for the Eastern District of New York and from the US Securities and Exchange Commission (SEC), which are investigating potential sales to US persons of bearer bonds and other unregistered securities in possible violation of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) and the registration requirements of the US securities laws. UBS is cooperating with the authorities in these investigations.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 31 December 2016 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

We were not a significant originator of US residential loans. A subsidiary of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008 and securitized less than half of these loans.

RMBS-related lawsuits concerning disclosures: UBS is named as a defendant relating to its role as underwriter and issuer of RMBS in lawsuits related to approximately USD 2.5 billion in original face amount of RMBS underwritten or issued by UBS. Of the USD 2.5 billion in original face amount of RMBS that remains at issue in these cases, approximately USD 1.2 billion was issued in offerings in which a UBS subsidiary transferred underlying loans (the majority of which were purchased from third-party originators) into a securitization trust and made representations and warranties about those loans (UBS-sponsored RMBS). The remaining USD 1.3 billion of RMBS to which these cases relate was issued by third parties in securitizations in which UBS acted as underwriter (third-party RMBS).

In connection with certain of these lawsuits, UBS has indemnification rights against surviving third-party issuers or originators for losses or liabilities incurred by UBS, but UBS cannot predict the extent to which it will succeed in enforcing those rights.

UBS is a defendant in a lawsuit brought by the National Credit Union Administration (NCUA) as conservator for certain failed credit unions, asserting misstatements and omissions in the offering documents for RMBS purchased by the credit unions. The lawsuit was filed in the US District Court for the District of Kansas. The original principal balance at issue in the case is approximately USD 1.15 billion. In March 2017, UBS and NCUA reached an agreement in principle to resolve this matter. In the second quarter of 2016, UBS resolved a similar case brought by the NCUA in the US District Court for the Southern District of New York (SDNY) relating to RMBS with an original principal balance of approximately USD 400 million, for a total of approximately USD 69.8 million, in addition to reasonable attorneys' fees incurred by NCUA.

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, we generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, we were in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. UBS has received demands to repurchase US residential mortgage loans as to which UBS made certain representations at the time the loans were transferred to the securitization trust aggregating approximately USD 4.1 billion in original principal balance. Of this amount, UBS considers claims relating to approximately USD 2 billion in original principal balance to be resolved, including claims barred by the statute of limitations. Substantially all of the remaining claims are in litigation, including the matters described in the next paragraph. UBS believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

In 2012, certain RMBS trusts filed an action (Trustee Suit) in the SDNY seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations with an original principal balance of approximately USD 2 billion, for which Assured Guaranty Municipal Corp., a financial guaranty insurance company, had previously demanded repurchase. A bench trial in the SDNY adjourned in May 2016. Approximately 9,000 loans were at issue in the trial. In September 2016, the court issued an order ruling on numerous legal and factual issues and applying those rulings to 20 exemplar loans. The court further ordered that a lead master be appointed to apply the court's rulings to the loans that remain at issue following the trial. With respect to the loans subject to the Trustee Suit that were originated by institutions still in existence, UBS intends to enforce its indemnity rights against those institutions.

We also have tolling agreements with certain institutional purchasers of RMBS concerning their potential claims related to substantial purchases of UBS-sponsored or third-party RMBS.

Note 20 Provisions and contingent liabilities (continued)

Provision for claims related to sales of residential mortgage-backed securities and mortgages

USD million	31.12.16	31.12.15
Balance at the beginning of the year	1,218	849
Increase in provision recognized in the income statement	589	662
Release of provision recognized in the income statement	0	(94)
Provision used in conformity with designated purpose	(307)	(199)
Balance at the end of the year	1,500	1,218

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and has subsequently provided a revised list of transactions. We have provided and continue to provide information. UBS continues to respond to the FIRREA subpoena and to subpoenas from the New York State Attorney General and other state attorneys general relating to its RMBS business. In addition, UBS has also been responding to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the SEC relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. We are cooperating with the authorities in these matters.

As reflected in the table "Provision for claims related to sales of residential mortgage-backed securities and mortgages," our balance sheet at 31 December 2016 reflected a provision of USD 1,500 million with respect to matters described in this item 2. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds now face severe losses, and the Luxembourg funds are in liquidation. The last reported net asset value of the two Luxembourg funds before revelation of the Madoff scheme was approximately USD 1.7 billion in the aggregate although that figure likely includes fictitious profit reported by BMIS. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members. UBS (Luxembourg) S.A. and certain other UBS subsidiaries are responding to inquiries by Luxembourg investigating authorities, without, however, being named as parties in those investigations. In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims on behalf of the funds against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees. The amounts claimed are approximately EUR 890 million and EUR 305 million, respectively. The liquidators have filed supplementary claims for amounts that the funds may possibly be held liable to pay the BMIS Trustee. These amounts claimed by the liquidator are approximately EUR 564 million and EUR 370 million, respectively. In addition, a large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff scheme. The majority of these cases are pending in Luxembourg, where appeals were filed by the claimants against the 2010 decisions of the court in which the claims in a number of test cases were held to be inadmissible. In 2014, the Luxembourg Court of Appeal dismissed one test case appeal in its entirety, which decision was appealed by the investor. In 2015, the Luxembourg Supreme Court found in favor of UBS and dismissed the investor's appeal. In June 2016, the Luxembourg Court of Appeal dismissed the remaining test cases in their entirety. In the US, the BMIS Trustee filed claims in 2010 against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. Following a motion by UBS, in 2011, the SDNY dismissed all of the BMIS Trustee's claims other than claims for recovery of fraudulent conveyances and preference payments that were allegedly transferred to UBS on the ground that the BMIS Trustee lacks standing to bring such claims. In 2013, the Second Circuit affirmed the District Court's decision and, in 2014, the US Supreme Court denied the BMIS Trustee's petition seeking review of the Second Circuit ruling. In November 2016, the bankruptcy court issued an opinion dismissing the remaining claims for recovery of subsequent transfers of fraudulent conveyances and preference payments on the ground that the US Bankruptcy Code does not apply to transfers that occurred outside the US. The BMIS Trustee has indicated that he will appeal. In 2014, several claims, including a purported class action, were filed in the US by BMIS customers against UBS entities, asserting claims similar to the ones made by the BMIS Trustee, seeking unspecified damages. One claim was voluntarily withdrawn by the plaintiff. In 2015, following a motion by UBS, the SDNY dismissed the two remaining claims on the basis that the New York courts did not have jurisdiction to hear the claims against the UBS entities. The plaintiff in one of those claims has appealed the dismissal. In Germany, certain clients of UBS are exposed to Madoff-managed positions through third-party funds and funds administered by UBS entities in Germany. A small number of claims have been filed with respect to such funds. In 2015, a court of appeal ordered UBS to pay EUR 49 million, plus interest of approximately EUR 15.3 million.

4. Puerto Rico

Declines since August 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (the funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of approximately USD 2.0 billion, of which claims with aggregate claimed damages of approximately USD 861 million have been resolved through settlements, arbitration or withdrawal of the claim. The claims are filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans. A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied. Defendants' requests for permission to appeal that ruling were denied by the Puerto Rico Court of Appeals and the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management, and the co-manager of certain of the funds seeking damages for investor losses in the funds during the period from May 2008 through May 2014. Defendants had moved to dismiss that complaint, and in December 2016, defendants' motion to dismiss was granted in part and denied in part. In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA in December 2013 based on plaintiffs' allegation that the loans are not valid. The trial court denied defendants' motion to dismiss the action based on a forum selection clause in the loan agreements; the Puerto Rico Supreme Court has stayed the action pending its review of defendants' appeal from that ruling.

In 2014, UBS reached a settlement with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI) in connection with OCFI's examination of UBS's operations from January 2006 through September 2013, pursuant to which UBS is paying up to an aggregate of USD 7.7 million in investor education contributions and restitution.

In 2015, the SEC and the Financial Industry Regulatory Authority (FINRA) announced settlements with UBS PR of their separate investigations stemming from the 2013 market events. Without admitting or denying the findings in either matter, UBS PR agreed in the SEC settlement to pay USD 15 million and USD 18.5 million in the FINRA matter. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of approximately USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. Defendants' motion to dismiss is pending. In September 2016, the System announced its intention to join the action as a plaintiff, and the court has since ordered that plaintiffs must file an amended complaint.

Also, in 2013, an SEC Administrative Law Judge dismissed a case brought by the SEC against two UBS executives, finding no violations. The charges had stemmed from the SEC's investigation of UBS's sale of closed-end funds in 2008 and 2009, which UBS settled in 2012. Beginning in 2012, two federal class action complaints, which were subsequently consolidated, were filed against various UBS entities, certain of the funds, and certain members of UBS PR senior management, seeking damages for investor losses in the funds during the period from January 2008 through May 2012 based on allegations similar to those in the SEC action. In September 2016, the court denied plaintiffs' motion for class certification. In October 2016, plaintiffs filed a petition with the US Court of Appeals for the First Circuit seeking permission to bring an interlocutory appeal challenging the denial of their motion for class certification. Defendants have filed an opposition to plaintiffs' petition.

Beginning in 2015, agencies and public corporations of the Commonwealth have defaulted on certain interest payments, and in July 2016, the Commonwealth defaulted on payments on its general obligation debt. Executive orders of the Governor that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In June 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board is authorized to impose, and has imposed, a stay on exercise of creditors' rights. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations, may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 31 December 2016 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR, and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Following an initial media report in 2013 of widespread irregularities in the foreign exchange markets, UBS immediately commenced an internal review of its foreign exchange business, which includes our precious metals and related structured products businesses. Since then, various authorities have commenced investigations concerning possible manipulation of foreign exchange markets, including FINMA, the Swiss Competition Commission (WEKO), the DOJ, the SEC, the US Commodity Futures Trading Commission (CFTC), the Board of Governors of the Federal Reserve System (Federal Reserve Board), the California State Attorney General, the UK Financial Conduct Authority (FCA) (to which certain responsibilities of the UK Financial Services Authority (FSA) have passed), the UK Serious Fraud Office (SFO), the Australian Securities and Investments Commission (ASIC), the Hong Kong Monetary Authority (HKMA), the Korea Fair Trade Commission (KFTC) and the Brazil Competition Authority (CADE). In addition, WEKO is, and a number of other authorities reportedly are, investigating potential manipulation of precious metals prices. UBS has taken and will continue to take appropriate action with respect to certain personnel as a result of its ongoing review.

In 2014, UBS reached settlements with the FCA and the CFTC in connection with their foreign exchange investigations, and FINMA issued an order concluding its formal proceedings with respect to UBS relating to its foreign exchange and precious metals businesses. UBS has paid a total of approximately CHF 774 million to these authorities, including GBP 234 million in fines to the FCA, USD 290 million in fines to the CFTC, and CHF 134 million to FINMA representing confiscation of costs avoided and profits. In 2015, the Federal Reserve Board and the Connecticut Department of Banking issued an Order to Cease and Desist and Order of Assessment of a Civil Monetary Penalty Issued upon Consent (Federal Reserve Order) to UBS AG. As part of the Federal Reserve Order, UBS AG paid a USD 342 million civil monetary penalty.

In 2015, the DOJ's Criminal Division (Criminal Division) terminated the December 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates. As a result, UBS AG entered into a plea agreement with the Criminal Division pursuant to which UBS AG pleaded guilty to a one-count criminal information filed in the US District Court for the District of Connecticut charging UBS AG with one count of wire fraud in violation of 18 USC Sections 1343 and 2. Sentencing occurred on 5 January 2017. Under the plea agreement, UBS AG has paid a USD 203 million fine and is subject to a three-year term of probation starting on the sentencing date. The criminal information charges that, between approximately 2001 and 2010, UBS AG engaged in a scheme to defraud counterparties to interest rate derivatives transactions by manipulating benchmark interest rates, including Yen LIBOR. The Criminal Division terminated the NPA based on its determination, in its sole discretion, that certain UBS AG employees committed criminal conduct that violated the NPA, including fraudulent and deceptive currency trading and sales practices in conducting certain foreign exchange market transactions with clients and collusion with other participants in certain foreign exchange markets.

We have ongoing obligations to cooperate with these authorities and to undertake certain remediation, including actions to improve UBS's processes and controls.

UBS has been granted conditional leniency or conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) from prosecution for EUR / USD collusion and entered into a non-prosecution agreement covering other currency pairs. As a result, UBS AG will not be subject to prosecutions, fines or other sanctions for antitrust law violations by the Antitrust Division, subject to UBS AG's continuing cooperation. However, the conditional leniency and conditional immunity grant does not bar government agencies from asserting other claims and imposing sanctions against UBS AG, as evidenced by the settlements and ongoing investigations referred to above. UBS has also been granted conditional immunity by authorities in certain jurisdictions, including WEKO, in connection with potential competition law violations relating to foreign exchange and precious metals businesses and, as a result, will not be subject to prosecutions, fines or other sanctions for antitrust or competition law violations in those jurisdictions, subject to UBS AG's continuing cooperation as the leniency applicant.

Investigations relating to foreign exchange and precious metals matters by numerous authorities, including the CFTC, remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since November 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. They allege collusion by the defendants and assert claims under the antitrust laws and for unjust enrichment. In 2015, additional putative class actions were filed in federal court in New York against UBS and other banks on behalf of a putative class of persons who entered into or held any foreign exchange futures contracts and options on foreign exchange futures contracts since 1 January 2003. The complaints assert claims under the Commodity Exchange Act (CEA) and the US antitrust laws. In 2015, a consolidated complaint was filed on behalf of both putative classes of persons covered by the US federal court class actions described above. UBS has entered into a settlement agreement that would resolve all of these US federal court class actions. The agreement, which has been preliminarily approved by the court and is subject to final court approval, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

Note 20 Provisions and contingent liabilities (continued)

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries, and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign currency exchange transactional services, exercised discretionary authority or discretionary control over management of such ERISA plan, or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. The parties filed a stipulation to dismiss the case with prejudice. The plaintiffs have appealed the dismissal.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of a putative class of persons and businesses in the US who directly purchased foreign currency from the defendants and their co-conspirators for their own end use. That action has been transferred to federal court in New York. Motions to dismiss are pending.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of a putative class of persons and entities who had indirectly purchased FX instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. Motions to dismiss will be filed.

In 2015, UBS was added to putative class actions pending against other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits assert claims under the antitrust laws and the CEA, and other claims. In October 2016, the court in New York granted UBS's motions to dismiss the putative class actions relating to gold and silver. Plaintiffs in those cases are seeking to amend their complaints to add new allegations about UBS. UBS's motion to dismiss the putative class action relating to platinum and palladium remains pending.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the SFO, the Monetary Authority of Singapore (MAS), the HKMA, FINMA, the various state attorneys general in the US and competition authorities in various jurisdictions have conducted or are continuing to conduct investigations regarding submissions with respect to LIBOR and other benchmark rates. These investigations focus on whether there were improper attempts by UBS, among others, either acting on our own or together with others, to manipulate LIBOR and other benchmark rates at certain times.

In 2012, UBS reached settlements with the FSA, the CFTC and the Criminal Division of the DOJ in connection with their investigations of benchmark interest rates. At the same time, FINMA issued an order concluding its formal proceedings with respect to UBS relating to benchmark interest rates. UBS has paid a total of approximately CHF 1.4 billion in fines and disgorgement, including GBP 160 million in fines to the FSA, USD 700 million in fines to the CFTC, USD 500 million in fines to the DOJ, and CHF 59 million in disgorgement to FINMA. UBS Securities Japan Co. Ltd. (UBSSJ) entered into a plea agreement with the DOJ under which it entered a plea to one count of wire fraud relating to the manipulation of certain benchmark interest rates, including Yen LIBOR. UBS entered into an NPA with the DOJ, which (along with the plea agreement) covered conduct beyond the scope of the conditional leniency / immunity grants described below, required UBS to pay the USD 500 million fine to the DOJ after the sentencing of UBSSJ and provided that any criminal penalties imposed on UBSSJ at sentencing be deducted from the USD 500 million fine. Under the NPA, we agreed, among other things, that for two years from 18 December 2012 UBS would not commit any US crime and we would advise DOJ of any potentially criminal conduct by UBS or any of its employees relating to violations of US laws concerning fraud or securities and commodities markets. The term of the NPA was extended by one year to 18 December 2015. In 2015, the Criminal Division terminated the NPA based on its determination, in its sole discretion, that certain UBS AG employees committed criminal conduct that violated the NPA.

In 2014, UBS reached a settlement with the European Commission (EC) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives and paid a EUR 12.7 million fine, which was reduced to this level based in part on UBS's cooperation with the EC. In December 2016, UBS reached a settlement with WEKO regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives and received full immunity from fines. The MAS, HKMA and the Japan Financial Services Agency have also resolved investigations of UBS (and in some cases, other banks). We have ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation with respect to benchmark interest rate submissions.

Investigations by the CFTC, ASIC and other governmental authorities remain ongoing notwithstanding these resolutions.

Note 20 Provisions and contingent liabilities (continued)

UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to submissions for Yen LIBOR and Euroyen TIBOR. As a result of these conditional grants, UBS will not be subject to prosecutions, fines or other sanctions for antitrust or competition law violations in the jurisdictions where we have conditional immunity in connection with the matters covered by the conditional grants, subject to our continuing cooperation as leniency applicant. However, since the Secretariat of WEKO has asserted that UBS does not qualify for full immunity, UBS has been unable to reach a settlement with WEKO, and therefore the investigation will continue. Furthermore, the conditional leniency and conditional immunity grants we have received do not bar government agencies from asserting other claims and imposing sanctions against us, as evidenced by the settlements and ongoing investigations referred to above. In addition, as a result of the conditional leniency agreement with the DOJ, we are eligible for a limit on liability to actual rather than treble damages were damages to be awarded in any civil antitrust action under US law based on conduct covered by the agreement and for relief from potential joint and several liability in connection with such civil antitrust action, subject to our satisfying the DOJ and the court presiding over the civil litigation of our cooperation. The conditional leniency and conditional immunity grants do not otherwise affect the ability of private parties to assert civil claims against us.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. All of the complaints allege manipulation, through various means, of various benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD ISDAFIX rates and other benchmark rates, and seek unspecified compensatory and other damages under varying legal theories.

In 2013, the US district court in the USD LIBOR action dismissed the federal antitrust and racketeering claims of certain USD LIBOR plaintiffs and a portion of their claims brought under the CEA and state common law. Certain plaintiffs appealed the decision to the Second Circuit, which, in May 2016, vacated the district court's ruling finding no antitrust injury and remanded the case back to the district court for a further determination on whether plaintiffs have antitrust standing. In December 2016, the district court again dismissed plaintiffs' antitrust claims, this time for lack of personal jurisdiction over UBS and other foreign banks. In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including federal antitrust claims. In 2015, the same court dismissed plaintiff's federal racketeering claims and affirmed its previous dismissal of plaintiff's antitrust claims. UBS and other defendants in other lawsuits including those related to EURIBOR, CHF LIBOR, GBP LIBOR and SIBOR have filed motions to dismiss. UBS has entered into an agreement with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement is subject to court approval.

Since September 2014, putative class actions have been filed in federal court in New York and New Jersey against UBS and other financial institutions, among others, on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX. The complaints, which have since been consolidated into an amended complaint, allege that the defendants conspired to manipulate ISDAFIX rates from 1 January 2006 through January 2014, in violation of US antitrust laws and certain state laws, and seek unspecified compensatory damages, including treble damages. In March 2016, the court in the ISDAFIX action denied in substantial part defendants' motion to dismiss, holding that plaintiffs have stated Sherman Act, breach-of-contract and unjust-enrichment claims against defendants, including UBS AG.

Government bonds: Putative class actions have been filed in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. The complaints generally allege that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction. They assert claims under the antitrust laws and the CEA and for unjust enrichment. The cases have been consolidated in the SDNY. Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

With respect to additional matters and jurisdictions not encompassed by the settlements and order referred to above, our balance sheet at 31 December 2016 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among others, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 31 December 2016 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Banco UBS Pactual tax indemnity

Pursuant to the 2009 sale of Banco UBS Pactual S.A. (Pactual) by UBS to BTG Investments, LP (BTG), BTG has submitted contractual indemnification claims that UBS estimates amount to approximately BRL 2.6 billion, including interest and penalties, which is net of liabilities retained by BTG. The claims pertain principally to several tax assessments issued by the Brazilian tax authorities against Pactual relating to the period from December 2006 through March 2009, when UBS owned Pactual. These assessments are being challenged in administrative and judicial proceedings. The majority of these assessments relate to the deductibility of goodwill amortization in connection with UBS's 2006 acquisition of Pactual and payments made to Pactual employees through various profit-sharing plans. In 2015, an intermediate administrative court issued a decision that was largely in favor of the tax authority with respect to the goodwill amortization assessment. In May 2016, the highest level of the administrative court agreed to review this decision on a number of the significant issues.

8. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. In October 2016, the SFC informed UBS that it intends to commence action against UBS and certain UBS employees with respect to sponsorship work in those offerings. If such action is taken, there may be financial ramifications for UBS, including fines and obligations to pay investor compensation, and suspension of UBS's ability to provide corporate finance advisory services in Hong Kong for a period of time. On 16 January 2017, a writ was filed by the SFC with Hong Kong's High Court in which UBS is named as one of six defendants from whom the SFC is seeking compensation in an unspecified amount for losses incurred by certain shareholders of China Forestry Holdings Company Limited, for whom UBS acted as a sponsor in connection with their 2009 listing application.

Note 21 Other liabilities

CHF million	31.12.16	31.12.15
Prime brokerage payables[1]	31,973	45,306
Amounts due under unit-linked investment contracts	9,286	15,718
Compensation-related liabilities	5,256	5,122
of which: accrued expenses	*2,367*	*2,827*
of which: other deferred compensation plans	*1,623*	*1,559*
of which: net defined benefit pension and post-employment liabilities[2]	*1,266*	*736*
Third-party interest in consolidated investment funds	751	594
Settlement and clearing accounts	1,011	893
Current and deferred tax liabilities[3]	911	810
VAT and other tax payables	487	446
Deferred income	168	210
Accrued interest expenses	1,571	1,438
Other accrued expenses	2,427	2,492
Liabilities of disposal group held for sale[4]	5,213	235
Other	1,390	1,343
Total other liabilities	60,443	74,606

1 Prime brokerage services include clearance, settlement, custody, financing and portfolio reporting services for corporate clients trading across multiple asset classes. Prime brokerage payables are mainly comprised of client securities financing and deposits. 2 Refer to Note 26 for more information. 3 Refer to Note 8 for more information. 4 Refer to Note 30 for more information.

Additional information

Note 22 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and is structured as follows:

a) Valuation principles
b) Valuation governance
c) Fair value hierarchy
d) Valuation adjustments
e) Transfers between Level 1 and Level 2
f) Level 3 instruments: valuation techniques and inputs
g) Level 3 instruments: sensitivity to changes in unobservable input assumptions
h) Level 3 instruments: movements during the period
i) Financial instruments not measured at fair value

a) Valuation principles

Fair value is defined as the price that would be received for the sale of an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market (or most advantageous market, in the absence of a principal market) as of the measurement date. In measuring fair value, UBS AG uses various valuation approaches and applies a hierarchy for prices and inputs that maximizes the use of observable market data, if available.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

– Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
– Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
– Level 3 – valuation techniques for which significant inputs are not based on observable market data.

If available, fair values are determined using quoted prices in active markets for identical assets or liabilities. An active market is one in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing data on an ongoing basis. Assets and liabilities that are quoted and traded in an active market are valued at the currently quoted price multiplied by the number of units of the instrument held.

Where the market for a financial instrument or non-financial asset or liability is not active, fair value is established using a valuation technique, including pricing models. Valuation techniques involve the use of estimates, the extent of which depends on the complexity of the instrument and the availability of market-based data. Valuation adjustments may be made to allow for additional factors, including model, liquidity, credit and funding risks, which are not explicitly captured within the valuation technique, but which would nevertheless be considered by market participants when establishing a price. The limitations inherent in a particular valuation technique are considered in the determination of an asset or liability's classification within the fair value hierarchy.

Many cash instruments and over-the-counter (OTC) derivative contracts have bid and offer prices that can be observed in the marketplace. Bid prices reflect the highest price that a party is willing to pay for an asset. Offer prices represent the lowest price that a party is willing to accept for an asset. In general, long positions are measured at a bid price and short positions at an offer price, reflecting the prices at which the instruments could be transferred under normal market conditions. Offsetting positions in the same financial instrument are marked at the mid-price within the bid-offer spread.

Generally, the unit of account for a financial instrument is the individual instrument, and UBS AG applies valuation adjustments at an individual instrument level, consistent with that unit of account. However, if certain conditions are met, UBS AG may estimate the fair value of a portfolio of financial assets and liabilities with substantially similar and offsetting risk exposures on the basis of the net open risks.

For transactions where the valuation technique used to measure fair value requires significant inputs that are not based on observable market data, the financial instrument is initially recognized at the transaction price. This initial recognition amount may differ from the fair value obtained using the valuation technique. Any such difference is deferred and not recognized in the income statement and referred to as deferred day-1 profit or loss.

→ **Refer to Note 22d for more information**

Note 22 Fair value measurement (continued)

b) Valuation governance

UBS AG's fair value measurement and model governance framework includes numerous controls and other procedural safeguards that are intended to maximize the quality of fair value measurements reported in the financial statements. New products and valuation techniques must be reviewed and approved by key stakeholders from risk and finance control functions. Responsibility for the ongoing measurement of financial and non-financial instruments at fair value resides with the business divisions. In carrying out their valuation responsibilities, the businesses are required to consider the availability and quality of external market data and to provide justification and rationale for their fair value estimates.

Fair value estimates are validated by risk and finance control functions, which are independent of the business divisions. Independent price verification is performed by finance through benchmarking the business divisions' fair value estimates with observable market prices and other independent sources. Controls and governance are in place to ensure the quality of third-party pricing sources where used. For instruments where valuation models are used to determine fair value, independent valuation and model control groups within finance and risk evaluate UBS AG's models on a regular basis, including valuation and model input parameters as well as pricing. As a result of the valuation controls employed, valuation adjustments may be made to the business divisions' estimates of fair value to align with independent market data and the relevant accounting standard.

→ **Refer to Note 22d for more information**

Note 22 Fair value measurement (continued)

c) Fair value hierarchy

The table below provides the fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value. The narrative that follows describes the different product types, valuation techniques used in measuring their fair value, including significant valuation inputs and assumptions used, and the factors determining their classification within the fair value hierarchy.

Determination of fair values from quoted market prices or valuation techniques[1]

	31.12.16				31.12.15			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets measured at fair value on a recurring basis								
Financial assets held for trading[2]	76,046	14,377	1,689	92,112	96,388	21,946	2,070	120,405
of which:								
Government bills / bonds	*10,500*	*1,319*	*0*	*11,820*	*12,911*	*3,277*	*5*	*16,193*
Corporate and municipal bonds	*58*	*6,722*	*591*	*7,371*	*232*	*8,108*	*698*	*9,038*
Loans	*0*	*1,356*	*681*	*2,037*	*0*	*1,769*	*816*	*2,585*
Investment fund units	*6,114*	*3,521*	*63*	*9,698*	*6,062*	*5,697*	*168*	*11,928*
Asset-backed securities	*0*	*470*	*215*	*685*	*0*	*958*	*201*	*1,159*
Equity instruments	*50,916*	*397*	*65*	*51,378*	*62,420*	*1,475*	*89*	*63,984*
Financial assets for unit-linked investment contracts	*8,459*	*591*	*74*	*9,123*	*14,764*	*663*	*93*	*15,519*
Positive replacement values	434	155,428	2,549	158,411	545	164,025	2,865	167,435
of which:								
Interest rate contracts	*8*	*57,703*	*278*	*57,988*	*1*	*74,443*	*88*	*74,531*
Credit derivative contracts	*0*	*2,562*	*1,313*	*3,875*	*0*	*5,384*	*1,272*	*6,656*
Foreign exchange contracts	*263*	*75,607*	*222*	*76,092*	*304*	*64,886*	*484*	*65,675*
Equity / index contracts	*1*	*17,274*	*729*	*18,003*	*2*	*15,938*	*996*	*16,936*
Commodity contracts	*0*	*2,269*	*8*	*2,277*	*0*	*3,363*	*25*	*3,388*
Financial assets designated at fair value	39,641	23,304	2,079	65,024	170	2,338	3,301	5,808
of which:								
Government bills / bonds	*39,439*	*4,361*	*0*	*43,799*	*4*	*0*	*0*	*4*
Corporate and municipal bonds	*15*	*16,860*	*0*	*16,875*	*0*	*0*	*0*	*0*
Loans (including structured loans)	*0*	*2,043*	*1,195*	*3,238*	*0*	*2,311*	*1,677*	*3,988*
Structured reverse repurchase and securities borrowing agreements	*0*	*40*	*644*	*684*	*0*	*40*	*1,510*	*1,550*
Other	*187*	*0*	*240*	*427*	*165*	*12*	*113*	*266*
Financial assets available for sale	6,299	8,891	486	15,676	34,204	27,653	686	62,543
of which:								
Government bills / bonds	*5,444*	*450*	*0*	*5,894*	*31,108*	*1,986*	*0*	*33,094*
Corporate and municipal bonds	*646*	*4,939*	*12*	*5,596*	*2,992*	*22,186*	*27*	*25,205*
Investment fund units	*0*	*51*	*126*	*177*	*0*	*64*	*139*	*202*
Asset-backed securities	*0*	*3,381*	*0*	*3,381*	*0*	*3,396*	*0*	*3,396*
Equity instruments	*204*	*71*	*336*	*611*	*103*	*21*	*517*	*641*
Non-financial assets								
Precious metals and other physical commodities	4,583	0	0	4,583	3,670	0	0	3,670
Assets measured at fair value on a non-recurring basis								
Other assets[3]	5,060	131	56	5,248	266	69	78	413
Total assets measured at fair value	132,064	202,132	6,860	341,056	135,242	216,037	9,001	360,280

Note 22 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	31.12.16				31.12.15			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Liabilities measured at fair value on a recurring basis								
Trading portfolio liabilities	18,808	3,898	119	22,825	25,476	3,504	158	29,137
of which:								
Government bills / bonds	*5,573*	*648*	*0*	*6,221*	*5,997*	*845*	*0*	*6,842*
Corporate and municipal bonds	*12*	*2,927*	*37*	*2,976*	*12*	*2,370*	*90*	*2,471*
Investment fund units	*484*	*91*	*20*	*595*	*666*	*52*	*20*	*738*
Asset-backed securities	*0*	*5*	*0*	*5*	*0*	*2*	*0*	*2*
Equity instruments	*12,740*	*227*	*62*	*13,028*	*18,802*	*235*	*47*	*19,084*
Negative replacement values	539	149,255	4,016	153,810	640	158,494	3,296	162,430
of which:								
Interest rate contracts	*12*	*51,990*	*475*	*52,476*	*2*	*67,225*	*326*	*67,553*
Credit derivative contracts	*0*	*3,269*	*1,538*	*4,807*	*0*	*5,350*	*1,303*	*6,653*
Foreign exchange contracts	*274*	*71,668*	*148*	*72,089*	*286*	*62,965*	*233*	*63,484*
Equity / index contracts	*1*	*20,254*	*1,854*	*22,109*	*1*	*19,722*	*1,433*	*21,156*
Commodity contracts	*0*	*2,040*	*1*	*2,041*	*0*	*3,222*	*0*	*3,222*
Financial liabilities designated at fair value	2	44,007	11,008	55,017	1	52,321	10,673	62,995
of which:								
Issued debt instruments	*0*	*40,242*	*9,688*	*49,930*	*0*	*47,197*	*9,337*	*56,534*
Over-the-counter debt instruments	*2*	*3,611*	*1,050*	*4,663*	*2*	*4,719*	*773*	*5,493*
Structured repurchase agreements	*0*	*130*	*266*	*395*	*0*	*293*	*556*	*849*
Loan commitments and guarantees	*0*	*25*	*5*	*29*	*0*	*113*	*7*	*119*
Other liabilities – amounts due under unit-linked investment contracts	0	9,286	0	9,286	0	15,718	0	15,718
Liabilities measured at fair value on a non-recurring basis								
Other liabilities[3]	0	5,213	0	5,213	0	235	0	235
Total liabilities measured at fair value	19,349	211,660	15,143	246,152	26,117	230,272	14,127	270,515

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. As of 31 December 2016, net bifurcated embedded derivative assets held at fair value, totaling CHF 50 million (of which CHF 58 million were net Level 2 assets and CHF 8 million net Level 2 liabilities), were recognized on the balance sheet within Due to customers and Debt issued. As of 31 December 2015, net bifurcated embedded derivative liabilities held at fair value, totaling CHF 130 million (of which CHF 106 million were net Level 2 assets and CHF 236 million net Level 2 liabilities), were recognized on the balance sheet within Debt issued. 2 Financial assets held for trading do not include precious metals and other physical commodities. 3 Other assets and other liabilities primarily consist of assets held for sale as well as assets and liabilities of a disposal group held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell. Refer to Note 30 for more information.

Valuation techniques

Valuation techniques are used to value positions for which a market price is not available from market sources. This includes certain less liquid debt and equity instruments, certain exchange-traded derivatives and all derivatives transacted in the OTC market. UBS AG uses widely recognized valuation techniques for determining the fair value of financial and non-financial instruments that are not actively traded and quoted. The most frequently applied valuation techniques include discounted value of expected cash flows, relative value and option pricing methodologies.

Discounted value of expected cash flows is a valuation technique that measures fair value using estimated expected future cash flows from assets or liabilities and then discounts these cash flows using a discount rate or discount margin that reflects the credit and / or funding spreads required by the market for instruments with similar risk and liquidity profiles to produce a present value. When using such valuation techniques, expected future cash flows are estimated using an observed or implied market price for the future cash flows or by using industry standard cash flow projection models. The discount factors within the calculation are generated using industry standard yield curve modeling techniques and models.

Relative value models measure fair value based on the market prices of equivalent or comparable assets or liabilities, making adjustments for differences between the characteristics of the observed instrument and the instrument being valued.

Option pricing models incorporate assumptions regarding the behavior of future price movements of an underlying referenced asset or assets to generate a probability-weighted future expected payoff for the option. The resulting probability-weighted expected payoff is then discounted using discount factors generated from industry standard yield curve modeling techniques and models. The option pricing model may be implemented using a closed-form analytical formula or other mathematical techniques (e.g., binomial tree or Monte Carlo simulation).

Where available, valuation techniques use market-observable assumptions and inputs. If such data is not available, inputs may be derived by reference to similar assets in active markets, from recent prices for comparable transactions or from other observable market data. In such cases, the inputs selected are based on historical experience and practice for similar or analogous instruments, derivation of input levels based on similar products with observable price levels and knowledge of current market conditions and valuation approaches.

For more complex instruments and instruments not traded in an active market, fair values may be estimated using a combination of observed transaction prices, consensus pricing services and relevant quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided by consensus pricing services. UBS AG also uses internally developed models, which are typically based on valuation methods and techniques recognized as standard within the industry.

Assumptions and inputs used in valuation techniques include benchmark interest rate curves, credit and funding spreads used in estimating discount rates, bond and equity prices, equity index prices, foreign exchange rates, levels of market volatility and correlation. Refer to Note 22f for more information. The discount curves used by UBS AG incorporate the funding and credit characteristics of the instruments to which they are applied.

Financial instruments excluding derivatives: product description, valuation and classification in the fair value hierarchy

Government bills and bonds

Product description: government bills and bonds include fixed-rate, floating-rate and inflation-linked bills and bonds issued by sovereign governments.

Valuation: these instruments are generally valued using prices obtained directly from the market. Instruments that cannot be priced directly using active market data are valued using discounted cash flow valuation techniques that incorporate market data for similar government instruments.

Fair value hierarchy: government bills and bonds are generally traded in active markets with prices that can be obtained directly from these markets, resulting in classification as Level 1, while the remaining positions are classified as Level 2.

Corporate and municipal bonds

Product description: corporate bonds include senior, junior and subordinated debt issued by corporate entities. Municipal bonds are issued by state and local governments. While most instruments are standard fixed- or floating-rate securities, some may have more complex coupon or embedded option features.

Valuation: corporate and municipal bonds are generally valued using prices obtained directly from the market for the security, or similar securities, adjusted for seniority, maturity and liquidity. When prices are not available, instruments are valued using discounted cash flow valuation techniques incorporating the credit spread of the issuer or similar issuers. For convertible bonds where no directly comparable price is available, issuances may be priced using a convertible bond model.

Fair value hierarchy: corporate and municipal bonds are generally classified as Level 1 or Level 2 depending on the depth of trading activity behind price sources. Level 3 instruments have no suitable pricing information available and also cannot be referenced to other securities issued by the same issuer. Therefore, such instruments are measured based on price levels for similar issuers adjusted for relative tenor and issuer quality.

Note 22 Fair value measurement (continued)

Traded loans and loans designated at fair value

Product description: these instruments include fixed-rate loans, corporate loans, recently originated commercial real estate loans and contingent lending transactions.

Valuation: loans are valued directly using market prices that reflect recent transactions or quoted dealer prices where available. Where no market price data are available, loans are valued using relative value benchmarking using pricing derived from debt instruments in comparable entities or different products in the same entity, or by using a credit default swap valuation technique, which requires inputs for credit spreads, credit recovery rates and interest rates. Recently originated commercial real estate loans are measured using a securitization approach based on rating agency guidelines. The valuation of the contingent lending transactions is dependent on actuarial mortality levels and actuarial life insurance policy lapse rates. Mortality and lapse rate assumptions are based on external actuarial estimations for large homogeneous pools, and contingencies are derived from a range relative to the actuarially expected amount.

Fair value hierarchy: instruments with suitably deep and liquid pricing information are classified as Level 2, while any positions requiring the use of valuation techniques, or for which the price sources have insufficient trading depth, are classified as Level 3.

Investment fund units

Product description: investment fund units are pools of assets, generally equity instruments and bonds, broken down to redeemable units.

Valuation: investment fund units are predominantly exchange-traded, with readily available quoted prices in liquid markets. Where market prices are not available, fair value may be measured using net asset values (NAV), taking into account any restrictions imposed upon redemption.

Fair value hierarchy: listed units are classified as Level 1, provided there is sufficient trading activity to justify active market classification, while other positions are classified as Level 2. Positions for which NAV is not available or which are not redeemable at the measurement date or shortly thereafter are classified as Level 3.

Asset-backed securities (ABS)

Product description: ABS include residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), other asset-backed securities (ABS) and collateralized debt obligations (CDO) and are instruments generally issued through the process of securitization of underlying interest-bearing assets.

Valuation: for liquid securities, the valuation process will use trade and price data, updated for movements in market levels between the time of trading and the time of valuation. Less liquid instruments are measured using discounted expected cash flows incorporating price data for instruments or indices with similar risk profiles. Inputs to discounted expected cash flow techniques include asset prepayment rates, discount margin or discount yields, asset default rates and asset loss on default severity.

Fair value hierarchy: RMBS, CMBS and ABS are generally classified as Level 2. However, if significant inputs are unobservable, or if market or fundamental data are not available, they are classified as Level 3.

Equity instruments

Product description: equity instruments include stocks and shares, private equity positions and units held in hedge funds.

Valuation: listed equity instruments are generally valued using prices obtained directly from the market. Unlisted equity holdings, including private equity positions, are initially marked at their transaction price and are revalued when reliable evidence of price movement becomes available or when the position is deemed to be impaired. Fair value for units held in hedge funds is measured based on their published NAV, taking into account any restrictions imposed upon redemption.

Fair value hierarchy: the majority of equity securities are actively traded on public stock exchanges where quoted prices are readily and regularly available, resulting in Level 1 classification. Units held in hedge funds are classified as Level 2, except for positions for which published NAV is not available or which are not redeemable at the measurement date or shortly thereafter, in which case such positions are classified as Level 3.

Financial assets for unit-linked investment contracts

Product description: unit-linked investment contracts allow investors to invest in a pool of assets through issued investment units.

Valuation: the majority of assets are listed on exchanges and fair values are determined using quoted prices.

Fair value hierarchy: most assets are classified as Level 1 if actively traded, or Level 2 if trading is not active. However, instruments for which prices are not readily available are classified as Level 3.

Structured (reverse) repurchase agreements

Product description: structured (reverse) repurchase agreements are securities purchased under resale agreements and securities sold under repurchase agreements.

Valuation: these instruments are valued using discounted expected cash flow techniques. The discount rate applied is based on funding curves that are specific to the collateral eligibility terms for the contract in question.

Fair value hierarchy: collateral terms for these positions are not standard and therefore funding spread levels used for valuation purposes cannot be observed in the market. As a result, these positions are mostly classified as Level 3.

Financial liabilities designated at fair value

Product description: debt instruments, primarily comprised of equity-, rates- and credit-linked issued notes, which are held at fair value under the fair value option. These instruments are tailored specifically to the holder's risk or investment appetite with structured coupons or payoffs.

Valuation: the risk management and the valuation approaches for these instruments are closely aligned with the equivalent derivatives business and the underlying risk, and the valuation techniques used for this component are the same as the relevant valuation techniques described below. For example, equity-linked notes should be referenced to equity / index contracts and credit-linked notes should be referenced to credit derivative contacts.

Fair value hierarchy: observability is closely aligned with the equivalent derivatives business and the underlying risk.

→ **Refer to Note 18 for more information on financial liabilities designated at fair value**

→ **Refer to Note 22d for more information on own credit adjustments related to financial liabilities designated at fair value**

Amounts due under unit-linked investment contracts

Product description: the financial liability represents the amounts due to unit holders.

Valuation: the fair values of investment contract liabilities are determined by reference to the fair value of the corresponding assets.

Fair value hierarchy: the liabilities themselves are not actively traded, but are mainly referenced to instruments that are actively traded and are therefore classified as Level 2.

Derivative instruments: product description, valuation and classification in the fair value hierarchy

The curves used for discounting expected cash flows in the valuation of collateralized derivatives reflect the funding terms associated with the relevant collateral arrangement for the instrument being valued. These collateral arrangements differ across counterparties with respect to the eligible currency and interest terms of the collateral. The majority of collateralized derivatives are measured using a discount curve that is based on funding rates derived from overnight interest in the cheapest eligible currency for the respective counterparty collateral agreement.

Uncollateralized and partially collateralized derivatives are discounted using the LIBOR (or equivalent) curve for the currency of the instrument. As described in Note 22d, the fair value of uncollateralized and partially collateralized derivatives is then adjusted by CVA, DVA and FVA as applicable, to reflect an estimation of the effect of counterparty credit risk, UBS AG's own credit risk and funding costs and benefits.

Interest rate contracts

Product description: interest rate swap contracts include interest rate swaps, basis swaps, cross-currency swaps, inflation swaps and interest rate forwards, often referred to as forward-rate agreements (FRA). Interest rate option contracts include caps and floors, swaptions, swaps with complex payoff profiles and other more complex interest rate options.

Valuation: interest rate swap contracts are valued by estimating future interest cash flows and discounting those cash flows using a rate that reflects the appropriate funding rate for the position being measured. The yield curves used to estimate future index levels and discount rates are generated using market standard yield curve models using interest rates associated with current market activity. The key inputs to the models are interest rate swap rates, FRA rates, short-term interest rate futures prices, basis swap spreads and inflation swap rates. Interest rate option contracts are valued using various market standard option models, using inputs that include interest rate yield curves, inflation curves, volatilities and correlations. The volatility and correlation inputs within the models are implied from market data based on market observed prices for standard option instruments trading within the market. Option models used to value more exotic products have a number of model parameter inputs that require calibration to enable the exotic model to price standard option instruments to the price levels observed in the market. When the maturity of the interest rate swap or option contract exceeds the term for which standard market quotes are observable for a significant input parameter, the contracts are valued by extrapolation from the last observable point using standard assumptions or by reference to another observable comparable input parameter to represent a suitable proxy for that portion of the term.

Fair value hierarchy: the majority of interest rate swaps are classified as Level 2 as the standard market contracts that form the inputs for yield curve models are generally traded in active and observable markets. Options are generally treated as Level 2 as the calibration process enables the model output to be validated to active market levels. Models calibrated in this way are then used to revalue the portfolio of both standard options as well as more exotic products. In most cases, there are active and observable markets for the standard market instruments that form the inputs for yield curve models as well as the financial instruments from which volatility and correlation inputs are derived. Exotic options for which appropriate volatility or correlation input levels cannot be implied from observable market data are classified as Level 3. Interest rate swap or option contracts are classified as Level 3 when the term exceeds standard market observable quotes.

Credit derivative contracts

Product description: a credit derivative is a financial instrument that transfers credit risk related to a single underlying entity, a portfolio of underlying entities or a pool of securitized referenced assets. Credit derivative products include credit default swaps (CDS) on single names, indices, bespoke portfolios and securitized products, plus first to default swaps and certain total return swaps (TRS).

Valuation: credit derivative contracts are valued using industry standard models based primarily on market credit spreads, upfront pricing points and implied recovery rates. Where a derivative credit spread is not directly available it may be derived from the price of the reference cash bond. Correlation is an additional input for certain portfolio credit derivatives. Asset-backed credit derivatives are valued using a similar valuation technique to the underlying security with an adjustment to reflect the funding differences between cash and synthetic form. Inputs include prepayment rates, default rates, loss severity, discount margin / rate.

Fair value hierarchy classification: single entity and portfolio credit derivative contracts are classified as Level 2 when credit spreads, recovery rates and correlations are determined from actively traded observable market data. Where the underlying reference name(s) are not actively traded and the correlation cannot be directly mapped to actively traded tranche instruments, these contracts are classified as Level 3. Asset-backed credit derivatives follow the characteristics of the underlying security and are therefore distributed across Level 2 and Level 3.

Foreign exchange contracts

Product description: this includes open spot and forward foreign exchange (FX) contracts and OTC FX option contracts. OTC FX option contracts include standard call and put options, options with multiple exercise dates, path-dependent options, options with averaging features, options with discontinuous payoff characteristics, options on a number of underlying FX rates and multi-dimensional FX option contracts, which have a dependency on multiple FX pairs.

Valuation: open spot FX contracts are valued using the FX spot rate observed in the market. Forward FX contracts are valued using the FX spot rate adjusted for forward pricing points observed from standard market-based sources. OTC FX option contracts are valued using market standard option valuation models. The models used for shorter-dated options (i.e., maturities of five years or less) tend to be different than those used for longer-dated options because the models needed for longer-dated OTC FX contracts require additional consideration of interest rate and FX rate interdependency. Inputs to the option valuation models include spot FX rates, FX forward points, FX volatilities, interest rate yield curves, interest rate volatilities and correlations. The inputs for volatility and correlation are implied through the calibration of observed prices for standard option contracts trading within the market. The valuation for multiple-dimensional FX options uses a multi-local volatility model, which is calibrated to the observed FX volatilities for all relevant FX pairs.

Fair value hierarchy: the markets for both FX spot and FX forward pricing points are both actively traded and observable and therefore such FX contracts are generally classified as Level 2. A significant proportion of OTC FX option contracts are classified as Level 2 as inputs are derived mostly from standard market contracts traded in active and observable markets. OTC FX option contracts classified as Level 3 include multiple-dimensional FX options and long-dated FX exotic option contracts where there is no active market from which to derive volatility or correlation inputs. The inputs used to value these OTC FX option contracts are calculated using consensus pricing services without an underlying principal market, historical asset prices or by extrapolation.

Equity / index contracts

Product description: equity / index contracts are equity forward contracts and equity option contracts. Equity option contracts include market standard single or basket stock or index call and put options as well as equity option contracts with more complex features.

Valuation: equity forward contracts have a single stock or index underlying and are valued using market standard models. The key inputs to the models are stock prices, estimated dividend rates and equity funding rates (which are implied from prices of forward contracts observed in the market). Estimated cash flows are then discounted using market standard discounted cash flow models using a rate that reflects the appropriate funding rate for that portion of the portfolio. When no market data is available for the instrument maturity, they are valued by extrapolation of available data, use of historical dividend data, or use of data for a related equity. Equity option contracts are valued using market standard models that estimate the equity forward level as described for equity forward contracts and incorporate inputs for stock volatility and for correlation between stocks within a basket. The probability-weighted expected option payoff generated is then discounted using market standard discounted cash flow models using a rate that reflects the appropriate funding rate for that portion of the portfolio. When volatility, forward or correlation inputs are not available, they are valued using extrapolation of available data, historical dividend, correlation or volatility data, or the equivalent data for a related equity.

Note 22 Fair value measurement (continued)

Fair value hierarchy: as inputs are derived mostly from standard market contracts traded in active and observable markets, a significant proportion of equity forward contracts are classified as Level 2. Equity option positions for which inputs are derived from standard market contracts traded in active and observable markets are also classified as Level 2. Level 3 positions are those for which volatility, forward or correlation inputs are not observable.

Commodity contracts

Product description: commodity derivative contracts include forward, swap and option contracts on individual commodities and on commodity indices.

Valuation: commodity forward and swap contracts are measured using market standard models that use market forward levels on standard instruments. Commodity option contracts are measured using market standard option models that estimate the commodity forward level as described for commodity forward and swap contracts, incorporating inputs for the volatility of the underlying index or commodity. For commodity options on baskets of commodities or bespoke commodity indices, the valuation technique also incorporates inputs for the correlation between different commodities or commodity indices.

Fair value hierarchy: individual commodity contracts are typically classified as Level 2 because active forward and volatility market data are available.

→ **Refer to Note 12 for more information on derivative instruments**

d) Valuation adjustments

The output of a valuation technique is always an estimate of a fair value that cannot be measured with complete certainty. As a result, valuations are adjusted, where appropriate and when such factors would be considered by market participants in estimating fair value, to reflect close-out costs, credit exposure, model-driven valuation uncertainty, funding costs and benefits, trading restrictions and other factors. Valuation adjustments are an important component of fair value for assets and liabilities that are measured using valuation techniques. Such adjustments are applied to reflect uncertainties within the fair value measurement process, to adjust for an identified model simplification or to incorporate an aspect of fair value that requires an overall portfolio assessment rather than an evaluation based on an individual instrument level characteristic.

Day-1 reserves

For new transactions where the valuation technique used to measure fair value requires significant inputs that are not based on observable market data, the financial instrument is initially recognized at the transaction price. The transaction price may differ from the fair value obtained using a valuation technique where any such difference is deferred and not initially recognized in the income statement. These day-1 profit or loss reserves are reflected, where appropriate, as valuation adjustments.

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss related to financial instruments other than financial assets available for sale is released into *Net trading income* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

Deferred day-1 profit or loss related to financial assets available for sale is released into *Other comprehensive income* when pricing of equivalent products or the underlying parameters become observable and is released into *Other income* when the assets are sold.

Deferred day-1 profit or loss

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Balance at the beginning of the year	421	480	486
Profit / (loss) deferred on new transactions	254	268	344
(Profit) / loss recognized in the income statement	(290)	(321)	(384)
(Profit) / loss recognized in other comprehensive income	(23)		
Foreign currency translation	9	(6)	35
Balance at the end of the year	371	421	480

Note 22 Fair value measurement (continued)

Own credit

In addition to considering the valuation of the derivative risk component, the valuation of financial liabilities designated at fair value also requires consideration of the funded component and specifically the own credit component of fair value. Own credit risk is reflected in the valuation of UBS AG's fair value option liabilities where this component is considered relevant for valuation purposes by UBS AG's counterparties and other market participants. However, own credit risk is not reflected in the valuation of UBS AG's liabilities that are fully collateralized or for other obligations for which it is established market practice not to include an own credit component.

The own credit presentation requirements of IFRS 9, *Financial Instruments,* were adopted as of 1 January 2016. From this date onward, changes in the fair value of financial liabilities designated at fair value through profit or loss related to own credit are recognized in *Other comprehensive income* directly within *Retained Earnings.* As UBS AG does not hedge changes in own credit arising on financial liabilities designated at fair value, presenting own credit within *Other comprehensive income* does not create or increase an accounting mismatch in the income statement. The unrealized and any realized own credit recognized in *Other comprehensive income* will not be reclassified to the income statement in future periods. Comparative period information was not restated.

Own credit is estimated using an own credit adjustment curve (OCA), which incorporates observable market data, including market-observed secondary prices for UBS AG senior debt, UBS AG credit default swap (CDS) spreads and senior debt curves of peers. The table below summarizes the effects of own credit adjustments related to financial liabilities designated at fair value. The change in unrealized own credit for the period ended consists of changes in fair value that are attributable to the change in UBS AG's credit spreads, as well as the effect of changes in fair values attributable to factors other than credit spreads, such as redemptions, effects from time decay and changes in interest and other market rates. Realized own credit is recognized when an instrument with an associated unrealized own credit adjustment is repurchased prior to the contractual maturity date. Life-to-date amounts reflect the cumulative unrealized change since initial recognition.

→ **Refer to Note 18 for more information on financial liabilities designated at fair value**

Own credit adjustments on financial liabilities designated at fair value

	For the year ended		
	Included in Other comprehensive income	Included in Net trading income	
CHF million	31.12.16	31.12.15	31.12.14
Recognized during the year:			
Realized gain / (loss)	18		
Unrealized gain / (loss)	(138)	553	292
Total gain / (loss), before tax	(120)		

	As of		
CHF million	31.12.16	31.12.15	31.12.14
Recognized on the balance sheet as of the end of the year:			
Unrealized life-to-date gain / (loss)	141	287	(302)

Note 22 Fair value measurement (continued)

Credit valuation adjustments

In order to measure the fair value of OTC derivative instruments, including funded derivative instruments which are classified as *Financial assets designated at fair value,* credit valuation adjustments (CVA) are necessary to reflect the credit risk of the counterparty inherent in these instruments. This amount represents the estimated fair value of protection required to hedge the counterparty credit risk of such instruments. A CVA is determined for each counterparty, considering all exposures to that counterparty, and is dependent on the expected future value of exposures, default probabilities and recovery rates, applicable collateral or netting arrangements, break clauses and other contractual factors.

Funding valuation adjustments

Funding valuation adjustments (FVA) reflect the costs and benefits of funding associated with uncollateralized and partially collateralized derivative receivables and payables and are calculated as the valuation effect from moving the discounting of the uncollateralized derivative cash flows from LIBOR to OCA using the CVA framework.

An FVA is also applied to collateralized derivative assets in cases where the collateral cannot be sold or repledged.

Debit valuation adjustments

A debit valuation adjustment (DVA) is estimated to incorporate own credit in the valuation of derivatives, effectively consistent with the CVA framework. DVA is determined for each counterparty, considering all exposures with that counterparty and taking into account collateral netting agreements, expected future mark-to-market movements and UBS AG's credit default spreads.

Other valuation adjustments

Instruments that are measured as part of a portfolio of combined long and short positions are valued at mid-market levels to ensure consistent valuation of the long and short component risks. A liquidity valuation adjustment is then made to the overall net long or short exposure to move the fair value to bid or offer as appropriate, reflecting current levels of market liquidity. The bid-offer spreads used in the calculation of this valuation adjustment are obtained from market transactions and other relevant sources and are updated periodically.

Uncertainties associated with the use of model-based valuations are incorporated into the measurement of fair value through the use of model reserves. These reserves reflect the amounts that UBS AG estimates should be deducted from valuations produced directly by models to incorporate uncertainties in the relevant modeling assumptions, in the model and market inputs used, or in the calibration of the model output to adjust for known model deficiencies. In arriving at these estimates, UBS AG considers a range of market practices, including how it believes market participants would assess these uncertainties. Model reserves are reassessed periodically in light of data from market transactions, consensus pricing services and other relevant sources.

Valuation adjustments on financial instruments

	As of	
Life-to-date gain / (loss), CHF million	31.12.16	31.12.15
Credit valuation adjustments[1]	(216)	(309)
Funding valuation adjustments	(106)	(160)
Debit valuation adjustments	5	47
Other valuation adjustments	(713)	(810)
of which: liquidity	*(439)*	*(491)*
of which: model uncertainty	*(274)*	*(319)*

1 Amounts do not include reserves against defaulted counterparties.

Note 22 Fair value measurement (continued)

e) Transfers between Level 1 and Level 2

The amounts provided below reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets totaling approximately CHF 0.2 billion, which were mainly comprised of financial assets held for trading, and liabilities totaling approximately CHF 0.1 billion, which were primarily comprised of financial liabilities held for trading, were transferred from Level 2 to Level 1 during 2016, generally due to increased levels of trading activity observed within the market.

Assets totaling approximately CHF 0.4 billion, which were mainly comprised of financial assets available for sale, largely corporate and municipal bonds, and financial assets held for trading, predominantly equity instruments and corporate and municipal bonds, were transferred from Level 1 to Level 2 during 2016, generally due to diminished levels of trading activity observed within the market. Transfers of financial liabilities from Level 1 to Level 2 during 2016 were not significant.

f) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs.

The range of values represents the highest and lowest level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Further, the ranges of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				31.12.16			31.12.15			
CHF billion	31.12.16	31.12.15	31.12.16	31.12.15	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets held for trading / Trading portfolio liabilities, Financial assets / liabilities designated at fair value and Financial assets available for sale													
Corporate and municipal bonds	*0.6*	*0.7*	*0.0*	*0.1*	Relative value to market comparable	Bond price equivalent	0	128	88	0	134	94	points
Traded loans, loans designated at fair value, loan commitments and guarantees	*2.0*	*2.6*	*0.0*	*0.0*	Relative value to market comparable	Loan price equivalent	39	103	94	65	100	93	points
					Discounted expected cash flows	Credit spread	71	554		30	252		basis points
					Market comparable and securitization model	Discount margin	0	16	2	1	14	2	%
Equity instruments[3]	*0.4*	*0.6*	*0.1*	*0.0*	Relative value to market comparable	Price							
Structured (reverse) repurchase agreements	*0.6*	*1.5*	*0.3*	*0.6*	Discounted expected cash flows	Funding spread	15	195		18	183		basis points
Issued and OTC debt instruments[4]			*10.7*	*10.1*									

Note 22 Fair value measurement (continued)

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities (continued)

	Fair value						Range of inputs						
	Assets		Liabilities				31.12.16			31.12.15			
CHF billion	31.12.16	31.12.15	31.12.16	31.12.15	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Replacement values													
Interest rate contracts	*0.3*	*0.1*	*0.5*	*0.3*	Option model	Volatility of interest rates	26	176		16	130		%
						Rate-to-rate correlation	84	94		84	94		%
						Intra-curve correlation	36	94		36	94		%
					Discounted expected cash flows	Constant prepayment rate[5]				0	3		%
Credit derivative contracts	*1.3*	*1.3*	*1.5*	*1.3*	Discounted expected cash flow based on modeled defaults and recoveries	Credit spreads	0	791		1	1,163		basis points
						Upfront price points	1	13		8	25		%
						Recovery rates	0	50		0	95		%
						Credit index correlation	10	85		10	85		%
						Discount margin	(1)	68		1	72		%
						Credit pair correlation	59	100		57	94		%
					Discounted cash flow projection on underlying bond	Constant prepayment rate	1	15		0	15		%
						Constant default rate	1	8		0	9		%
						Loss severity	40	100		0	100		%
						Discount margin	0	11		1	15		%
						Bond price equivalent	3	100		0	104		points
Equity / index contracts	*0.7*	*1.0*	*1.9*	*1.4*	Option model	Equity dividend yields	0	15		0	57		%
						Volatility of equity stocks, equity and other indices	0	150		0	143		%
						Equity-to-FX correlation	(45)	82		(44)	82		%
						Equity-to-equity correlation	12	98		3	99		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par. For example, 100 points would be 100% of par. 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 The range of inputs is not disclosed due to the dispersion of possible values given the diverse nature of the investments. 4 Valuation techniques, significant unobservable inputs and the respective input ranges for issued debt instruments and OTC debt instruments are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table. 5 The range of inputs is not disclosed as of 31 December 2016 because this unobservable input parameter was not significant to the respective valuation technique as of that date.

Significant unobservable inputs in Level 3 positions

This section discusses the significant unobservable inputs used in the valuation of Level 3 instruments and assesses the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown. Relationships between observable and unobservable inputs have not been included in the summary below.

Bond price equivalent

Where market prices are not available for a bond, fair value is measured by comparison with observable pricing data from similar instruments. Factors considered when selecting comparable instruments include credit quality, maturity and industry of the issuer. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield (either as an outright yield or as a spread to LIBOR). Bond prices are expressed as points of the nominal, where 100 represents a fair value equal to the nominal value (i.e., par).

For corporate and municipal bonds, the range represents the range of prices from reference issuances used in determining fair value. Bonds priced at 0 are distressed to the point that no recovery is expected, while prices significantly in excess of 100 or par relate to inflation-linked or structured issuances that pay a coupon in excess of the market benchmark as of the measurement date.

For credit derivatives, the bond price range represents the range of prices used for reference instruments that are typically converted to an equivalent yield or credit spread as part of the valuation process.

Loan price equivalent

Where market prices are not available for a traded loan, fair value is measured by comparison with observable pricing data for similar instruments. Factors considered when selecting comparable instruments include industry segment, collateral quality, maturity and issuer-specific covenants. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield. The range represents the range of prices derived from reference issuances of a similar credit quality used in measuring fair value for loans classified as Level 3. Loans priced at 0 are distressed to the point that no recovery is expected, while a current price of 100 represents a loan that is expected to be repaid in full.

Credit spread

Valuation models for many credit derivatives require an input for the credit spread, which is a reflection of the credit quality of the associated referenced underlying. The credit spread of a particular security is quoted in relation to the yield on a benchmark security or reference rate, typically either US Treasury or LIBOR, and is generally expressed in terms of basis points. An increase / (decrease) in credit spread will increase / (decrease) the value of credit protection offered by CDS and other credit derivative products. The income statement effect from such changes depends on the nature and direction of the positions held. Credit spreads may be negative where the asset is more creditworthy than the benchmark against which the spread is calculated. A wider credit spread represents decreasing creditworthiness. The ranges represents a diverse set of underlyings, with the lower end of the range representing credits of the highest quality (e.g., approximating the risk of LIBOR) and the upper end of the range representing greater levels of credit risk.

Discount margin (DM)

The DM spread represents the discount rates used to present value cash flows of an asset to reflect the market return required for uncertainty in the estimated cash flows. DM spreads are a rate or rates applied on top of a floating index (e.g., LIBOR) to discount expected cash flows. Generally, a decrease / (increase) in the unobservable input in isolation would result in a significantly higher / (lower) fair value.

The different ranges represent the different discount rates across loans and credit derivatives. The high end of the range relates to securities that are priced very low within the market relative to the expected cash flow schedule. This indicates that the market is pricing an increased risk of credit loss into the security that is greater than what is being captured by the expected cash flow generation process. The low ends of the ranges are typical of funding rates on better quality instruments.

Funding spread

Structured financing transactions are valued using synthetic funding curves that best represent the assets that are pledged as collateral for the transactions. They are not representative of where UBS AG can fund itself on an unsecured basis, but provide an estimate of where UBS AG can source and deploy secured funding with counterparties for a given type of collateral. The funding spreads are expressed in terms of basis points over or under LIBOR, and if funding spreads widen, this increases the effect of discounting.

A small proportion of structured debt instruments and non-structured fixed-rate bonds within financial liabilities designated at fair value had an exposure to funding spreads that was longer in duration than the actively traded market.

Note 22 Fair value measurement (continued)

Volatility

Volatility measures the variability of future prices for a particular instrument and is generally expressed as a percentage, where a higher number reflects a more volatile instrument for which future price movements are more likely to occur. The minimum level of volatility is 0% and there is no theoretical maximum. Volatility is a key input into option models, where it is used to derive a probability-based distribution of future prices for the underlying instrument. The effect of volatility on individual positions within the portfolio is driven primarily by whether the option contract is a long or short position. In most cases, the fair value of an option increases as a result of an increase in volatility and is reduced by a decrease in volatility. Generally, volatility used in the measurement of fair value is derived from active market option prices (referred to as implied volatility). A key feature of implied volatility is the volatility "smile" or "skew," which represents the effect of pricing options of different option strikes at different implied volatility levels.

Correlation

Correlation measures the inter-relationship between the movements of two variables. It is expressed as a percentage between –100% and +100%, where +100% represents perfectly correlated variables (meaning a movement of one variable is associated with a movement of the other variable in the same direction), and –100% implies the variables are inversely correlated (meaning a movement of one variable is associated with a movement of the other variable in the opposite direction). The effect of correlation on the measurement of fair value depends on the specific terms of the instruments being valued, due to the range of different payoff features within such instruments.

Rate-to-rate correlation is the correlation between interest rates of two separate currencies. Intra-curve correlation represents the correlation between different tenor points of the same yield curve. Credit index correlation reflects the implied correlation derived from different indices across different parts of the benchmark index capital structure. The input is particularly important for bespoke index tranches. Credit pair correlation is particularly important for first to default credit structures. Equity-to-FX correlation is important for equity options based on a currency different than the currency of the underlying stock. Equity-to-equity correlation is particularly important for complex options that incorporate, in some manner, different equities in the projected payoff. The closer the correlation is to 100%, the more related one equity is to another. For example, equities with a very high correlation could be from different parts of the same corporate structure.

Constant prepayment rate

A prepayment rate represents the amount of unscheduled principal repayment for a pool of loans. The prepayment estimate is based on a number of factors, such as historical prepayment rates for repaid and existing loans with similar characteristics and the future economic outlook, considering factors including, but not limited to, future interest rates. In general, a significant increase / (decrease) in this unobservable input in isolation would result in a significantly higher / (lower) fair value for bonds trading at a discount. For bonds trading at a premium the reverse would apply, with a decrease in fair value when the constant prepayment rate increases. However, in certain cases the effect of a change in prepayment speed on instrument price is more complicated and depends on both the precise terms of the securitization and the position of the instrument within the securitization capital structure.

The range represents the input assumption for credit derivatives on asset-backed securities. Securities with an input of 0% typically reflect no current prepayment behavior with respect to the underlying collateral, and with no expectation of this changing in the immediate future, while the high range relates to securities that are currently experiencing high prepayments. Different classes of asset-backed securities typically show different ranges of prepayment characteristics depending on a combination of factors, including the borrowers' ability to refinance, prevailing refinancing rates, and the quality or characteristics of the underlying loan collateral pools.

Upfront price points

These are a component in the price quotation of credit derivative contracts, whereby the overall fair value price level is split between the credit spread and a component that is quoted and settled upfront on transacting a new contract. This latter component is referred to as upfront price points and represents the difference between the credit spread paid as protection premium on a current contract versus a small number of standard contracts defined by the market. Distressed credit names frequently trade and quote CDS protection only in upfront points rather than as a running credit spread. An increase / (decrease) in upfront points will increase / (decrease) the value of credit protection offered by CDS and other credit derivative products. The effect of increases or decreases in upfront price points depends on the nature and direction of the positions held. Upfront price points may be negative where a contract is quoting for a narrower premium than the market standard, but are generally positive, reflecting an increase in credit premium required by the market as creditworthiness deteriorates.

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Loss severity / recovery rate

The projected loss severity / recovery rate reflects the estimated loss that will be realized given expected defaults. Loss severity is generally applied to collateral within asset-backed securities while the recovery rate is the analogous pricing input for corporate or sovereign credits. Recovery is the reverse of loss severity, so a 100% recovery rate is the equivalent of a 0% loss severity. Increases in loss severity levels / decreases in recovery rates will result in lower expected cash flows into the structure upon the default of the instruments. In general, a significant decrease / (increase) in the loss severity in isolation would result in significantly higher / (lower) fair value for the respective asset-backed securities. The effect of a change in recovery rate on a credit derivative position will depend on whether credit protection has been bought or sold.

Loss severity is ultimately driven by the value recoverable from collateral held after foreclosure occurs relative to the loan principal and possibly unpaid interest accrued at that point. For credit derivatives, the loss severity range applies to derivatives on asset-backed securities. The recovery rate range represents the range of expected recovery levels on credit derivative contracts within the Level 3 portfolio.

The volatility of interest rates reflects the range of unobservable volatilities across different currencies and related underlying interest rate levels. Volatilities of low interest rates tend to be much higher than volatilities of high interest rates. In addition, different currencies may have significantly different implied volatilities. The volatility of equity stocks, equity and other indices reflects the range of underlying stock volatilities.

Constant default rate (CDR)

The CDR represents the percentage of outstanding principal balances in the pool that are projected to default and liquidate and is the annualized rate of default for a group of mortgages or loans. The CDR estimate is based on a number of factors, such as collateral delinquency rates in the pool and the future economic outlook. In general, a significant increase / (decrease) in this unobservable input in isolation would result in significantly lower / (higher) cash flows for the deal (and thus lower / (higher) valuations). However, different instruments within the capital structure can react differently to changes in the CDR. Generally, subordinated bonds will decrease in value as CDR increases, but for well protected senior bonds an increase in CDR may cause an increase in price. In addition, the presence of a guarantor wrap on the collateral pool of a security may result in notes at the junior end of the capital structure experiencing a price increase with an increase in the default rate.

The range represents the expected default percentage across the individual instruments' underlying collateral pools.

Equity dividend yields

The derivation of a forward price for an individual stock or index is important for measuring fair value for forward or swap contracts and for measuring fair value using option pricing models. The relationship between the current stock price and the forward price is based on a combination of expected future dividend levels and payment timings, and, to a lesser extent, the relevant funding rates applicable to the stock in question. Dividend yields are generally expressed as an annualized percentage of the share price with the lowest limit of 0% representing a stock that is not expected to pay any dividend. The dividend yield and timing represents the most significant parameter in determining fair value for instruments that are sensitive to an equity forward price.

Note 22 Fair value measurement (continued)

g) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and do not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Further, direct inter-relationships between the Level 3 parameters discussed below are not a significant element of the valuation uncertainty.

Sensitivity data are estimated using a number of techniques, including the estimation of price dispersion among different market participants, variation in modeling approaches and reasonably possible changes to assumptions used within the fair value measurement process. The sensitivity ranges are not always symmetrical around the fair values as the inputs used in valuations are not always precisely in the middle of the favorable and unfavorable range.

Sensitivity data are determined at a product or parameter level and then aggregated assuming no diversification benefit. The calculated sensitivity is applied to both the outright position and any related Level 3 hedge. The main interdependencies across different Level 3 products to a single unobservable input parameter have been included in the basis of netting exposures within the calculation. Aggregation without allowing for diversification involves the simple summation of individual results with the total sensitivity, therefore representing the effect of all unobservable inputs which, if moved to a reasonably possible favorable or unfavorable level at the same time, would result in a significant change in the valuation. Diversification would incorporate estimated correlations across different sensitivity results and, as such, would result in an overall sensitivity that would be less than the sum of the individual component sensitivities. UBS AG believes that, while there are diversification benefits within the portfolios representing these sensitivity numbers, they are not significant to this analysis.

Sensitivity of fair value measurements to changes in unobservable input assumptions

	31.12.16		31.12.15	
CHF million	Favorable changes[1]	Unfavorable changes[1]	Favorable changes[1]	Unfavorable changes[1]
Corporate and municipal bonds	34	(39)	24	(25)
Traded loans, loans designated at fair value, loan commitments and guarantees	82	(10)	88	(28)
Equity instruments	67	(47)	166	(74)
Interest rate derivative contracts, net	41	(42)	107	(67)
Credit derivative contracts, net	131	(183)	174	(196)
Foreign exchange derivative contracts, net	17	(8)	33	(28)
Equity / index derivative contracts, net	63	(63)	61	(57)
Issued debt instruments	96	(93)	136	(146)
Other	29	(31)	20	(20)
Total	560	(517)	809	(640)

1 Of the total favorable changes, CHF 75 million as of 31 December 2016 (31 December 2015: CHF 164 million) related to financial assets available for sale. Of the total unfavorable changes, CHF 55 million as of 31 December 2016 (31 December 2015: CHF 71 million) related to financial assets available for sale.

Note 22 Fair value measurement (continued)

h) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into and out of Level 3 totaled CHF 3.5 billion and CHF 0.8 billion, respectively. Transfers into Level 3 were primarily comprised of traded loans and interest rate contracts, due to decreased observability of the respective credit spread and rates volatility inputs. Transfers out of Level 3 were primarily comprised of traded loans and equity / index contracts, reflecting increased observability of the respective credit spread and equity volatility inputs.

Liabilities transferred into and out of Level 3 totaled CHF 2.2 billion and CHF 3.5 billion, respectively. Transfers into Level 3 were primarily comprised of equity-linked issued debt instruments and interest rate contracts, due to decreased observability of the respective equity and rates volatility inputs used to determine the fair value of the options embedded in these structures. Transfers out of Level 3 were primarily comprised of equity-linked issued debt instruments and fixed-rate issued debt instruments resulting from changes in the availability of the observable equity and rates volatility inputs used to determine the fair value of the options embedded in these structures.

Note 22 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2014	Total gains / losses included in comprehensive income: Net interest income, net trading income and other income	Total gains / losses included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Total gains / losses included in comprehensive income: Other comprehensive income	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation
Financial assets held for trading	**3.5**	**(0.2)**	***(0.4)***		**0.7**	**(7.6)**	**5.4**	**0.0**	**0.9**	**(0.5)**	**(0.1)**
of which:											
Corporate and municipal bonds	*1.4*	*0.0*	*0.0*		*0.5*	*(1.0)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*(0.1)*
Loans	*1.1*	*(0.1)*	*(0.3)*		*0.1*	*(5.5)*	*5.4*	*0.0*	*0.2*	*(0.3)*	*0.0*
Asset-backed securities	*0.6*	*0.0*	*0.0*		*0.1*	*(0.6)*	*0.0*	*0.0*	*0.2*	*(0.1)*	*0.0*
Other	*0.5*	*(0.1)*	*(0.1)*		*0.1*	*(0.5)*	*0.0*	*0.0*	*0.4*	*0.0*	*0.0*
Financial assets designated at fair value	**3.5**	**0.0**	***0.0***		**0.0**	**0.0**	**0.8**	**(1.3)**	**0.8**	**(0.4)**	**(0.1)**
of which:											
Loans (including structured loans)	*1.0*	*(0.1)*	*(0.1)*		*0.0*	*0.0*	*0.7*	*(0.2)*	*0.8*	*(0.4)*	*0.0*
Structured reverse repurchase and securities borrowing agreements	*2.4*	*0.1*	*0.1*		*0.0*	*0.0*	*0.1*	*(1.0)*	*0.0*	*0.0*	*(0.1)*
Other	*0.1*	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Financial assets available for sale	**0.6**	**0.0**	***0.0***	**0.0**	**0.1**	**(0.1)**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Positive replacement values	**4.4**	**(0.4)**	***(0.1)***		**0.0**	**(0.1)**	**1.7**	**(2.9)**	**0.7**	**(0.5)**	**(0.1)**
of which:											
Credit derivative contracts	*1.7*	*(0.1)*	*0.2*		*0.0*	*0.0*	*0.9*	*(1.1)*	*0.1*	*(0.1)*	*(0.1)*
Foreign exchange contracts	*0.6*	*(0.1)*	*0.0*		*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*
Equity / index contracts	*1.9*	*0.0*	*(0.3)*		*0.0*	*(0.1)*	*0.7*	*(1.4)*	*0.2*	*(0.3)*	*0.0*
Other	*0.3*	*(0.1)*	*(0.1)*		*0.0*	*0.0*	*0.0*	*(0.3)*	*0.4*	*(0.1)*	*0.0*
Negative replacement values	**5.0**	**(0.4)**	***0.0***		**0.0**	**0.0**	**1.0**	**(2.2)**	**0.5**	**(0.5)**	**(0.1)**
of which:											
Credit derivative contracts	*1.7*	*0.3*	*0.6*		*0.0*	*0.0*	*0.0*	*(0.9)*	*0.3*	*(0.1)*	*0.0*
Foreign exchange contracts	*0.3*	*0.0*	*(0.1)*		*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*
Equity / index contracts	*2.4*	*(0.4)*	*(0.5)*		*0.0*	*0.0*	*0.9*	*(1.2)*	*0.1*	*(0.4)*	*(0.1)*
Other	*0.6*	*(0.2)*	*(0.1)*		*0.0*	*0.0*	*0.1*	*0.0*	*0.1*	*0.0*	*(0.1)*
Financial liabilities designated at fair value	**11.9**	**0.6**	***0.0***		**0.0**	**0.0**	**6.1**	**(6.7)**	**1.3**	**(2.2)**	**(0.3)**
of which:											
Issued debt instruments	*9.5*	*0.4*	*0.1*		*0.0*	*0.0*	*4.9*	*(4.4)*	*1.3*	*(2.2)*	*(0.2)*
Over-the-counter debt instruments	*1.5*	*0.2*	*(0.1)*		*0.0*	*0.0*	*1.2*	*(2.0)*	*0.0*	*0.0*	*(0.1)*
Structured repurchase agreements	*0.9*	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*(0.3)*	*0.0*	*0.0*	*0.0*

1 Total Level 3 assets as of 31 December 2016 were CHF 6.9 billion (31 December 2015: CHF 9.0 billion). Total Level 3 liabilities as of 31 December 2016 were CHF 15.1 billion (31 December 2015: CHF 14.1 billion).

	Total gains / losses included in comprehensive income										
Balance as of 31 December 2015	Net interest income, net trading income and other income	*of which: related to Level 3 instruments held at the end of the reporting period*	Other comprehensive income	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 31 December 2016[1]
2.1	0.1	*0.0*		0.9	(6.8)	4.1	0.0	1.7	(0.3)	(0.1)	1.7
0.7	*0.2*	*0.1*		*0.6*	*(0.8)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*(0.1)*	*0.6*
0.8	*(0.1)*	*(0.1)*		*0.1*	*(5.2)*	*4.1*	*0.0*	*1.1*	*(0.2)*	*0.0*	*0.7*
0.2	*0.0*	*0.0*		*0.0*	*(0.1)*	*0.0*	*0.0*	*0.2*	*0.0*	*0.0*	*0.2*
0.4	*0.0*	*0.0*		*0.2*	*(0.7)*	*0.0*	*0.0*	*0.4*	*0.0*	*0.0*	*0.2*
3.3	(0.4)	*(0.1)*		0.1	0.0	0.7	(1.9)	0.5	(0.1)	0.0	2.1
1.7	*(0.4)*	*(0.1)*		*0.0*	*0.0*	*0.6*	*(1.0)*	*0.4*	*(0.1)*	*0.0*	*1.2*
1.5	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*(0.9)*	*0.0*	*0.0*	*0.0*	*0.6*
0.1	*0.0*	*0.0*		*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.2*
0.7	0.0	*0.0*	0.0	0.1	(0.1)	0.0	0.0	0.0	(0.1)	0.0	0.5
2.9	(0.4)	*(0.5)*		0.0	0.0	1.0	(1.9)	1.3	(0.4)	0.0	2.5
1.3	*(0.2)*	*(0.1)*		*0.0*	*0.0*	*0.6*	*(0.7)*	*0.4*	*(0.1)*	*0.0*	*1.3*
0.5	*0.0*	*0.0*		*0.0*	*0.0*	*0.1*	*(0.2)*	*0.0*	*(0.1)*	*0.0*	*0.2*
1.0	*(0.1)*	*0.0*		*0.0*	*0.0*	*0.4*	*(0.6)*	*0.2*	*(0.2)*	*0.0*	*0.7*
0.1	*(0.1)*	*(0.2)*		*0.0*	*0.0*	*0.0*	*(0.4)*	*0.7*	*0.0*	*0.0*	*0.3*
3.3	0.6	*0.5*		0.0	0.0	1.5	(2.1)	1.2	(0.6)	0.0	4.0
1.3	*0.5*	*0.6*		*0.0*	*0.0*	*0.2*	*(0.7)*	*0.3*	*(0.1)*	*0.0*	*1.5*
0.2	*0.0*	*0.0*		*0.0*	*0.0*	*0.0*	*(0.2)*	*0.1*	*0.0*	*0.0*	*0.1*
1.4	*0.3*	*0.1*		*0.0*	*0.0*	*1.0*	*(0.8)*	*0.2*	*(0.3)*	*0.0*	*1.9*
0.3	*(0.2)*	*(0.1)*		*0.0*	*0.0*	*0.2*	*(0.4)*	*0.7*	*(0.1)*	*0.0*	*0.5*
10.7	1.0	*0.6*		0.0	0.0	5.0	(3.5)	0.9	(2.9)	(0.1)	11.0
9.3	*0.9*	*0.6*		*0.0*	*0.0*	*4.1*	*(2.5)*	*0.8*	*(2.9)*	*(0.1)*	*9.7*
0.8	*0.1*	*0.0*		*0.0*	*0.0*	*0.8*	*(0.6)*	*0.1*	*0.0*	*0.0*	*1.1*
0.6	*0.0*	*0.0*		*0.0*	*0.0*	*0.1*	*(0.4)*	*0.0*	*0.0*	*0.0*	*0.3*

Note 22 Fair value measurement (continued)

i) Financial instruments not measured at fair value

The table below provides the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	31.12.16					31.12.15				
	Carrying value	Fair value				Carrying value	Fair value			
CHF billion	Total	Total	Level 1	Level 2	Level 3	Total	Total	Level 1	Level 2	Level 3
Assets										
Cash and balances with central banks	107.8	107.8	107.8	0.0	0.0	91.3	91.3	91.3	0.0	0.0
Due from banks	13.1	13.1	12.5	0.7	0.0	11.9	11.9	11.4	0.5	0.0
Cash collateral on securities borrowed	15.1	15.1	0.0	15.1	0.0	25.6	25.6	0.0	25.6	0.0
Reverse repurchase agreements	66.2	66.2	0.0	62.5	3.7	67.9	67.9	0.0	65.8	2.1
Cash collateral receivables on derivative instruments	26.7	26.7	0.0	26.7	0.0	23.8	23.8	0.0	23.8	0.0
Loans	307.0	310.4	0.0	170.0	140.4	312.7	314.9	0.0	170.9	143.9
Financial assets held to maturity	9.3	9.1	6.3	2.8	0.0					
Other assets	18.5	18.5	0.0	18.5	0.0	20.1	20.1	0.0	20.1	0.0
Liabilities										
Due to banks	10.6	10.6	8.8	1.9	0.0	11.8	11.8	10.4	1.4	0.0
Cash collateral on securities lent	2.8	2.8	0.0	2.8	0.0	8.0	8.0	0.0	8.0	0.0
Repurchase agreements	6.6	6.6	0.0	6.6	0.0	9.7	9.7	0.0	9.6	0.0
Cash collateral payables on derivative instruments	35.5	35.5	0.0	35.5	0.0	38.3	38.3	0.0	38.3	0.0
Due to customers	450.2	450.6	0.0	450.6	0.0	402.5	402.8	0.0	402.8	0.0
Debt issued	79.0	81.1	0.0	78.5	2.6	82.2	84.4	0.0	78.4	6.0
Other liabilities	39.0	39.0	0.0	39.0	0.0	52.1	52.1	0.0	52.1	0.0

The fair values included in the table above were calculated for disclosure purposes only. The valuation techniques and assumptions described below relate only to the fair value of UBS AG's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another. The following principles were applied when determining fair value estimates for financial instruments not measured at fair value:

- For financial instruments with remaining maturities greater than three months, the fair value was determined from quoted market prices, if available.
- Where quoted market prices were not available, the fair values were estimated by discounting contractual cash flows using current market interest rates or appropriate yield curves for instruments with similar credit risk and maturity. These estimates generally include adjustments for counterparty credit risk or UBS AG's own credit.
- For short-term financial instruments with remaining maturities of three months or less, the carrying amount, which is net of credit loss allowances, is generally considered a reasonable estimate of fair value. The following financial instruments not measured at fair value had remaining maturities of three months or less as of 31 December 2016: 100% of cash and balances with central banks, 95% of amounts due from banks, 100% of cash collateral on securities borrowed, 83% of reverse repurchase agreements, 100% of cash collateral receivables on derivative instruments, 51% of loans, 4% of financial assets held to maturity, 82% of amounts due to banks, 100% of cash collateral on securities lent, 87% of repurchase agreements, 100% of cash collateral payables on derivative instruments, 99% of amounts due to customers and 15% of debt issued.
- The fair value estimates for repurchase and reverse repurchase agreements with variable and fixed interest rates, for all maturities, include the valuation of the interest rate component of these instruments. Credit and debit valuation adjustments have not been included in the valuation due to the short-term nature of these instruments.

Note 23 Restricted and transferred financial assets

This Note provides information on restricted financial assets (Note 23a), transfers of financial assets (Note 23b and 23c) and financial assets that are received as collateral with the right to resell or repledge these assets (Note 23d).

a) Restricted financial assets

Restricted financial assets consist of assets pledged as collateral against an existing liability or contingent liability and other assets that are otherwise explicitly restricted such that they cannot be used to secure funding.

Financial assets are mainly pledged as collateral in securities lending transactions, in repurchase transactions, against loans from Swiss mortgage institutions and in connection with the issuance of covered bonds. UBS AG generally enters into repurchase and securities lending arrangements under standard market agreements, with a market-based haircut applied to the collateral, which results in the associated liabilities having a carrying value below the carrying value of the assets. Pledged mortgage loans serve as collateral for existing liabilities against Swiss central mortgage institutions and for existing covered bond issuances of CHF 14,137 million as of 31 December 2016 (31 December 2015: CHF 16,727 million).

Other restricted financial assets include assets protected under client asset segregation rules, assets held by UBS AG's insurance entities to back related liabilities to the policy holders, assets held in certain jurisdictions to comply with explicit minimum local asset maintenance requirements and assets held in consolidated bankruptcy remote entities such as certain investment funds and other structured entities. The carrying value of the liabilities associated with these other restricted financial assets is generally equal to the carrying value of the assets, with the exception of assets held to comply with local asset maintenance requirements for which the associated liabilities are greater.

UBS AG and its subsidiaries are generally not subject to significant restrictions that would prevent the transfer of dividends and capital within UBS AG. However, certain regulated subsidiaries are required to maintain capital and / or liquidity to comply with local regulations and may be subject to prudential limitations by regulators that limit the amount of funds that they can distribute or otherwise transfer. Non-regulated subsidiaries are generally not subject to such requirements and transfer restrictions. However, restrictions can also be the result of different legal, regulatory, contractual, entity or country-specific arrangements and / or requirements.

Restricted financial assets

CHF million	31.12.16	31.12.15
Financial assets pledged as collateral		
Trading portfolio assets	36,549	57,024
of which: assets pledged as collateral which may be sold or repledged by counterparties	*30,260*	*51,943*
Loans[1]	19,887	24,980
Financial assets designated at fair value	776	0
of which: assets pledged as collateral which may be sold or repledged by counterparties	*636*	*0*
Financial assets available for sale	0	632
of which: assets pledged as collateral which may be sold or repledged by counterparties	*0*	*6*
Total financial assets pledged as collateral[2]	57,213	82,636
Other restricted financial assets		
Due from banks	2,625	3,285
Reverse repurchase agreements	658	1,099
Trading portfolio assets	12,129	24,388
Cash collateral receivables on derivative instruments	4,329	7,104
Loans	958	0
Financial assets available for sale	247	502
Other	5,195	480
Total other restricted financial assets	26,141	36,858
Total financial assets pledged and other restricted financial assets	83,354	119,494

1 All related to mortgage loans that serve as collateral for existing liabilities against Swiss central mortgage institutions and for existing covered bond issuances. Of these pledged mortgage loans, approximately CHF 1.9 billion for 31 December 2016 (31 December 2015: approximately CHF 4.4 billion) could be withdrawn or used for future liabilities or covered bond issuances without breaching existing collateral requirements.
2 Does not include assets placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes (31 December 2016: CHF 4.7 billion; 31 December 2015: CHF 4.9 billion).

Note 23 Restricted and transferred financial assets (continued)

b) Transferred financial assets that are not derecognized in their entirety

The table below presents information for financial assets that have been transferred but are subject to continued recognition in full as well as recognized liabilities associated with those transferred assets.

Transferred financial assets subject to continued recognition in full

CHF million	31.12.16		31.12.15	
	Carrying value of transferred assets	Carrying value of associated liabilities recognized on-balance sheet	Carrying value of transferred assets	Carrying value of associated liabilities recognized on-balance sheet
Trading portfolio assets which may be sold or repledged by counterparties	30,260	11,260	51,943	13,146
relating to securities lending and repurchase agreements in exchange for cash received	*11,410*	*11,260*	*13,406*	*13,146*
relating to securities lending agreements in exchange for securities received	*17,341*	*0*	*37,097*	*0*
relating to other financial asset transfers	*1,509*	*0*	*1,440*	*0*
Financial assets designated at fair value which may be sold or repledged by counterparties	636	630	0	0
Financial assets available for sale which may be sold or repledged by counterparties	0	0	6	6
Total financial assets transferred	30,896	11,890	**51,950**	**13,152**

Transactions in which financial assets are transferred, but continue to be recognized in their entirety on UBS AG's balance sheet include securities lending and repurchase agreements as well as other financial asset transfers. Repurchase and securities lending arrangements are, for the most part, conducted under standard market agreements and are undertaken with counterparties subject to UBS AG's normal credit risk control processes.

→ **Refer to Note 1a item 3e for more information on repurchase agreements and securities lending agreements**

As of 31 December 2016, approximately one-third of the transferred financial assets were trading portfolio assets transferred in exchange for cash, in which case the associated recognized liability represents the amount to be repaid to counterparties. For securities lending and repurchase agreements, a haircut between 0% and 15% is generally applied to the transferred assets, which results in associated liabilities having a carrying value below the carrying value of the transferred assets. The counterparties to the associated liabilities presented in the table above have full recourse to UBS AG.

In securities lending arrangements entered into in exchange for the receipt of other securities as collateral, neither the securities received nor the obligation to return them are recognized on UBS AG's balance sheet, as the risks and rewards of ownership are not transferred to UBS AG. In cases where such financial assets received are subsequently sold or repledged in another transaction, this is not considered to be a transfer of financial assets.

Other financial asset transfers primarily include securities transferred to collateralize derivative transactions, for which the carrying value of associated liabilities is not provided in the table above because those replacement values are managed on a portfolio basis across counterparties and product types, and therefore there is no direct relationship between the specific collateral pledged and the associated liability.

Transferred financial assets that are not subject to derecognition in full, but which remain on the balance sheet to the extent of UBS AG's continuing involvement, were not material as of 31 December 2016 and as of 31 December 2015.

Note 23 Restricted and transferred financial assets (continued)

c) Transferred financial assets that are derecognized in their entirety with continuing involvement

Continuing involvement in a transferred and fully derecognized financial asset may result from contractual provisions in the transfer agreement or from a separate agreement with the counterparty or a third party entered into in connection with the transfer.

Purchased and retained interests in securitization vehicles

In cases where UBS AG has transferred assets into a securitization vehicle and retained or purchased interests therein, UBS AG has a continuing involvement in those transferred assets.

As of 31 December 2016, the majority of the retained continuing involvement related to securitization positions held in the trading portfolio, primarily collateralized debt obligations, US commercial mortgage-backed securities and residential mortgage-backed securities. The fair value and carrying amount of UBS AG's continuing involvement related to these purchased and retained interests was CHF 5 million as of 31 December 2016, and UBS AG recognized gains of CHF 11 million in 2016 related to these positions. As of 31 December 2016, life-to-date losses of CHF 1,173 million have been recorded related to the positions held as of 31 December 2016.

As of 31 December 2015, the fair value and carrying amount of UBS AG's continuing involvement related to purchased and retained interests in securitization vehicles was CHF 15 million, and UBS AG recognized gains of CHF 16 million in 2015 related to these positions. As of 31 December 2015, life-to-date losses of CHF 1,566 million were recorded related to the positions held as of 31 December 2015.

The maximum exposure to loss related to purchased and retained interests in securitization structures was CHF 28 million as of 31 December 2016 compared with CHF 55 million as of 31 December 2015.

Undiscounted cash outflows of CHF 23 million may be payable to the transferee in future periods as a consequence of holding the purchased and retained interests. The earliest period in which payment may be required is less than one month.

d) Off-balance sheet assets received

The table below presents assets received from third parties that can be sold or repledged, that are not recognized on the balance sheet, but that are held as collateral, including amounts that have been sold or repledged.

Off-balance sheet assets received

CHF million	31.12.16	31.12.15
Fair value of assets received which can be sold or repledged	429,327	401,511
received as collateral under reverse repurchase, securities borrowing and lending arrangements, derivative transactions and other transactions[1]	*423,524*	*393,839*
received in unsecured borrowings	*5,803*	*7,672*
Thereof sold or repledged[2]	316,324	286,757
in connection with financing activities	*277,341*	*241,992*
to satisfy commitments under short sale transactions	*22,825*	*29,137*
in connection with derivative and other transactions[1]	*16,158*	*15,628*

1 Includes securities received as initial margin from its clients that UBS AG is required to remit to CCPs, brokers and deposit banks through its exchange-traded derivative (ETD) clearing and execution services. 2 Does not include off-balance sheet securities (31 December 2016: CHF 30.9 billion; 31 December 2015: CHF 47.3 billion) placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes for which there are no associated liabilities or contingent liabilities.

Note 24 Offsetting financial assets and financial liabilities

UBS AG enters into netting agreements with counterparties to manage the credit risks associated primarily with repurchase and reverse repurchase transactions, securities borrowing and lending, and over-the-counter (OTC) and exchange-traded derivatives (ETD). These netting agreements and similar arrangements generally enable the counterparties to set off liabilities against available assets received in the ordinary course of business and / or in the event that the counterparty to the transaction is unable to fulfill its contractual obligations. The right of setoff is a legal right to settle or otherwise eliminate all or a portion of an amount due by applying an amount receivable from the same counterparty against it, thus reducing credit exposure.

The table below provides a summary of financial assets subject to offsetting, enforceable master netting arrangements and similar agreements, as well as financial collateral received to mitigate credit exposures for these financial assets. The gross financial assets of UBS AG that are subject to offsetting, enforceable netting arrangements and similar agreements are reconciled to the net amounts presented within the associated balance sheet line, after giving effect to financial liabilities with the same counterparties that have been offset on the balance sheet and other financial assets not subject to an enforceable netting arrangement or similar agreement. Further, related amounts for financial liabilities and collateral received that are not offset on the balance sheet are shown to arrive at financial assets after consideration of netting potential.

UBS AG engages in a variety of counterparty credit mitigation strategies in addition to netting and collateral arrangements. Therefore, the net amounts presented in the tables on this and on the next page do not purport to represent UBS AG's actual credit exposure.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

	Assets subject to netting arrangements								
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[4]			Assets not subject to netting arrangements[5]	Total assets	
As of 31.12.16, CHF billion	Gross assets before netting	Netting with gross liabilities[3]	Net assets recognized on the balance sheet	Financial liabilities	Collateral received	Assets after consideration of netting potential	Assets recognized on the balance sheet	Total assets after consideration of netting potential	Total assets recognized on the balance sheet
Cash collateral on securities borrowed	4.2	0.0	4.2	(0.9)	(3.3)	0.0	10.9	10.9	15.1
Reverse repurchase agreements	128.4	(71.5)	56.9	(2.1)	(54.8)	0.0	9.3	9.3	66.2
Positive replacement values	152.3	(2.5)	149.8	(113.1)	(26.7)	10.0	8.6	18.6	158.4
Cash collateral receivables on derivative instruments[1]	37.2	(15.1)	22.1	(14.2)	(1.0)	7.0	4.5	11.5	26.7
Financial assets designated at fair value	1.7	0.0	1.7	0.0	(0.6)	1.1	63.3	64.4	65.0
Total assets	323.8	(89.1)	234.7	(130.3)	(86.3)	18.1	96.7	114.8	331.5
As of 31.12.15, CHF billion									
Cash collateral on securities borrowed[2]	8.2	0.0	8.2	(3.1)	(5.2)	0.0	17.3	17.3	25.6
Reverse repurchase agreements	117.9	(62.1)	55.8	(4.4)	(51.4)	0.0	12.1	12.1	67.9
Positive replacement values	161.9	(2.5)	159.3	(123.0)	(25.5)	10.8	8.1	18.9	167.4
Cash collateral receivables on derivative instruments[1]	85.9	(66.3)	19.6	(10.9)	(1.5)	7.2	4.1	11.3	23.8
Financial assets designated at fair value	2.4	0.0	2.4	0.0	(1.8)	0.6	3.4	4.0	5.8
Total assets	376.4	(131.0)	245.4	(141.3)	(85.4)	18.7	45.0	63.7	290.5

1 The net amount of Cash collateral receivables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and ETD that are economically settled on a daily basis. In 2016 UBS AG elected to convert its IRS transacted with the London Clearing House and Japan Securities Clearing Corporation from the previous collateral model to a settlement model. As a result, gross assets and liabilities and corresponding netting decreased by CHF 64 billion as of 31 December 2016, with no change to net assets and liabilities recognized on the balance sheet. Refer to Note 1b for more information. 2 In 2016, balances as of 31 December 2015 were revised to conform to the presentation for balances as of 31 December 2016. This resulted in a CHF 16 billion decrease in Assets subject to netting arrangements with a corresponding increase in Assets not subject to netting arrangements. This change did not impact amounts recognized on the balance sheet since IAS 32 netting was not applied under either presentation as the relevant netting criteria were not met. Furthermore, the level of collateralization for these assets did not change as result of this presentational change. 3 The logic of the table results in amounts presented in the "Netting with gross liabilities" column corresponding directly to the amounts presented in the "Netting with gross assets" column in the liabilities table presented on the following page. 4 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped by the relevant netting agreement so as not to exceed the net amount of financial assets presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 5 Includes assets not subject to enforceable netting arrangements and other out-of-scope items.

Note 24 Offsetting financial assets and financial liabilities (continued)

The table below provides a summary of financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements, as well as financial collateral pledged to mitigate credit exposures for these financial liabilities. The gross financial liabilities of UBS AG that are subject to offsetting, enforceable netting arrangements and similar agreements are reconciled to the net amounts presented within the associated balance sheet line, after giving effect to financial assets with the same counterparties that have been offset on the balance sheet and other financial liabilities not subject to an enforceable netting arrangement or similar agreement. Further, related amounts for financial assets and collateral pledged that are not offset on the balance sheet are shown to arrive at financial liabilities after consideration of netting potential.

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

	Liabilities subject to netting arrangements								
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[3]			Liabilities not subject to netting arrangements[4]	Total liabilities	
As of 31.12.16, CHF billion	Gross liabilities before netting	Netting with gross assets[2]	Net liabilities recognized on the balance sheet	Financial assets	Collateral pledged	Liabilities after consideration of netting potential	Liabilities recognized on the balance sheet	Total liabilities after consideration of netting potential	Total liabilities recognized on the balance sheet
Cash collateral on securities lent	2.6	0.0	2.6	(0.9)	(1.7)	0.0	0.2	0.2	2.8
Repurchase agreements	76.7	(71.5)	5.2	(2.1)	(3.1)	0.0	1.4	1.4	6.6
Negative replacement values	146.3	(2.5)	143.9	(113.1)	(16.6)	14.2	10.0	24.2	153.8
Cash collateral payables on derivative instruments[1]	48.5	(15.1)	33.4	(20.8)	(1.4)	11.2	2.1	13.3	35.5
Financial liabilities designated at fair value	2.8	0.0	2.8	0.0	(0.2)	2.6	52.2	54.8	55.0
Total liabilities	276.9	(89.1)	187.9	(137.0)	(22.9)	28.0	65.9	93.9	253.7
As of 31.12.15, CHF billion									
Cash collateral on securities lent	7.9	0.0	7.9	(3.1)	(4.8)	0.0	0.1	0.1	8.0
Repurchase agreements	69.0	(62.1)	6.9	(4.4)	(2.5)	0.0	2.8	2.8	9.7
Negative replacement values	154.2	(2.5)	151.7	(123.0)	(17.4)	11.3	10.7	22.1	162.4
Cash collateral payables on derivative instruments[1]	99.9	(66.3)	33.6	(19.0)	(2.5)	12.1	4.7	16.8	38.3
Financial liabilities designated at fair value	3.9	0.0	3.9	0.0	(0.7)	3.1	59.1	62.3	63.0
Total liabilities	334.9	(131.0)	203.9	(149.4)	(28.0)	26.5	77.4	104.0	281.4

1 The net amount of Cash collateral payables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and ETD that are economically settled on a daily basis. In 2016 UBS AG elected to convert its IRS transacted with the London Clearing House and Japan Securities Clearing Corporation from the previous collateral model to a settlement model. As a result, gross assets and liabilities and corresponding netting decreased by CHF 64 billion as of 31 December 2016, with no change to net assets and liabilities recognized on the balance sheet. Refer to Note 1b for more information. 2 The logic of the table results in amounts presented in the "Netting with gross assets" column corresponding directly to the amounts presented in the "Netting with gross liabilities" column in the assets table presented on the previous page. 3 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped by the relevant netting agreement so as not to exceed the net amount of financial liabilities presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 4 Includes liabilities not subject to enforceable netting arrangements and other out-of-scope items.

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments

a) Measurement categories of financial assets and liabilities

The table below provides information about the carrying amounts of individual classes of financial instruments within the measurement categories of financial assets and liabilities as defined in IAS 39 *Financial Instruments: Recognition and Measurement*. Only those assets and liabilities that are financial instruments as defined in IAS 32 *Financial Instruments: Presentation* are included in the table below, which causes certain balances to differ from those presented on the balance sheet.

→ **Refer to Note 22 for more information on how the fair value of financial instruments is determined**

Measurement categories of financial assets and financial liabilities

CHF million	31.12.16	31.12.15
Financial assets[1]		
Held for trading		
Trading portfolio assets	92,112	120,405
Due to customers[2]	12	0
Debt issued[2]	38	106
Positive replacement values	158,411	167,435
Total	250,572	287,946
Fair value through profit or loss		
Financial assets designated at fair value	65,024	5,808
Other assets	131	0
Total	65,155	5,808
Financial assets at amortized cost		
Cash and balances with central banks	107,767	91,306
Due from banks	13,125	11,866
Cash collateral on securities borrowed	15,111	25,584
Reverse repurchase agreements	66,246	67,893
Cash collateral receivables on derivative instruments	26,664	23,763
Loans[3]	307,004	312,723
Financial assets held to maturity	9,289	0
Other assets	18,519	20,139
Total	563,727	553,275
Available for sale		
Financial assets available for sale	15,676	62,543
Total financial assets	895,131	909,572
Financial liabilities		
Held for trading		
Trading portfolio liabilities	22,825	29,137
Debt issued[2]	0	236
Negative replacement values	153,810	162,430
Total	176,635	191,803
Fair value through profit or loss		
Financial liabilities designated at fair value	55,017	62,995
Amounts due under unit-linked investment contracts	9,286	15,718
Other liabilities	131	0
Total	64,434	78,713
Financial liabilities at amortized cost		
Due to banks	10,645	11,836
Cash collateral on securities lent	2,818	8,029
Repurchase agreements	6,612	9,653
Cash collateral payables on derivative instruments	35,472	38,282
Due to customers	450,211	402,522
Debt issued	79,036	82,230
Other liabilities	38,992	52,065
Total	623,786	604,617
Total financial liabilities	864,855	875,133

1 As of 31 December 2016, CHF 126 billion of Loans, CHF 0 billion of Due from banks, CHF 1 billion of Reverse repurchase agreements, CHF 10 billion of Financial assets available for sale, CHF 29 billion of Financial assets designated at fair value and CHF 8 billion of Financial assets held to maturity are expected to be recovered or settled after 12 months. As of 31 December 2015, CHF 123 billion of Loans, CHF 0 billion of Due from banks, CHF 1 billion of Reverse repurchase agreements, CHF 30 billion of Financial assets available for sale and CHF 3 billion of Financial assets designated at fair value are expected to be recovered or settled after 12 months. 2 Represents the embedded derivative component of structured financial instruments for which the fair value option has not been applied and that is presented within Due to customers and Debt issued on the balance sheet. 3 Includes finance lease receivables of CHF 1.0 billion as of 31 December 2016 (31 December 2015: CHF 1.1 billion). Refer to Notes 10 and 31 for more information.

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

b) Maximum exposure to credit risk

The tables on the following pages provide UBS AG's maximum exposure to credit risk by class of financial instrument and the respective collateral and other credit enhancements mitigating credit risk for these classes of financial instruments.

The maximum exposure to credit risk includes the carrying amounts of financial instruments recognized on the balance sheet subject to credit risk and the notional amounts for off-balance sheet arrangements. Where information is available, collateral is presented at fair value. For other collateral such as real estate, a reasonable alternative value is used. Credit enhancements, such as credit derivative contracts and guarantees, are included at their notional amounts. Both are capped at the maximum exposure to credit risk for which they serve as security.

Maximum exposure to credit risk

	31.12.16							
		Collateral				Credit enhancements		
CHF billion	Maximum exposure to credit risk	Cash collateral received	Collateral-ized by securities	Secured by real estate	Other collateral[1]	Netting	Credit derivative contracts	Guarantees
Financial assets measured at amortized cost on the balance sheet								
Balances with central banks	107.1							
Due from banks[2]	13.1							
Cash collateral on securities borrowed	15.1		14.8					
Reverse repurchase agreements	66.2		62.5		3.2			
Cash collateral receivables on derivative instruments[3,4]	26.7					15.1		
Loans[5]	307.0	17.9	99.6	158.2	14.6		0.1	1.8
Financial assets held to maturity	9.3							
Other assets	18.6		10.0					
Total financial assets measured at amortized cost	563.2	17.9	186.9	158.2	17.7	15.1	0.1	1.8
Financial assets measured at fair value on the balance sheet								
Positive replacement values[4]	158.4		5.3			134.5		
Trading portfolio assets – debt instruments[6,7]	21.9							
Financial assets designated at fair value – debt instruments[8]	64.8		2.6				0.6	
Financial assets available for sale – debt instruments[8]	14.9							
Total financial assets measured at fair value	260.0	0.0	7.9	0.0	0.0	134.5	0.6	0.0
Total maximum exposure to credit risk reflected on the balance sheet	823.2	17.9	194.9	158.2	17.7	149.6	0.7	1.8
Guarantees[9]	16.7	1.4	2.0	0.2	1.2		0.1	3.0
Loan commitments[9]	54.4	0.1	3.9	1.0	9.5		4.8	2.0
Forward starting transactions, reverse repurchase and securities borrowing agreements	10.2		10.2					
Total maximum exposure to credit risk not reflected on the balance sheet	81.3	1.5	16.1	1.1	10.6	0.0	4.9	5.1
Total	904.5	19.4	210.9	159.4	28.4	149.6	5.7	6.8

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

Maximum exposure to credit risk (continued)

	31.12.15							
		Collateral				Credit enhancements		
CHF billion	Maximum exposure to credit risk	Cash collateral received	Collateral-ized by securities	Secured by real estate	Other collateral[1]	Netting	Credit derivative contracts	Guarantees
Financial assets measured at amortized cost on the balance sheet								
Balances with central banks	89.8							
Due from banks[2]	11.9		0.2					0.1
Cash collateral on securities borrowed	25.6		25.1					
Reverse repurchase agreements	67.9		62.8		4.6			
Cash collateral receivables on derivative instruments[3,4]	23.8					12.4		
Loans	312.7	13.7	101.0	164.4	15.2		0.4	2.9
Other assets	20.1		11.1					
Total financial assets measured at amortized cost	551.7	13.7	200.1	164.4	19.8	12.4	0.4	3.0
Financial assets measured at fair value on the balance sheet								
Positive replacement values[4]	167.4		5.8			142.7		
Trading portfolio assets - debt instruments[6,7]	29.0							
Financial assets designated at fair value – debt instruments[8]	5.6		3.5		0.1		0.6	
Financial assets available for sale – debt instruments[8]	61.7							
Total financial assets measured at fair value	263.7	0.0	9.3	0.0	0.1	142.7	0.6	0.0
Total maximum exposure to credit risk reflected on the balance sheet	815.4	13.7	209.4	164.4	19.8	155.2	1.0	3.0
Guarantees[9]	16.0	1.2	2.1	0.2	1.5		0.1	3.0
Loan commitments[9]	56.1		1.8	1.7	8.7		6.9	2.0
Forward starting transactions, reverse repurchase and securities borrowing agreements	6.6		6.6					
Total maximum exposure to credit risk not reflected on the balance sheet	78.6	1.2	10.5	1.9	10.2	0.0	7.0	5.0
Total	894.1	14.9	220.0	166.3	30.1	155.2	8.1	8.0

1 Includes but not limited to life insurance contracts, inventory, accounts receivable, mortgage loans, patents, and copyrights. 2 Due from banks includes amounts held with third-party banks on behalf of clients. The credit risk associated with these balances may be borne by those clients. 3 Included within Cash collateral receivables on derivative instruments are margin balances due from exchanges or clearing houses. Some of these margin balances reflect amounts transferred on behalf of clients who retain the associated credit risk. 4 The amount shown in the netting column represents the netting potential not recognized on the balance sheet. Refer to Note 24 for more information. 5 In 2016, UBS AG aligned its collateral allocation processes across business divisions with a risk-based approach which prioritizes collateral mainly according to its liquidity profile. This resulted in increases in loans collateralized by cash of CHF 3.3 billion and increases in loans collateralized by securities of CHF 3.1 billion, while loans secured by real estate decreased by CHF 5.2 billion and loans secured by guarantees decreased by CHF 1.2 billion. 6 These positions are generally managed under the market risk framework. For the purpose of this disclosure, collateral and credit enhancements were not considered. 7 Does not include debt instruments held for unit-linked investment contracts and investment fund units. 8 Does not include investment fund units. Financial assets designated at fair value collateralized by securities consisted of structured loans and reverse repurchase and securities borrowing agreements. 9 The amount shown in the "Guarantees" column largely relates to sub-participations. Refer to the "Treasury management" section of this report for more information.

Maximum exposure to credit risk for financial assets designated at fair value

The maximum exposure to credit risk of loans, but not structured loans, designated at fair value is generally mitigated by credit derivatives or similar instruments. As of 31 December 2016, the credit risk of such loans with a total notional amount of CHF 609 million (31 December 2015: CHF 687 million) was mitigated by credit derivatives with a total notional amount of CHF 578 million (31 December 2015: CHF 630 million) and a fair value of negative CHF 7 million (31 December 2015: positive CHF 4 million).

Changes in the fair value of loans designated at fair value attributable to changes in credit risk were not material for the years ended 31 December 2016 and 31 December 2015 and from inception until 31 December 2016 and 31 December 2015.

Similarly, changes in the fair value of credit derivatives mitigating the credit risk of loans designated at fair value were not material for the years ended 31 December 2016 and 31 December 2015 and from inception until 31 December 2016 and 31 December 2015.

→ **Refer to Note 22 for more information on financial assets designated at fair value**

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

c) Financial assets subject to credit risk by rating category

Financial assets subject to credit risk by rating category

CHF billion	31.12.16						
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Defaulted	Total
Balances with central banks	106.2	0.9					107.1
Due from banks	0.6	9.7	2.0	0.5	0.3		13.1
Cash collateral on securities borrowed and reverse repurchase agreements	29.2	24.5	20.1	6.9	0.7		81.4
Positive replacement values	19.6	96.9	34.2	7.4	0.4		158.4
Cash collateral receivables on derivative instruments	6.4	12.2	6.4	1.6	0.2		26.7
Trading portfolio assets – debt instruments[2]	9.0	6.9	2.9	1.7	1.3		21.9
Loans	31.7	127.8	63.2	63.6	19.1	1.6	307.0
Financial assets designated at fair value – debt instruments[3]	48.4	12.6	1.0	1.6	1.3		64.8
Financial assets available for sale - debt instruments[3]	12.7	1.8	0.2	0.1			14.9
Financial assets held to maturity	8.4	0.9					9.3
Other assets	0.1	2.1	6.2	7.7	2.2	0.3	18.6
Guarantees, commitments and forward starting transactions							
Guarantees	2.0	6.4	3.7	3.6	0.7	0.3	16.7
Loan commitments	2.4	19.5	17.1	8.7	6.5	0.1	54.4
Forward starting transactions, reverse repurchase and securities borrowing agreements	0.6	9.4	0.3				10.2
Total	277.4	331.6	157.2	103.5	32.7	2.2	904.5

CHF billion	31.12.15						
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Defaulted	Total
Balances with central banks	87.9	1.3	0.6				89.8
Due from banks	1.3	8.8	1.1	0.6			11.9
Cash collateral on securities borrowed and reverse repurchase agreements	21.7	40.2	20.1	11.2	0.4		93.5
Positive replacement values	20.7	116.9	23.2	5.9	0.7		167.4
Cash collateral receivables on derivative instruments	8.4	10.2	4.7	0.4	0.1		23.8
Trading portfolio assets – debt instruments[2]	14.2	8.6	3.1	1.9	1.2		29.0
Loans	31.9	132.1	68.2	61.4	17.7	1.4	312.7
Financial assets designated at fair value – debt instruments[3]	0.0	0.5	1.0	3.0	0.9	0.1	5.6
Financial assets available for sale - debt instruments[3]	52.4	9.2					61.7
Other assets	0.2	2.2	7.5	8.1	1.7	0.4	20.1
Guarantees, commitments and forward starting transactions							
Guarantees	2.2	7.1	3.6	2.2	0.7	0.3	16.0
Loan commitments	1.8	22.4	19.6	6.1	6.2	0.0	56.1
Forward starting transactions, reverse repurchase and securities borrowing agreements		6.5		0.0			6.6
Total	242.6	366.0	152.8	100.8	29.6	2.2	894.1

1 Refer to the "Internal UBS rating scale and mapping of external ratings" table in the "Risk management and control" section of this report for more information on rating categories. 2 Does not include debt instruments held for unit-linked investment contracts and investment fund units. 3 Does not include investment fund units.

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

d) Maturity analysis of financial liabilities

The contractual maturities for non-derivative and non-trading financial liabilities as of 31 December 2016 are based on the earliest date on which UBS could be contractually required to pay. The total amounts that contractually mature in each time band are also shown for 31 December 2015. Derivative positions and trading liabilities, predominantly made up of short sale transactions, are assigned to the column *Due within 1 month,* as this provides a conservative reflection of the nature of these trading activities. The contractual maturities may extend over significantly longer periods.

Maturity analysis of financial liabilities[1]

CHF billion	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Financial liabilities recognized on-balance sheet[2]						
Due to banks	7.4	1.4	1.8	0.1	0.0	10.7
Cash collateral on securities lent	2.2	0.6				2.8
Repurchase agreements	4.7	1.0	0.7	0.1	0.0	6.6
Trading portfolio liabilities[3], [4]	22.8					22.8
Negative replacement values[3]	153.8					153.8
Cash collateral payables on derivative instruments	35.5					35.5
Due to customers	408.5	13.8	3.3	9.1	20.9	455.6
Financial liabilities designated at fair value[5]	16.8	14.7	11.1	8.4	5.9	57.0
Debt issued	7.8	7.8	23.3	28.2	18.7	85.8
Other liabilities	47.0					47.0
Total 31.12.16	**706.7**	**39.2**	**40.2**	**45.9**	**45.6**	**877.7**
Total 31.12.15	712.5	44.3	36.4	53.0	44.6	890.7
Guarantees, commitments and forward starting transactions[6]						
Loan commitments	54.0	0.2	0.2	0.0		54.4
Guarantees	16.7					16.7
Forward starting transactions						
Reverse repurchase agreements	10.2					10.2
Securities borrowing agreements	0.0					0.0
Total 31.12.16	**81.0**	**0.2**	**0.2**	**0.0**	**0.0**	**81.4**
Total 31.12.15	78.1	0.2	0.2	0.1	0.0	78.7

1 Non-financial liabilities such as deferred income, deferred tax liabilities, provisions and liabilities on employee compensation plans are not included in this analysis. 2 Except for trading portfolio liabilities and negative replacement values (see footnote 3), the amounts presented generally represent undiscounted cash flows of future interest and principal payments. 3 Carrying value is fair value. Management believes that this best represents the cash flows that would have to be paid if these positions had to be settled or closed out. Refer to Note 12 for undiscounted cash flows of derivatives designated in hedge accounting relationships. 4 Contractual maturities of trading portfolio liabilities are: CHF 21.8 billion due within one month (2015: CHF 27.2 billion), CHF 1.0 billion due between one month and one year (2015: CHF 1.2 billion), and CHF 0.1 billion due between 1 and 5 years (2015: CHF 0.8 billion). 5 Future interest payments on variable rate liabilities are determined by reference to the applicable interest rate prevailing as of the reporting date. Future principal payments that are variable are determined by reference to the conditions existing at the reporting date. 6 Comprises the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

e) Reclassification of financial assets

In 2008 and 2009, certain financial assets were reclassified from *Trading portfolio assets* to *Loans*. On their reclassification date, these assets had fair values of CHF 26 billion and CHF 0.6 billion, respectively.

The reclassification of financial assets reflected UBS's change in intent and ability to hold these financial assets for the foreseeable future rather than for trading in the near term. The financial assets were reclassified using their fair value on the date of the reclassification, which became their new cost basis at that date.

As of 31 December 2016, the carrying value of the remaining reclassified financial assets, which were entirely comprised of municipal auction rate securities, was CHF 0.2 billion (31 December 2015: CHF 0.2 billion), which was approximately equal to the fair value of these assets.

The overall effect on operating profit before tax from reclassified financial assets for the year ended 31 December 2016 was a profit of CHF 1 million (2015: CHF 23 million). If the financial assets had not been reclassified, the impact on operating profit before tax for the year ended 31 December 2016 would have been a profit of CHF 10 million.

Note 26 Pension and other post-employment benefit plans

The table below provides information about expenses for pension and other post-employment benefit plans. These expenses are part of *Personnel expenses*.

Income statement – expenses related to pension and other post-employment benefit plans

CHF million	31.12.16	31.12.15	31.12.14
Net periodic expenses for defined benefit plans	435	569	467
of which: related to major pension plans[1]	*412*	*546*	*508*
of which: Swiss plan[2]	*381*	*515*	*458*
of which: UK plan	*(2)*	*18*	*17*
of which: US and German plans	*33*	*12*	*33*
of which: related to post-employment medical and life insurance plans[3]	*4*	*4*	*(36)*
of which: UK plan	*1*	*1*	*2*
of which: US plans	*3*	*2*	*(37)*
of which: related to remaining plans and other expenses[4]	*19*	*19*	*(5)*
Expenses for defined contribution plans[5]	236	239	244
of which: UK plans	*77*	*86*	*91*
of which: US plan	*106*	*100*	*91*
of which: remaining plans	*53*	*53*	*62*
Total pension and other post-employment benefit plan expenses[6]	670	808	711

1 Refer to Note 26a for more information. 2 The reduction in net periodic pension expenses for the Swiss pension plan between 2016 and 2015 related primarily to changes in demographic and financial assumptions. 3 Refer to Note 26b for more information. The US post-employment life insurance policy was terminated in 2014. Only the amounts disclosed for 2014 include expenses with regard to life insurance benefits. 4 Other expenses include differences between actual and estimated performance award accruals and net accrued pension expenses related to restructuring. 5 Refer to Note 26c for more information. 6 Refer to Note 6.

The table below provides information relating to amounts recognized in *Other comprehensive income* for defined benefit plans.

Other comprehensive income – gains / (losses) on defined benefit plans

CHF million	31.12.16	31.12.15	31.12.14
Major pension plans[1]	(837)	339	(1,456)
of which: Swiss plan	*(105)*	*58*	*(1,032)*
of which: UK plan	*(610)*	*317*	*(168)*
of which: US and German plans	*(122)*	*(35)*	*(256)*
Post-employment medical and life insurance plans[2]	(13)	(3)	(5)
of which: UK plan	*(6)*	*6*	*(3)*
of which: US plans	*(7)*	*(9)*	*(2)*
Remaining plans	(26)	(14)	7
Gains / (losses) recognized in other comprehensive income, before tax	(876)	322	(1,454)
Tax (expense) / benefit relating to defined benefit plans recognized in other comprehensive income	52	(19)	247
Gains / (losses) recognized in other comprehensive income, net of tax[3]	(824)	303	(1,208)

1 Refer to Note 26a for more information. 2 Refer to Note 26b for more information. The US post-employment life insurance policy was terminated in 2014. Amounts with regard to life insurance benefits are included only in the year ended on 31 December 2014. 3 Refer to the "Statement of comprehensive income".

Note 26 Pension and other post-employment benefit plans (continued)

UBS AG recognizes assets and liabilities with respect to defined benefit plans within *Other assets* and *Other liabilities*.

As of 31 December 2016 and 31 December 2015, the Swiss pension plan was in a surplus situation. However, a surplus is only recognized on the balance sheet to the extent that it does not exceed the estimated future economic benefit. Since the estimated future economic benefit was zero as of 31 December 2016 and 31 December 2015, no net defined benefit pension asset was recognized on the balance sheet.

The tables below provide information on UBS AG's assets and liabilities with respect to defined benefit plans.

Balance sheet – net defined benefit pension and post-employment asset

CHF million	31.12.16	31.12.15
Major pension plans[1]	0	50
of which: Swiss plan	*0*	*0*
of which: UK plan	*0*	*50*
Total net defined benefit pension and post-employment asset[2]	0	50

1 Refer to Note 26a for more information. 2 Refer to Note 16.

Balance sheet – net defined benefit pension and post-employment liability

CHF million	31.12.16	31.12.15
Major pension plans[1]	1,140	622
of which: Swiss plan	*0*	*0*
of which: UK plan	*529*	*0*
of which: US and German plans[2]	*611*	*622*
Post-employment medical insurance plans[3]	91	84
of which: UK plan	*26*	*25*
of which: US plans	*65*	*59*
Remaining plans	35	30
Total net defined benefit pension and post-employment liability[4]	1,266	736

1 Refer to Note 26a for more information. 2 Of the total liability as of 31 December 2016, CHF 265 million related to US plans and CHF 346 million related to German plans (31 December 2015: CHF 315 million related to US plans and CHF 307 million related to German plans). 3 Refer to Note 26b for more information. 4 Refer to Note 21.

Note 26 Pension and other post-employment benefit plans (continued)

a) Defined benefit pension plans

UBS AG has established defined benefit pension plans for its employees in various jurisdictions, with the major plans located in Switzerland, the UK, the US and Germany.

The overall investment policy and strategy for UBS AG's defined benefit pension plans is guided by the objective of achieving an investment return which, together with contributions, ensures that there will be sufficient assets to pay pension benefits as they fall due while also mitigating various risks. For the plans with assets (i.e., funded plans), the investment strategies are managed under local laws and regulations in each jurisdiction. The asset allocation is determined by the governance body with reference to the prevailing current and expected economic and market conditions and in consideration of specific asset class risk in the risk profile. Within this framework, UBS AG ensures that the fiduciaries consider how the asset investment strategy correlates with the maturity profile of the plan liabilities and the respective potential effect on the funded status of the plans, including potential short-term liquidity requirements.

The defined benefit obligations (DBOs) for all of UBS AG's defined benefit pension plans are directly affected by changes in yields of high-quality corporate bonds quoted in an active market in the currency of the respective pension plan, as the applicable discount rate used to determine the DBO is based on these yields. For the funded plans, the pension assets are invested in a diversified portfolio of financial assets, including real estate, bonds, investment funds and cash across geographic regions to ensure a balance of risk and return. Under IAS 19, volatility arises in each pension plan's net asset / liability position because the fair value of the plan's financial assets is not fully correlated to movements in the value of the plan's DBO. Specific asset-liability matching strategies for each pension plan are independently determined by the responsible governance body. The net asset / liability volatility for each plan is dependent on the specific financial assets chosen by each plan's governance body. For certain pension plans, a liability-driven investment approach is applied to a portion of the plan assets to reduce potential volatility.

Swiss pension plan

The Swiss pension plan covers employees of UBS AG and employees of companies having close economic or financial ties with UBS AG and exceeds the minimum benefit requirements under Swiss pension law.

Contributions to the pension plan are paid by both the employer and the employees. The Swiss pension plan allows employees to choose the level of contributions paid by them. Employee contributions are calculated as a percentage of the contributory salary and are deducted monthly. The percentages deducted from salary depend on age and choice of contribution category and vary between 1% and 13.5% of contributory base salary and between 0% and 9% of contributory variable compensation. Depending on the age of the employee, UBS AG pays a contribution that ranges between 6.5% and 27.5% of contributory base salary and between 3.6% and 9% of contributory variable compensation. UBS AG also pays risk contributions which are used to finance benefits paid out in the event of death and disability, as well as to finance bridging pensions.

The plan benefits include retirement benefits and disability, death and survivor pensions. The pension plan offers to members at the normal retirement age of 64 a choice between a lifetime pension with or without full restitution and a partial or full lump sum payment. Members can draw early retirement benefits starting from the age of 58. Since 2015, employees have the possibility to make additional purchases of benefits to fund early retirement benefits (Plan 58+).

The pension amount payable is a result of the conversion rate applied on the accumulated balance of the individual plan participant's pension account at the retirement date. The accumulated balance of each individual plan participant's pension account is based on credited vested benefits transferred from previous employers, purchases of benefits and the employee and employer contributions that have been made to the pension account of each individual plan participant, as well as the interest accrued on the accumulated balance. The interest rate accrued is defined annually by the Pension Foundation Board.

Although the Swiss pension plan is based on a defined contribution promise under Swiss pension law, it is accounted for as a defined benefit plan under IAS 19, primarily because of the obligation to accrue interest on the pension accounts and the payment of lifetime pension benefits.

The Swiss pension plan is governed by a Pension Foundation Board as required by Swiss pension law. The responsibilities of this board are defined by Swiss pension law and by the plan rules. An actuarial valuation under Swiss pension law is performed regularly. According to Swiss pension law, a temporary limited underfunding is permitted. However, should an underfunded situation occur, the Pension Foundation Board is required to take the necessary measures to ensure that full funding can be expected to be restored within a maximum period of 10 years. If a Swiss pension plan were to become significantly underfunded on a Swiss pension law basis, additional employer and employee contributions could be required. In these situations, the risk is shared between employer and employees, and the employer is not legally obliged to cover more than 50% of the additional contributions required. As of 31 December 2016, the Swiss pension plan had a technical funding ratio under Swiss pension law of 125.4% (31 December 2015: 123.3%).

The investment strategy of the Swiss plan is implemented on the basis of a multi-level investment and risk management process and is in line with Swiss pension law, including the rules and regulations relating to diversification of plan assets. These rules, among others, specify restrictions to the composition of plan assets, e.g., there is a limit of 50% for investments in equities. The investment strategy of the Swiss plan is aligned with the defined risk budget set out by the Pension Foundation Board. The risk budget is determined on the basis of regularly performed asset and liability management analyses. In order to implement the risk budget, the Swiss plan may use direct investments, investment funds and derivatives. To mitigate foreign currency risk, a specific currency hedging strategy is in place. The Pension Foundation Board strives for a medium- and long-term balance between assets and liabilities.

As of 31 December 2016, the Swiss pension plan was in a surplus situation on an International Financial Reporting Standards (IFRS) measurement basis, as the fair value of plan assets exceeded the DBO by CHF 1,749 million (31 December 2015: surplus of CHF 1,283 million). However, a surplus is only recognized on the balance sheet to the extent that it does not exceed the estimated future economic benefit, which equals the difference between the present value of the estimated future net service cost and the present value of the estimated future employer contributions. The maximum future economic benefit is highly variable based on changes in the discount rate. Both as of 31 December 2016 and 31 December 2015, the estimated future economic benefit was zero and hence no net defined benefit asset was recognized on the balance sheet. As of 31 December 2016, the difference between the pension plan surplus and the estimated future economic benefit, i.e., the asset ceiling effect, was CHF 1,749 million (31 December 2015: CHF 1,283 million). CHF 452 million out of the total movement of CHF 466 million was recognized in *Other comprehensive income* and CHF 14 million related to interest expense on the asset ceiling effect was recognized in the income statement. As of 31 December 2015, the total asset ceiling effect of CHF 1,283 million was recognized in *Other comprehensive income*. The employer contributions expected to be made to the Swiss pension plan in 2017 are estimated to be CHF 478 million.

Non-Swiss pension plans

UBS AG locations outside of Switzerland offer various defined benefit pension plans in accordance with local regulations and practices. The non-Swiss locations with major defined benefit pension plans are the UK, the US and Germany. Defined benefit pension plans in other locations are not material to the financial results of UBS AG and hence not separately disclosed.

The non-Swiss plans provide benefits in the event of retirement, death or disability. The level of benefits provided depends on the specific rate of benefit accrual and the level of employee compensation. UBS AG's general principle is to ensure that the plans are adequately funded on the basis of actuarial valuations. Local pension regulations and tax requirements are the primary drivers for determining when contributions are required.

UK pension plan

The UK plan is a career-average revalued earnings scheme, and benefits increase automatically based on UK price inflation. Normal retirement age for participants in the UK plan is 60. The UK defined benefit pension plan participants are no longer accruing benefits for current or future service. Active employees instead participate in the UK defined contribution plan.

The governance responsibility for the UK plan lies jointly with the Pension Trustee Board, which is required under local pension laws, and UBS AG. The employer contributions to the pension fund reflect agreed-upon deficit-funding contributions, which are determined on the basis of the most recent actuarial valuation using assumptions agreed by the Pension Trustee Board and UBS AG. In the event of underfunding, UBS AG and the Pension Trustee Board must agree on a deficit recovery plan within statutory deadlines. In 2016, UBS AG did not make any deficit-funding contributions (2015: CHF 316 million).

The plan assets are invested in a diversified portfolio of financial assets. A liability-driven investment approach is applied, as a portion of the plan assets is invested in inflation-indexed bonds which provide a partial hedge against price inflation. If price inflation increases, the DBO will likely increase more significantly than the change in the fair value of plan assets, which would result in an increase in the net defined benefit liability. Plan rules and local pension legislation cap the level of inflationary increase that can be applied to plan benefits.

As the plan is obligated to provide guaranteed lifetime pension benefits to plan participants upon retirement, increases in life expectancy will result in an increase in the plan's liabilities. The sensitivity to changes in life expectancy is particularly high in the UK plan as the pension benefits are indexed to price inflation.

As of 31 December 2016, the UK plan was in a deficit situation on an IFRS measurement basis as the DBO exceeded the fair value of plan assets by CHF 529 million (31 December 2015: surplus of CHF 50 million).

No employer contributions are currently scheduled to be made to the UK defined benefit pension plan in 2017.

US pension plans

There are two distinct major defined benefit pension plans in the US. Normal retirement age for participants in both US plans is 65. The plans are closed to new entrants, who instead can participate in defined contribution plans.

One of the major defined benefit pension plans is a contribution-based plan in which each participant accrues a percentage of salary in a pension account. The pension account is credited annually with interest based on a rate that is linked to the average yield on one-year US government bonds. For the other major defined benefit pension plan, retirement benefits accrue based on the career-average earnings of each individual plan participant. Upon retirement, the plans allow participants a choice between a lump sum payment and a lifetime pension.

As required under local state pension laws, both plans have fiduciaries who, together with UBS AG, are responsible for the governance of the plans. UBS AG regularly reviews the contribution strategy for these plans. In determining the contribution strategy, UBS AG considers the minimum funding requirements (i.e., 80% funded ratio on a basis determined under local pension regulations) and the cost of any premiums that must be paid to the Pension Benefit Guaranty Corporation for having an underfunded plan. In 2016, the contributions made by UBS AG were CHF 172 million (2015: CHF 50 million).

The plan assets for both plans are invested in a diversified portfolio of financial assets. Each pension plan's fiduciaries are responsible for the investment decisions with respect to the plan assets. A liability-driven investment approach is applied for one of the US plans to support the volatility management in the net asset / liability position. Derivative instruments may also be employed to manage volatility.

In 2015, the US pension plan rules were amended to the effect that former UBS AG employees with vested benefits in the US defined benefit pension plans have the option to receive a lump sum payment (or early annuity payments) instead of a lifetime pension commencing at retirement age. This resulted in a reduction in the DBO of CHF 24 million and a corresponding gain recognized in the income statement in 2015, of which CHF 21 million was recorded in Wealth Management Americas.

The employer contributions expected to be made to the US defined benefit pension plans in 2017 are estimated to be CHF 20 million.

German pension plans

There are two different defined benefit pension plans in Germany, and both are contribution-based plans. No plan assets are set aside to fund these plans, and benefits are directly paid by UBS AG. Normal retirement age for the participants in the German plans is 65. Within the larger of the two pension plans, each participant accrues a percentage of salary in a pension account. The accumulated account balance of the plan participant is credited on an annual basis with guaranteed interest at a rate of 5%. In the other plan, amounts are accrued annually based on employee elections. For this plan, the accumulated account balance is credited on an annual basis with a guaranteed interest rate of 4% for amounts accrued after 2009. Both German plans are regulated under German pension law, under which the responsibility to pay pension benefits when they are due rests entirely with UBS AG. For the German plans, a portion of the pension payments is directly increased in line with price inflation.

The benefits expected to be paid by UBS AG to the participants of the German plans in 2017 are estimated to be CHF 9 million.

Financial information by plan

The table on the following pages provides an analysis of the movement in the net asset / liability recognized on the balance sheet for defined benefit pension plans, as well as an analysis of amounts recognized in net profit and in *Other comprehensive income*.

Note 26 Pension and other post-employment benefit plans (continued)

Defined benefit pension plans

CHF million	Swiss plan		UK plan		US and German plans		Total	
For the year ended	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15
Defined benefit obligation at the beginning of the year	22,636	23,956	3,350	3,949	1,619	1,693	27,605	29,598
Current service cost	471	589	0	0	9	10	480	599
Interest expense	240	270	116	137	62	57	419	463
Plan participant contributions	210	205	0	0	0	0	210	205
Remeasurements	477	(1,231)	922	(441)	125	(8)	1,524	(1,681)
of which: actuarial (gains) / losses due to changes in demographic assumptions	*(659)*	*(1,038)*	*(63)*	*(122)*	*3*	*34*	*(719)*	*(1,125)*
of which: actuarial (gains) / losses due to changes in financial assumptions	*698*	*(237)*	*1,022*	*(201)*	*107*	*(71)*	*1,827*	*(509)*
of which: experience (gains) / losses[1]	*438*	*44*	*(37)*	*(119)*	*15*	*28*	*416*	*(47)*
Past service cost related to plan amendments	0	0	0	0	0	(24)	0	(24)
Curtailments	(96)	(81)	0	0	0	0	(96)	(81)
Benefit payments	(1,074)	(1,071)	(135)	(128)	(98)	(83)	(1,307)	(1,283)
Termination benefits	0	1	0	0	0	0	0	1
Other movements	0	0	0	0	19	0	19	0
Foreign currency translation	0	0	(549)	(166)	20	(26)	(529)	(192)
Defined benefit obligation at the end of the year	22,865	22,636	3,704	3,350	1,755	1,619	28,325	27,605
of which: amounts owing to active members	*10,419*	*10,359*	*290*	*255*	*258*	*267*	*10,967*	*10,881*
of which: amounts owing to deferred members	*0*	*0*	*2,210*	*1,864*	*584*	*523*	*2,794*	*2,388*
of which: amounts owing to retirees	*12,446*	*12,278*	*1,204*	*1,230*	*913*	*829*	*14,563*	*14,336*
Fair value of plan assets at the beginning of the year	23,919	23,931	3,400	3,381	997	1,029	28,316	28,341
Return on plan assets excluding amounts included in interest income	824	109	312	(124)	2	(44)	1,139	(59)
Interest income	258	273	118	118	44	39	420	430
Employer contributions – excluding termination benefits	486	482	0	316	179	57	665	855
Employer contributions – termination benefits	0	1	0	0	0	0	0	1
Plan participant contributions	210	205	0	0	0	0	210	205
Benefit payments	(1,074)	(1,071)	(135)	(128)	(98)	(83)	(1,307)	(1,283)
Administration expenses, taxes and premiums paid	(10)	(10)	0	0	(6)	(8)	(16)	(18)
Foreign currency translation	0	0	(520)	(163)	26	7	(494)	(156)
Fair value of plan assets at the end of the year	24,614	23,919	3,175	3,400	1,144	997	28,934	28,316
Asset ceiling effect at the beginning of the year	1,283	0	0	0	0	0	1,283	0
Interest expense on asset ceiling effect	14	0	0	0	0	0	14	0
Asset ceiling effect excluding interest expense on asset ceiling effect	452	1,283	0	0	0	0	452	1,283
Asset ceiling effect at the end of the year	1,749	1,283	0	0	0	0	1,749	1,283
Net defined benefit asset / (liability)	0	0	(529)	50	(611)	(622)	(1,140)	(572)

Movement in the net asset / (liability) recognized on the balance sheet

Net asset / (liability) recognized on the balance sheet at the beginning of the year	0	(25)	50	(568)	(622)	(664)	(572)	(1,256)
Net periodic expenses	(381)	(515)	2	(18)	(33)	(12)	(412)	(546)
Amounts recognized in other comprehensive income	(105)	58	(610)	317	(122)	(35)	(837)	339
Employer contributions – excluding termination benefits	486	482	0	316	179	57	665	855
Employer contributions – termination benefits	0	1	0	0	0	0	0	1
Other movements	0	0	0	0	(19)	0	(19)	0
Foreign currency translation	0	0	29	3	6	33	35	36
Net asset / (liability) recognized on the balance sheet at the end of the year	0	0	(529)	50	(611)	(622)	(1,140)	(572)

Funded and unfunded plans

Defined benefit obligation from funded plans	22,865	22,636	3,704	3,350	1,316	1,288	27,885	27,274
Defined benefit obligation from unfunded plans	0	0	0	0	440	331	440	331
Plan assets	24,614	23,919	3,175	3,400	1,144	997	28,934	28,316
Surplus / (deficit)	1,749	1,283	(529)	50	(611)	(622)	609	711
Asset ceiling effect	1,749	1,283	0	0	0	0	1,749	1,283
Net defined benefit asset / (liability)	0	0	(529)	50	(611)	(622)	(1,140)	(572)

1 Experience (gains) / losses are a component of actuarial remeasurements of the defined benefit obligation that reflect the effects of differences between the previous actuarial assumptions and what has actually occurred.

Note 26 Pension and other post-employment benefit plans (continued)

Analysis of amounts recognized in net profit

CHF million	Swiss plan		UK plan		US and German plans		Total	
For the year ended	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15
Current service cost	471	589	0	0	9	10	480	599
Interest expense related to defined benefit obligation	240	270	116	137	62	57	419	463
Interest income related to plan assets	(258)	(273)	(118)	(118)	(44)	(39)	(420)	(430)
Interest expense on asset ceiling effect	14	0	0	0	0	0	14	0
Administration expenses, taxes and premiums paid	10	10	0	0	6	8	16	18
Plan amendments	0	0	0	0	0	(24)	0	(24)
Curtailments	(96)	(81)	0	0	0	0	(96)	(81)
Termination benefits	0	1	0	0	0	0	0	1
Net periodic expenses	381	515	(2)	18	33	12	412	546

Analysis of amounts recognized in other comprehensive income (OCI)

CHF million	Swiss plan		UK plan		US and German plans		Total	
For the year ended	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15
Remeasurement of defined benefit obligation	(477)	1,231	(922)	441	(125)	8	(1,524)	1,681
Return on plan assets excluding amounts included in interest income	824	109	312	(124)	2	(44)	1,139	(59)
Asset ceiling effect excluding interest expense on asset ceiling effect	(452)	(1,283)	0	0	0	0	(452)	(1,283)
Total gains / (losses) recognized in other comprehensive income, before tax	(105)	58	(610)	317	(122)	(35)	(837)	339

The table below provides information on the duration of the DBO and the timing for expected benefit payments.

	Swiss plan		UK plan		US and German plans[1]	
	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15
Duration of the defined benefit obligation (in years)	15.1	15.1	22.6	19.7	10.6	11.3
Maturity analysis of benefits expected to be paid						
CHF million						
Benefits expected to be paid within 12 months	1,140	1,146	72	80	103	92
Benefits expected to be paid between 1 and 3 years	2,204	2,218	164	177	213	185
Benefits expected to be paid between 3 and 6 years	3,394	3,403	315	338	328	291
Benefits expected to be paid between 6 and 11 years	5,439	5,526	710	785	562	509
Benefits expected to be paid between 11 and 16 years	5,041	5,173	856	981	514	510
Benefits expected to be paid in more than 16 years	17,162	18,892	6,064	7,348	958	1,172

1 The duration of the defined benefit obligation represents a weighted average across US and German plans.

Note 26 Pension and other post-employment benefit plans (continued)

Actuarial assumptions

The measurement of each pension plan's DBO considers different actuarial assumptions. Changes in those assumptions lead to volatility in the DBO. The following principal actuarial assumptions are applied:

- Discount rate: the discount rate is based on the yield of high-quality corporate bonds quoted in an active market in the currency of the respective pension plan. Consequently, a decrease in the yield of high-quality corporate bonds increases the DBO. Conversely, an increase in the yield of high-quality corporate bonds decreases the DBO.
- Rate of salary increase: an increase in the salary of plan participants generally increases the DBO, specifically for the Swiss and German plans. For the UK plan, as the plan is closed for future service, UBS AG employees no longer accrue future service benefits and thus salary increases have no effect on the DBO. For the US plans, only a small percentage of the total population continues to accrue benefits for future service, therefore the effect of a salary increase on the DBO is minimal.
- Rate of pension increase: for the Swiss plan, there is no automatic indexing of pensions. Any increase would be decided by the Pension Foundation Board. For the US plans, there is also no automatic indexing of pensions. For the UK plan, pensions are automatically indexed to price inflation as per plan rules and local pension legislation. The German plans are also automatically indexed and a portion of the pensions are directly increased by price inflation. An increase in price inflation in the UK and Germany increases the respective plan's DBO.
- Rate of interest credit on retirement savings: the Swiss plan and one of the US plans have retirement saving balances that are increased annually by an interest credit rate. For these plans, an increase in the interest credit rate increases the respective plan's DBO.
- Life expectancy: for most of UBS AG's defined benefit pension plans, the respective plan is obligated to provide guaranteed lifetime pension benefits. The DBO for all plans is calculated using an underlying best estimate of the life expectancy of plan participants. An increase in the life expectancy of plan participants increases the plan's DBO.

The actuarial assumptions used for the pension plans are based on the economic conditions prevailing in the jurisdiction in which they operate.

→ **Refer to Note 1a item 7 for a description of the accounting policy for defined benefit pension plans**

Changes in actuarial assumptions

UBS AG regularly reviews the actuarial assumptions used in calculating its DBO to determine their continuing relevance.

Swiss pension plan

In 2016, UBS AG continued to enhance its methodology for estimating the discount rate by improving the construction of the yield curve from Swiss high-quality corporate bonds. Furthermore, UBS AG refined its approach for estimating the life expectancy, the rate of employee disability and the rate of salary increases. These changes in estimates decreased the DBO of the Swiss pension plan by CHF 319 million, of which changes in demographic assumptions decreased the DBO by CHF 659 million and changes in financial assumptions increased the DBO by CHF 339 million. However, the effect from these changes in estimates was more than offset by experience losses and market-driven changes in the discount rate, resulting in a total upward remeasurement of the Swiss plan DBO of CHF 477 million, which was recognized in *Other comprehensive income*.

In 2015, the effect from an enhancement in methodology for estimating the discount rate and from the refinement of the approach to estimate the rate of salary increases, the rate of interest credit on retirement savings, the employee turnover rate, the rate of employee disabilities and the rate of marriage was a net decrease in the DBO of the Swiss pension plan of CHF 2,055 million, of which CHF 1,038 million related to demographic assumptions and CHF 1,017 million related to financial assumptions. The effect from these changes in estimates was partly offset by market-driven discount rate changes, resulting in an overall downward remeasurement of the Swiss plan DBO of CHF 1,231 million, which was recognized in *Other comprehensive income*.

Non-Swiss pension plans

In both 2016 and 2015, UBS AG also enhanced methodologies and refined approaches used to estimate various actuarial assumptions for its non-Swiss pension plans.

In 2016, these changes in estimates resulted in a total net decrease in the DBO of the UK pension plan of CHF 63 million, all related to demographic assumptions. However, the effect from these changes in estimates was more than offset mainly by market-driven discount rate changes, resulting in a total upward remeasurement of the UK plan DBO of CHF 922 million, which was recognized in *Other comprehensive income*.

In 2015, the changes in estimates resulted in a total net decrease in the DBO of the UK pension plan of CHF 192 million, of which CHF 122 million related to demographic assumptions and CHF 71 million related to financial assumptions. In addition, mainly market-driven discount rate changes reduced the DBO further, resulting in an overall downward remeasurement of the UK plan DBO of CHF 441 million, which was recognized in *Other comprehensive income*.

Note 26 Pension and other post-employment benefit plans (continued)

The tables below show the principal actuarial assumptions used in calculating the DBO at the end of the year.

Principal actuarial assumptions used

	Swiss plan		UK plan		US and German plans[1]	
In %	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15
Discount rate	0.73	1.09	2.69	3.90	3.58	4.01
Rate of salary increase	1.30	1.75	0.00	0.00	2.86	2.89
Rate of pension increase	0.00	0.00	3.18	3.02	1.50	1.50
Rate of interest credit on retirement savings	0.73	1.09	0.00	0.00	1.74	1.48

1 Represents weighted average assumptions across US and German plans.

Mortality tables and life expectancies for major plans

		Life expectancy at age 65 for a male member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.16	31.12.15	31.12.16	31.12.15
Switzerland	BVG 2015 G CMI_2016[1]	21.5	21.5	22.9	23.2
UK	S2PA CMI_2015, with projections	23.7	23.9	25.0	25.6
US	RP2014 WCHA, with MP2016 projection scale[2]	22.9	23.0	24.4	24.5
Germany	Dr. K. Heubeck 2005 G	20.1	20.0	22.8	22.6

		Life expectancy at age 65 for a female member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.16	31.12.15	31.12.16	31.12.15
Switzerland	BVG 2015 G CMI_2016[1]	23.4	24.0	24.9	25.7
UK	S2PA CMI_2015, with projections	25.6	25.8	27.4	28.0
US	RP2014 WCHA, with MP2016 projection scale[2]	24.5	24.6	26.1	26.2
Germany	Dr. K. Heubeck 2005 G	24.2	24.1	26.7	26.6

1 In 2015, the mortality table BVG 2010 G was used. 2 In 2015, the mortality table RP2014 WCHA, with MP2015 projection scale was used.

Sensitivity analysis of significant actuarial assumptions

The table below presents a sensitivity analysis for each significant actuarial assumption, showing how the DBO would have been affected by changes in the relevant actuarial assumption that were reasonably possible at the balance sheet date. Unforeseen circumstances may arise, which could result in variations that are outside the range of alternatives deemed reasonably possible. Caution should be used in extrapolating the sensitivities below to the overall impact on the DBO as the sensitivities may not be linear.

Sensitivity analysis of significant actuarial assumptions[1]

Increase / (decrease) in defined benefit obligation	Swiss plan		UK plan		US and German plans	
CHF million	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15
Discount rate						
Increase by 50 basis points	(1,435)	(1,416)	(388)	(308)	(86)	(84)
Decrease by 50 basis points	1,630	1,609	452	354	94	92
Rate of salary increase						
Increase by 50 basis points	86	82	–[2]	–[2]	1	1
Decrease by 50 basis points	(79)	(86)	–[2]	–[2]	(1)	(1)
Rate of pension increase						
Increase by 50 basis points	1,178	1,163	435	343	6	6
Decrease by 50 basis points	–[3]	–[3]	(377)	(300)	(6)	(5)
Rate of interest credit on retirement savings						
Increase by 50 basis points	264	263	–[4]	–[4]	9	8
Decrease by 50 basis points	(250)	(249)	–[4]	–[4]	(8)	(8)
Life expectancy						
Increase in longevity by one additional year	796	719	136	97	44	42

1 The sensitivity analyses are based on a change in one assumption while holding all other assumptions constant, so that interdependencies between the assumptions are excluded. 2 As the plan is closed for future service, a change in assumption is not applicable. 3 As the assumed rate of pension increase was 0% as of 31 December 2016 and as of 31 December 2015, a downward change in assumption is not applicable. 4 As the plan does not provide interest credits on retirement savings, a change in assumption is not applicable.

Note 26 Pension and other post-employment benefit plans (continued)

Fair value of plan assets

The table below provides information on the composition and fair value of plan assets of the Swiss, the UK and the US pension plans.

Composition and fair value of plan assets

Swiss plan

	31.12.16				31.12.15			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
CHF million	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	869	0	869	4	517	0	517	2
Real estate / property								
Domestic	0	2,689	2,689	11	0	2,647	2,647	11
Investment funds								
Equity								
Domestic	938	0	938	4	699	0	699	3
Foreign	6,558	1,170	7,728	31	6,948	1,085	8,033	34
Bonds[1]								
Domestic, AAA to BBB–	2,222	0	2,222	9	2,112	0	2,112	9
Foreign, AAA to BBB–	5,877	0	5,877	24	6,109	0	6,109	26
Foreign, below BBB–	1,176	0	1,176	5	1,056	0	1,056	4
Real estate								
Foreign	0	42	42	0	0	63	63	0
Other	283	2,776	3,059	12	1,064	1,605	2,669	11
Other investments	0	15	15	0	0	15	15	0
Total	17,923	6,691	24,614	100	18,505	5,414	23,919	100

	31.12.16	31.12.15
Total fair value of plan assets	24,614	23,919
of which:[2]		
Bank accounts at UBS AG	*432*	*517*
UBS AG debt instruments	*5*	*5*
UBS Group AG shares	*47*	*38*
Securities lent to UBS AG[3]	*1,855*	*962*
Property occupied by UBS AG	*83*	*82*
Derivative financial instruments, counterparty UBS AG[3]	*(220)*	*(170)*

1 The bond credit ratings are primarily based on Standard & Poor's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in the Standard & Poor's rating classification. 2 Bank accounts at UBS AG encompass accounts in the name of the Swiss pension fund. The other positions disclosed in the table encompass both direct investments in UBS AG instruments and indirect investments, i.e., those made through funds that the pension fund invests in. 3 Securities lent to UBS AG and derivative financial instruments are presented gross of any collateral. Securities lent to UBS AG were fully covered by collateral as of 31 December 2016 and 31 December 2015. Net of collateral, derivative financial instruments amounted to CHF 76 million as of 31 December 2016 (31 December 2015: negative CHF 90 million).

Note 26 Pension and other post-employment benefit plans (continued)

Composition and fair value of plan assets (continued)

UK plan

	31.12.16				31.12.15			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
CHF million	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	133	0	133	4	426	0	426	13
Bonds[1]								
Domestic, AAA to BBB–	1,131	0	1,131	36	0	0	0	0
Domestic, below BBB–	1	0	1	0	0	0	0	0
Investment funds								
Equity								
Domestic	39	0	39	1	98	0	98	3
Foreign	984	0	984	31	1,080	0	1,080	32
Bonds[1]								
Domestic, AAA to BBB–	500	28	528	17	1,305	0	1,305	38
Domestic, below BBB–	23	0	23	1	53	0	53	2
Foreign, AAA to BBB–	245	0	245	8	189	0	189	6
Foreign, below BBB–	39	0	39	1	31	0	31	1
Real estate								
Domestic	39	72	111	4	46	68	115	3
Other	(35)	111	76	2	(32)	123	91	3
Other investments	(144)	10	(134)	(4)	6	7	13	0
Total fair value of plan assets	2,955	221	3,175	100	3,202	198	3,400	100

1 The bond credit ratings are primarily based on Standard & Poor's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in the Standard & Poor's rating classification.

Note 26 Pension and other post-employment benefit plans (continued)

Composition and fair value of plan assets (continued)

US plans

	31.12.16				31.12.15			
	Fair value			Weighted average plan asset allocation %	Fair value			Weighted average plan asset allocation %
CHF million	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	75	0	75	7	52	0	52	5
Bonds[1]								
Domestic, AAA to BBB–	158	0	158	14	56	0	56	6
Domestic, below BBB–	13	0	13	1	60	0	60	6
Foreign, AAA to BBB–	42	0	42	4	17	0	17	2
Foreign, below BBB–	1	0	1	0	6	0	6	1
Investment funds								
Equity								
Domestic	264	0	264	23	240	0	240	24
Foreign	248	0	248	22	240	0	240	24
Bonds[1]								
Domestic, AAA to BBB–	218	0	218	19	134	0	134	13
Domestic, below BBB–	18	0	18	2	13	0	13	1
Foreign, AAA to BBB–	42	0	42	4	31	0	31	3
Foreign, below BBB–	5	0	5	0	3	0	3	0
Real estate								
Domestic	0	11	11	1	0	12	12	1
Other	19	0	19	2	56	42	98	10
Insurance contracts	0	18	18	2	0	17	17	2
Asset-backed securities	8	0	8	1	14	0	14	1
Other investments	3	0	3	0	5	0	5	0
Total fair value of plan assets	1,115	29	1,144	100	926	70	997	100

1 The bond credit ratings are primarily based on Standard & Poor's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in the Standard & Poor's rating classification.

Note 26 Pension and other post-employment benefit plans (continued)

b) Post-employment medical insurance plans

In the US and the UK, UBS AG offers post-employment medical benefits that contribute to the health care coverage of certain employees and their beneficiaries after retirement.

The UK post-employment medical plan is closed to new entrants. The post-employment medical benefits in the UK and the US cover all types of medical expenses. These plans are not prefunded plans, and costs are recognized as incurred. In the US, the retirees also contribute to the cost of the post-employment medical benefits.

The benefits expected to be paid by UBS AG to the post-employment medical insurance plans in 2017 are estimated to be CHF 6 million.

The table below provides an analysis of the movement in the net asset / liability recognized on the balance sheet for post-employment medical plans, as well as an analysis of amounts recognized in net profit and in *Other comprehensive income*.

Post-employment medical insurance plans

CHF million	UK plan		US plans		Total	
For the year ended	31.12.16	31.12.15	31.12.16	31.12.15	31.12.16	31.12.15
Post-employment benefit obligation at the beginning of the year	25	32	59	53	84	85
Current service cost	0	0	0	0	0	0
Interest expense	1	1	3	2	3	3
Plan participant contributions	0	0	2	2	2	2
Remeasurements	6	(6)	7	9	13	3
of which: actuarial (gains) / losses due to changes in demographic assumptions	*1*	*2*	*(1)*	*2*	*0*	*4*
of which: actuarial (gains) / losses due to changes in financial assumptions	*5*	*(1)*	*1*	*(2)*	*6*	*(3)*
of which: experience (gains) / losses[1]	*0*	*(7)*	*6*	*9*	*6*	*2*
Benefit payments[2]	(1)	(1)	(7)	(8)	(8)	(10)
Foreign currency translation	(4)	(2)	1	1	(3)	(1)
Post-employment benefit obligation at the end of the year	26	25	65	59	91	84
of which: amounts owing to active members	*6*	*5*	*0*	*0*	*6*	*5*
of which: amounts owing to deferred members	*0*	*0*	*0*	*0*	*0*	*0*
of which: amounts owing to retirees	*21*	*20*	*65*	*59*	*86*	*79*
Fair value of plan assets at the end of the year	0	0	0	0	0	0
Net post-employment benefit asset / (liability)	(26)	(25)	(65)	(59)	(91)	(84)
Analysis of amounts recognized in net profit						
Current service cost	0	0	0	0	0	0
Interest expense related to post-employment benefit obligation	1	1	3	2	3	3
Net periodic expenses	1	1	3	2	4	4
Analysis of amounts recognized in other comprehensive income (OCI)						
Remeasurement of post-employment benefit obligation	(6)	6	(7)	(9)	(13)	(3)
Total gains / (losses) recognized in other comprehensive income, before tax	(6)	6	(7)	(9)	(13)	(3)

1 Experience (gains) / losses are a component of actuarial remeasurements of the post-employment benefit obligation that reflect the effects of differences between the previous actuarial assumptions and what has actually occurred. 2 Benefit payments are funded by employer contributions and plan participant contributions.

Note 26 Pension and other post-employment benefit plans (continued)

Actuarial assumptions

The measurement of each medical insurance plan's post-employment benefit obligation considers different actuarial assumptions. On a country-by-country basis, the same discount rate is used for the calculation of the post-employment benefit obligation from medical insurance plans as for the DBO arising from pension plans. Changes in assumptions lead to volatility in the post-employment benefit obligation. The following principal actuarial assumptions are applied:

- Discount rate: similar to defined benefit pension plans, a decrease in the yield of high-quality corporate bonds increases the post-employment benefit obligation. Conversely, an increase in the yield of high-quality corporate bonds decreases the post-employment benefit obligation.
- Average health care cost trend rate: an increase in health care costs generally increases the post-employment benefit obligation.
- Life expectancy: as some plan participants have lifetime benefits under these plans, an increase in life expectancy increases the post-employment benefit obligation.

Changes in actuarial assumptions

UBS AG regularly reviews the actuarial assumptions used in calculating its post-employment benefit obligations to determine their continuing relevance. In 2016 and in 2015, UBS AG enhanced methodologies and refined approaches used to estimate several actuarial assumptions. These improvements in estimates resulted in a net increase in the post-employment benefit obligation.

Principal actuarial assumptions used to determine post-employment benefit obligations at the end of the year were:

Principal actuarial assumptions used[1]

	UK plan		US plans[2]	
In %	31.12.16	31.12.15	31.12.16	31.12.15
Discount rate	2.69	3.90	3.97	4.23
Average health care cost trend rate – initial	5.10	5.10	7.03	6.75
Average health care cost trend rate – ultimate	5.10	5.10	4.50	5.00

1 The assumptions for life expectancies are provided within Note 26a. 2 Represents weighted average assumptions across US plans.

Sensitivity analysis of significant actuarial assumptions

The table below presents a sensitivity analysis for each significant actuarial assumption showing how the post-employment benefit obligation would have been affected by changes in the relevant actuarial assumption that were reasonably possible at the balance sheet date. Unforeseen circumstances may arise, which could result in variations that are outside the range of alternatives deemed reasonably possible. Caution should be used in extrapolating the sensitivities below to the overall impact on the post-employment benefit obligation, as the sensitivities may not be linear.

Sensitivity analysis of significant actuarial assumptions[1]

Increase / (decrease) in post-employment benefit obligation	UK plan		US plans	
CHF million	31.12.16	31.12.15	31.12.16	31.12.15
Discount rate				
Increase by 50 basis points	(2)	(1)	(3)	(3)
Decrease by 50 basis points	2	2	3	3
Average health care cost trend rate				
Increase by 100 basis points	4	3	2	1
Decrease by 100 basis points	(3)	(3)	(1)	(1)
Life expectancy				
Increase in longevity by one additional year	2	2	5	5

1 The sensitivity analyses are based on a change in one assumption while holding all other assumptions constant, so that interdependencies between the assumptions are excluded.

c) Defined contribution plans

UBS AG sponsors a number of defined contribution plans in locations outside Switzerland. The locations with significant defined contribution plans are the US and the UK. Certain plans allow employees to make contributions and earn matching or other contributions from UBS AG. Employer contributions to defined contribution plans are recognized as an expense, which, for the years ended 31 December 2016, 2015 and 2014, amounted to CHF 236 million, CHF 239 million and CHF 244 million, respectively.

Note 26 Pension and other post-employment benefit plans (continued)

d) Related-party disclosure

UBS AG is the principal provider of banking services for the pension fund of UBS AG in Switzerland. In this function, UBS AG is engaged to execute most of the pension fund's banking activities. These activities can include, but are not limited to, trading, securities lending and borrowing and derivative transactions. The non-Swiss UBS AG pension funds do not have a similar banking relationship with UBS AG.

The bank leases certain properties that are owned by the Swiss pension fund. As of 31 December 2016, the minimum commitment toward the Swiss pension fund under the related leases is approximately CHF 11 million (31 December 2015: CHF 11 million).

→ **Refer to the "Composition and fair value of plan assets" table in Note 26a for more information on fair value of investments in UBS AG instruments held by the Swiss pension fund**

The following amounts have been received or paid by UBS AG from and to the pension and other post-employment benefit plans located in Switzerland, the UK and the US in respect of these banking activities and arrangements.

Related-party disclosure

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Received by UBS AG			
Fees	36	33	33
Paid by UBS AG			
Rent	4	5	6
Interest	(1)	(1)	0
Dividends and capital repayments	15	14	4

The transaction volumes in UBS Group AG shares and UBS AG debt instruments and the balances of UBS Group AG shares held as of 31 December were:

Transaction volumes – UBS Group AG shares and UBS AG debt instruments

	For the year ended	
	31.12.16	31.12.15
Financial instruments bought by pension funds		
UBS Group AG shares (in thousands of shares)	2,427	1,544
UBS AG debt instruments (par values, CHF million)	0	3
Financial instruments sold by pension funds or matured		
UBS Group AG shares (in thousands of shares)	1,618	2,255
UBS AG debt instruments (par values, CHF million)	0	4

UBS Group AG shares held by pension and other post-employment benefit plans

	31.12.16	31.12.15
Number of shares (in thousands of shares)	18,363	17,737
Fair value (CHF million)	293	344

Note 27 Equity participation and other compensation plans

a) Plans offered

The UBS Group has several equity participation and other compensation plans to align the interests of Group Executive Board (GEB) members, Key Risk Takers and other employees with the interests of investors while continuously meeting regulatory requirements. This Note provides a description of the most significant plans offered by the Group which relate to the performance year 2016 (awards granted in 2017) and those from prior years that were partly expensed in 2016.

→ **Refer to Note 1a item 6 for a description of the accounting policy related to equity participation and other compensation plans**

Mandatory share-based compensation plans

Equity Ownership Plan (EOP):
The EOP is a mandatory share-based compensation plan for all employees with total compensation greater than CHF/USD 300,000. These employees receive a portion of their annual performance-related compensation above the threshold in the form of notional shares. Furthermore, notional shares granted to GEB members, Key Risk Takers, Group Managing Directors (GMDs) or employees whose incentive awards exceed a certain threshold, are subject to performance conditions. These performance conditions are based on the Group's return on tangible equity and the divisional return on attributed equity (for Corporate Center employees, the combined return on attributed equity of all business divisions). Certain awards, such as replacement awards issued outside the normal performance year cycle, may take the form of deferred cash under the EOP plan rules.

Notional shares represent a promise to receive UBS shares at vesting and do not carry voting rights during the vesting period. Notional shares granted before February 2014 have no rights to dividends, whereas awards granted since February 2014 carry a dividend equivalent which may be paid in notional shares or cash and which vests on the same terms and conditions as the awards. Awards are settled by delivering UBS shares at vesting, except in jurisdictions where this is not permitted for legal or tax reasons. EOP awards generally vest in equal installments after two and three years following grant (for GEB members, generally after three, four and five years). The awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS.

Senior Executive Equity Ownership Plan (SEEOP):
Up to February 2012, GEB members and selected senior executives received a portion of their mandatory deferral in UBS shares or notional shares, which vested in equal installments over a five-year vesting period and were forfeitable if certain conditions had not been met. The employee's business division or the Group as a whole had to be profitable in the financial year preceding scheduled vesting. Awards granted under SEEOP are settled by delivering UBS shares at vesting. No SEEOP awards have been granted since 2012.

Role-based allowances (RBAs):
Certain employees of EU regulated entities may receive an RBA in addition to their base salary. This allowance reflects the market value of a specific role and is only paid as long as the employee is within such a role. RBAs are offered in line with market practice and are generally paid in cash. In the UK, RBAs are partially awarded in cash and above a threshold in blocked UBS shares. Such shares will be unblocked in equal installments after two and three years. The compensation expense is recognized in the year of grant.

Mandatory deferred cash compensation plans

Deferred Contingent Capital Plan (DCCP):
The DCCP is a mandatory deferred cash compensation plan for all employees with total compensation greater than CHF/USD 300,000. DCCP awards granted up to January 2015 represent a right to receive a cash payment at vesting. For awards granted since February 2015, DCCP takes the form of notional additional tier 1 (AT1) capital instruments, which may be settled at the discretion of UBS in the form of a cash payment or a marketable AT1 capital instrument. Awards vest in full after five years unless there is a trigger or viability event. Awards granted under the DCCP are written down if UBS's common equity tier 1 capital ratio falls below 10% for GEB members and below 7% for all other employees. DCCP awards are also forfeited if a viability event occurs, that is, if FINMA provides a written notice to UBS that the DCCP awards must be written down to prevent an insolvency, bankruptcy or failure of UBS, or if UBS receives a commitment of extraordinary support from the public sector that is necessary to prevent such an event. Additionally, GEB members forfeit 20% of their award for each year during the vesting period in which UBS does not achieve an adjusted profit before tax. For awards granted up to January 2015, interest on the awards is paid annually, provided that UBS achieved an adjusted profit before tax in the preceding year. For awards granted since February 2015, interest payments are discretionary. The awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS.

Long-Term Deferred Retention Senior Incentive Scheme (LTDRSIS):
Awards under the LTDRSIS were granted to employees in Australia up to and including 2014 and represent a profit share amount based on the profitability of the Australian business. Awards vest after three years and include an arrangement which allows for unpaid installments to be reduced if the business records a loss for the calendar year preceding vesting. The awards are generally forfeitable upon voluntary termination of employment with UBS.

Asset Management EOP:
In order to align deferred compensation of certain Asset Management employees with the performance of the funds they manage, EOP awards are granted to such employees in the form of cash-settled notional funds. The amount delivered depends on the value of the underlying investment funds at the time of vesting. The awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS.

Wealth Management Americas financial advisor compensation

Financial advisor compensation plans generally provide for cash payments and deferred awards that are formula driven and fluctuate in proportion to the level of business activity.

UBS also may enter into compensation commitments with certain new financial advisors, primarily as a recruitment incentive and to incentivize certain eligible active financial advisors to achieve specified revenue production and other performance conditions. The compensation may be earned and paid to the employee during a period of continued employment and may be forfeited under certain circumstances.

GrowthPlus:
GrowthPlus is a program for selected financial advisors whose revenue production and length of service exceed defined thresholds from 2010 through 2017. Compensation arrangements were granted in 2010, 2011 and 2015, with additional arrangements expected to be issued in 2018. The awards are distributed over seven years, with the exception of 2018 arrangements which will be distributed over five years.

PartnerPlus:
PartnerPlus is a mandatory deferred cash compensation plan for certain eligible financial advisors. Awards (UBS AG company contributions) are based on a predefined formula during the performance year. Participants are also allowed to voluntarily contribute additional amounts otherwise payable during the year, up to a certain percentage of their pay, which vest upon contribution. Company contributions and voluntary contributions are credited with interest in accordance with the terms of the plan. Rather than being credited with interest, a participant may elect to have voluntary contributions, along with vested company contributions, credited with notional earnings based on the performance of various mutual funds. Company contributions and interest on both company and voluntary contributions ratably vest in 20% installments six to ten years following grant date. Company contributions and interest on notional earnings on both company and voluntary contributions are forfeitable under certain circumstances.

Other share-based compensation plans

Equity Plus Plan (Equity Plus):
Equity Plus is a voluntary plan that provides eligible employees with the opportunity to purchase UBS shares at market value and receive one notional share for every three shares purchased, up to a maximum annual limit. Share purchases may be made annually from the performance award and / or monthly through deductions from salary. If the shares purchased are held for three years, and in general if the employee remains in employment, the notional shares vest. For notional shares granted since April 2014, employees are entitled to receive a dividend equivalent, which may be paid in notional shares and / or cash.

Key Employee Stock Appreciation Rights Plan (KESAP) and Key Employee Stock Option Plan (KESOP):
Until 2009, key and high-potential employees were granted discretionary share-settled stock appreciation rights (SARs) or options on UBS shares with a strike price not less than the market value of a UBS share on the date of grant. A SAR gives employees the right to receive a number of UBS shares equal to the value of any market price increase of a UBS share between the grant date and the exercise date. One option entitles the holder to acquire one registered UBS share at the option's strike price. SARs and options are settled by delivering UBS shares, except in jurisdictions where this is not permitted for legal reasons. These awards are generally forfeitable upon termination of employment with UBS. No options or SARs awards have been granted since 2009.

Note 27 Equity participation and other compensation plans (continued)

b) Effect on the income statement

Effect on the income statement for the financial year and future periods

The table below provides information on compensation expenses related to performance awards and other variable compensation, including financial advisor compensation in Wealth Management Americas, recognized for the financial year ended 31 December 2016 and deferred compensation expense that will be recognized in the income statement for 2017 and later. The deferred compensation expense in the table also includes vested and unvested awards, which relate to the performance year 2016. The majority of them were granted in February 2017. The total compensation expense for unvested share-based awards granted up to 31 December 2016 will be recognized in future periods over a weighted average period of 2.0 years.

Personnel expenses – recognized and deferred[1]

	Personnel expenses for the year ended 2016			Personnel expenses deferred to 2017 and later		
CHF million	Expenses relating to awards for 2016	Expenses relating to awards for prior years	Total	Relating to awards for 2016	Relating to awards for prior years	Total
Performance awards						
Cash performance awards	1,817	(42)	1,775	0	0	0
Deferred Contingent Capital Plan	133	295	428	266	468	735
Deferred cash plans	0	6	6	0	5	5
Equity Ownership Plan – UBS shares	214	485	699	372	356	727
Equity Ownership Plan – notional funds	26	39	65	34	27	60
Total performance awards	**2,191**	**781**	**2,972**	**671**	**856**	**1,527**
Variable compensation						
Variable compensation – other	266	151	418[2]	162[3]	301[4]	463
Financial advisor compensation – cash payments	2,506	0	2,506	0	0	0
Compensation commitments with recruited financial advisors	43	756	799	607	2,120	2,727
GrowthPlus and other deferral plans	112	199	311	139	773	912
UBS share plans	33	48	81	57	120	177
Wealth Management Americas: Financial advisor compensation[5]	2,695	1,002	3,697	804	3,013	3,816
Total	**5,152**	**1,935**	**7,087**	**1,637**	**4,169**	**5,806**

1 In 2016, total personnel expenses related to share-based compensation were CHF 910 million, which related to performance awards (CHF 699 million), other variable compensation (CHF 40 million), role-based allowances (CHF 39 million), Wealth Management Americas financial advisor compensation (CHF 81 million), the Equity Plus Plan (CHF 24 million) and social security costs (CHF 27 million). Total personnel expenses related to share-based equity-settled compensation excluding social security were CHF 861 million. 2 Includes replacement payments of CHF 86 million (of which CHF 62 million related to prior years), forfeiture credits of CHF 73 million (all related to prior years), severance payments of CHF 217 million (all related to 2016) and retention plan and other payments of CHF 188 million (of which CHF 163 million related to prior years). 3 Includes DCCP interest expense of CHF 98 million for DCCP awards 2016 (granted in 2017). 4 Includes DCCP interest expense of CHF 243 million for DCCP awards 2015, 2014 and 2013 (granted in 2016, 2015 and 2014, respectively). 5 Financial advisor compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated based on financial advisor productivity, firm tenure, assets and other variables. It also includes charges related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. Amounts reflected as deferred expenses represent the maximum deferred exposure as of the balance sheet date.

Note 27 Equity participation and other compensation plans (continued)

Personnel expenses – recognized and deferred[1]

	Personnel expenses for the year ended 2015			Personnel expenses deferred to 2016 and later		
CHF million	Expenses relating to awards for 2015	Expenses relating to awards for prior years	Total	Relating to awards for 2015	Relating to awards for prior years	Total
Performance awards						
Cash performance awards	2,073	(94)	1,980	0	0	0
Deferred Contingent Capital Plan	172	258	429	343	446	789
Deferred cash plans	0	12	12	0	3	3
Equity Ownership Plan – UBS shares	261	461	722	524	338	861
Equity Ownership Plan – notional funds	28	38	67	34	35	69
Total performance awards	**2,535**	**675**	**3,210**	**900**	**822**	**1,722**
Variable compensation						
Variable compensation – other	184	162	346[2]	248[3]	293[4]	541
Financial advisor compensation – cash payments	2,460	0	2,460	0	0	0
Compensation commitments with recruited financial advisors	43	692	735	940	1,899	2,839
GrowthPlus and other deferral plans	132	142	275	710	456	1,166
UBS share plans	37	45	82	66	115	182
Wealth Management Americas: Financial advisor compensation[5]	2,673	879	3,552	1,716	2,470	4,186
Total	**5,391**	**1,716**	**7,108**	**2,864**	**3,585**	**6,449**

1 In 2015, total personnel expenses related to share-based compensation were CHF 966 million, which related to performance awards (CHF 722 million), other variable compensation (CHF 54 million), role-based allowances (CHF 26 million), Wealth Management Americas financial advisor compensation (CHF 82 million), the Equity Plus Plan (CHF 21 million) and social security costs (CHF 61 million). Total personnel expenses related to share-based equity-settled compensation excluding social security were CHF 858 million. 2 Includes replacement payments of CHF 76 million (of which CHF 65 million related to prior years), forfeiture credits of CHF 86 million (all related to prior years), severance payments of CHF 157 million (all related to 2015) and retention plan and other payments of CHF 198 million (of which CHF 183 million related to prior years). 3 Includes DCCP interest expense of CHF 160 million for DCCP awards 2015 (granted in 2016). 4 Includes DCCP interest expense of CHF 200 million for DCCP awards 2014, 2013 and 2012 (granted in 2015, 2014 and 2013, respectively). 5 Financial advisor compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated based on financial advisor productivity, firm tenure, assets and other variables. It also includes charges related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. Amounts reflected as deferred expenses represent the maximum deferred exposure as of the balance sheet date.

Note 27 Equity participation and other compensation plans (continued)

Personnel expenses – recognized and deferred[1]

	Personnel expenses for the year ended 2014			Personnel expenses deferred to 2015 and later		
CHF million	Expenses relating to awards for 2014	Expenses relating to awards for prior years	Total	Relating to awards for 2014	Relating to awards for prior years	Total
Performance awards						
Cash performance awards	1,822	(108)	1,714	0	0	0
Deferred Contingent Capital Plan	155	194	349	312	386	698
Deferred cash plans	0	12	12	0	8	8
Equity Ownership Plan – UBS shares	215	444	659	459	367	826
Incentive Performance Plan	0	21	21	0	0	0
Total UBS share plans	215	465	680	459	367	826
Equity Ownership Plan – notional funds	24	41	65	36	33	69
Total performance awards	**2,216**	**604**	**2,820**	**807**	**794**	**1,601**
Variable compensation						
Variable compensation – other	260	206	466[2]	307[3]	340[4]	647
Financial advisor compensation – cash payments	2,396	0	2,396	0	0	0
Compensation commitments with recruited financial advisors	39	636	675	524	2,058	2,582
GrowthPlus and other deferral plans	81	153	234	189	528	717
UBS share plans	23	57	80	41	143	184
Wealth Management Americas: Financial advisor compensation[5]	2,539	846	3,385	754	2,729	3,483
Total	**5,015**	**1,656**	**6,671**	**1,868**	**3,863**	**5,731**

1 In 2014, total personnel expenses related to share-based compensation were CHF 942 million, which related to performance awards (CHF 680 million), other variable compensation (CHF 113 million), role-based allowances (CHF 9 million), Wealth Management Americas financial advisor compensation (CHF 80 million), the Equity Plus Plan (CHF 19 million) and social security costs (CHF 42 million). Total personnel expenses related to share-based equity-settled compensation excluding social security were CHF 909 million. 2 Includes replacement payments of CHF 81 million (of which CHF 70 million related to prior years), forfeiture credits of CHF 70 million (all related to prior years), severance payments of CHF 162 million (all related to 2014) and retention plan and other payments of CHF 292 million (of which CHF 206 million related to prior years). 3 Includes DCCP interest expense of CHF 121 million for DCCP awards 2014 (granted in 2015). 4 Includes DCCP interest expense of CHF 161 million for DCCP awards 2013 and 2012 (granted in 2014 and 2013, respectively). 5 Financial advisor compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated based on financial advisor productivity, firm tenure, assets and other variables. It also includes charges related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. Amounts reflected as deferred expenses represent the maximum deferred exposure as of the balance sheet date.

Note 27 Equity participation and other compensation plans (continued)

c) Movements during the year

UBS share and performance share awards

Movements in UBS share and notional share awards were:

UBS share awards

	Number of shares 2016	Weighted average grant date fair value (CHF)	Number of shares 2015	Weighted average grant date fair value (CHF)
Outstanding, at the beginning of the year	427,443	18	467,848	15
Shares awarded during the year	199,755	13	259,334	17
Distributions during the year	(115,014)	18	(279,415)	15
Forfeited during the year	0	0	(20,323)	19
Outstanding, at the end of the year	512,185	16	427,443	18
of which: shares vested for accounting purposes	*189,953*		*138,908*	

The fair value of shares that became legally vested, as all conditions had been met, and were distributed during the years ended 2016 and 2015 was CHF 2 million and CHF 5 million, respectively.

d) Valuation

UBS share awards

UBS AG measures compensation expense based on the average market price of the UBS share on the grant date as quoted on the SIX Swiss Exchange, taking into consideration post-vesting sale and hedge restrictions, non-vesting conditions and market conditions, where applicable. The fair value of the share awards subject to post-vesting sale and hedge restrictions is discounted on the basis of the duration of the post-vesting restriction and is referenced to the cost of purchasing an at-the-money European put option for the term of the transfer restriction. The grant date fair value of notional shares without dividend entitlements also includes a deduction for the present value of future expected dividends to be paid between the grant date and distribution.

Note 28 Interests in subsidiaries and other entities

a) Interests in subsidiaries

UBS AG defines its significant subsidiaries as those entities that, either individually or in aggregate, contribute significantly to UBS AG's financial position or results of operations, based on a number of criteria, including the subsidiaries' equity and their contribution to UBS AG's total assets and profit or loss before tax, in accordance with the requirements set by IFRS 12, Swiss regulations and the rules of the US Securities and Exchange Commission (SEC).

Individually significant subsidiaries

The two tables below list UBS AG's individually significant subsidiaries as of 31 December 2016. Unless otherwise stated, the subsidiaries listed below have share capital consisting solely of ordinary shares, which are held fully by UBS AG, and the proportion of ownership interest held is equal to the voting rights held by UBS AG.

The country where the respective registered office is located is also the principal place of business. UBS Europe SE has branches and offices in a number of EU member states, including branches in Germany, Italy, Luxembourg and Spain.

Individually significant subsidiaries as of 31 December 2016

Company	Registered office	Primary business division	Share capital in million		Equity interest accumulated in %
UBS Americas Holding LLC	Wilmington, Delaware, USA	Corporate Center	USD	2,250.0[1]	100.0
UBS Asset Management AG	Zurich, Switzerland	Asset Management	CHF	43.2	100.0
UBS Bank USA	Salt Lake City, Utah, USA	Wealth Management Americas	USD	0.0	100.0
UBS Europe SE	Frankfurt, Germany	Wealth Management	EUR	176.0	100.0
UBS Financial Services Inc.	Wilmington, Delaware, USA	Wealth Management Americas	USD	0.0	100.0
UBS Limited	London, United Kingdom	Investment Bank	GBP	226.6	100.0
UBS Securities LLC	Wilmington, Delaware, USA	Investment Bank	USD	1,283.1[2]	100.0
UBS Switzerland AG	Zurich, Switzerland	Personal & Corporate Banking	CHF	10.0	100.0

1 Comprised of common share capital of USD 1,000 and non-voting preferred share capital of USD 2,250,000,000. 2 Comprised of common share capital of USD 100,000 and non-voting preferred share capital of USD 1,283,000,000.

During 2016, the majority of the operating subsidiaries of Asset Management were transferred to UBS Asset Management AG to create a holding structure spanning the division's global activities outside the US. Also in 2016, UBS AG's direct Wealth Management subsidiaries UBS (Italia) SpA, UBS (Luxembourg) S.A. (including its branches in Austria, Denmark and Sweden), UBS Bank S.A. (Madrid) and UBS Bank (Netherlands) B.V. were merged into UBS Deutschland AG, which was renamed to UBS Europe SE and is headquartered in Frankfurt, Germany.

UBS Americas Holding LLC, UBS Asset Management AG, UBS Europe SE, UBS Limited and UBS Switzerland AG are fully held by UBS AG. UBS Bank USA, UBS Financial Services Inc. and UBS Securities LLC are fully held, directly or indirectly, by UBS Americas Holding LLC.

Note 28 Interests in subsidiaries and other entities (continued)

Other subsidiaries

The table below lists other subsidiaries of UBS AG that are not individually significant but that contribute to UBS AG's total assets and aggregated profit before tax thresholds and are thereby disclosed in accordance with the requirements set by the SEC.

Other subsidiaries as of 31 December 2016

Company	Registered office	Primary business division	Share capital in million		Equity interest accumulated in %
UBS Americas Inc.	Wilmington, Delaware, USA	Corporate Center	USD	0.0	100.0
UBS Asset Management (Americas) Inc.	Wilmington, Delaware, USA	Asset Management	USD	0.0	100.0
UBS Asset Management (Australia) Ltd	Sydney, Australia	Asset Management	AUD	20.1[1]	100.0
UBS Asset Management (Deutschland) GmbH	Frankfurt, Germany	Asset Management	EUR	7.7	100.0
UBS Asset Management (Hong Kong) Limited	Hong Kong, Hong Kong	Asset Management	HKD	150.0	100.0
UBS Asset Management (Japan) Ltd	Tokyo, Japan	Asset Management	JPY	2,200.0	100.0
UBS Asset Management (Singapore) Ltd	Singapore, Singapore	Asset Management	SGD	4.0	100.0
UBS Asset Management (UK) Ltd	London, United Kingdom	Asset Management	GBP	125.0	100.0
UBS Business Solutions US LLC	Wilmington, Delaware, USA	Corporate Center	USD	0.0	100.0
UBS Card Center AG	Glattbrugg, Switzerland	Personal & Corporate Banking	CHF	0.1	100.0
UBS Credit Corp.	Wilmington, Delaware, USA	Wealth Management Americas	USD	0.0	100.0
UBS Fund Advisor, L.L.C.	Wilmington, Delaware, USA	Wealth Management Americas	USD	0.0	100.0
UBS Fund Management (Luxembourg) S.A.	Luxembourg, Luxembourg	Asset Management	EUR	13.0	100.0
UBS Fund Management (Switzerland) AG	Basel, Switzerland	Asset Management	CHF	1.0	100.0
UBS Hedge Fund Solutions LLC	Wilmington, Delaware, USA	Asset Management	USD	0.1	100.0
UBS O'Connor LLC	Dover, Delaware, USA	Asset Management	USD	1.0	100.0
UBS Real Estate Securities Inc.	Wilmington, Delaware, USA	Investment Bank	USD	0.0	100.0
UBS Realty Investors LLC	Boston, Massachusetts, USA	Asset Management	USD	9.0	100.0
UBS Securities (Thailand) Ltd	Bangkok, Thailand	Investment Bank	THB	500.0	100.0
UBS Securities Australia Ltd	Sydney, Australia	Investment Bank	AUD	0.3[1]	100.0
UBS Securities India Private Limited	Mumbai, India	Investment Bank	INR	140.0	100.0
UBS Securities Japan Co., Ltd.	Tokyo, Japan	Investment Bank	JPY	56,450.0	100.0
UBS Securities Pte. Ltd.	Singapore, Singapore	Investment Bank	SGD	420.4	100.0
UBS Services LLC	Wilmington, Delaware, USA	Corporate Center	USD	0.0	100.0
UBS South Africa (Proprietary) Limited	Sandton, South Africa	Investment Bank	ZAR	0.0	100.0
UBS UK Properties Limited	London, United Kingdom	Corporate Center	GBP	132.0	100.0
OOO UBS Bank	Moscow, Russia	Investment Bank	RUB	3,450.0	100.0
Topcard Service AG	Glattbrugg, Switzerland	Personal & Corporate Banking	CHF	0.2	100.0

1 Includes a nominal amount relating to redeemable preference shares.

In 2016, UBS Italia SIM SpA, a subsidiary conducting activities of the Investment Bank, was converted to a branch of UBS Limited, London, via a cross-border merger transaction.

Note 28 Interests in subsidiaries and other entities (continued)

Changes in consolidation scope

In 2016, no significant subsidiaries were added to or removed from the scope of consolidation as a result of acquisitions or disposals.

Non-controlling interests

As of 31 December 2016 and 31 December 2015, non-controlling interests were not material to UBS AG. In addition, as of these dates there were no significant restrictions on UBS AG's ability to access or use the assets and settle the liabilities of subsidiaries resulting from protective rights of non-controlling interests.

Consolidated structured entities

UBS AG consolidates a structured entity (SE) if it has power over the relevant activities of the entity, exposure to variable returns and the ability to use its power to affect its returns. Consolidated SEs include certain investment funds, securitization vehicles and client investment vehicles. UBS has no individually significant subsidiaries that are SEs.

Investment fund SEs are generally consolidated when UBS AG's aggregate exposure combined with its decision-making rights indicate the ability to use such power in a principal capacity. Typically UBS AG will have decision-making rights as fund manager, earning a management fee, and will provide seed capital at the inception of the fund or hold a significant percentage of the fund units. Where other investors do not have the substantive ability to remove UBS as decision maker, UBS AG is deemed to have control and therefore consolidates the fund.

Securitization SEs are generally consolidated when UBS AG holds a significant percentage of the asset-backed securities issued by the SE and has the power to remove without cause the servicer of the asset portfolio.

Client investment SEs are generally consolidated when UBS AG has a substantive liquidation right over the SE or a decision right over the assets held by the SE and has exposure to variable returns through derivatives traded with the SE or holding notes issued by the SE.

In 2016 and 2015, UBS AG has not entered into any contractual obligation that could require UBS AG to provide financial support to consolidated SEs. In addition, UBS AG did not provide support, financial or otherwise, to a consolidated SE when UBS AG was not contractually obligated to do so, nor has UBS AG an intention to do so in the future. Further, UBS AG did not provide support, financial or otherwise, to a previously unconsolidated SE that resulted in UBS AG controlling the SE during the reporting period.

Note 28 Interests in subsidiaries and other entities (continued)

b) Interests in associates and joint ventures

As of 31 December 2016 and 2015, no associate or joint venture was individually material to UBS AG. In addition, there were no significant restrictions on the ability of associates or joint ventures to transfer funds to UBS AG or its subsidiaries in the form of cash dividends or to repay loans or advances made. There were no quoted market prices for any associates or joint ventures of UBS AG.

Investments in associates and joint ventures

CHF million	31.12.16	31.12.15
Carrying amount at the beginning of the year	954	927
Additions	3	12
Disposals	(2)	(2)
Share of comprehensive income	82	151
of which: share of net profit[1], [2]	*106*	*169*
of which: share of other comprehensive income[3]	*(24)*	*(18)*
Dividends received	(50)	(114)
Foreign currency translation	(23)	(20)
Carrying amount at the end of the year	963	954
of which: associates	*934*	*925*
of which: UBS Securities Co. Limited, Beijing[4]	*392*	*411*
of which: SIX Group AG, Zurich[5]	*426*	*413*
of which: other associates	*116*	*102*
of which: joint ventures	*29*	*29*

1 For 2016, consists of CHF 94 million from associates and CHF 12 million from joint ventures. For 2015, consists of CHF 158 million from associates and CHF 11 million from joint ventures. 2 In 2015, the SIX Group sold its stake in STOXX Ltd and Indexium Ltd. The UBS share of the resulting gain on sale was CHF 81 million. 3 For 2016, consists of negative CHF 25 million from associates and CHF 0 million from joint ventures. For 2015, consists of negative CHF 18 million from associates and CHF 0 million from joint ventures. 4 UBS AG's equity interest amounts to 24.99%. 5 UBS AG's equity interest amounts to 17.31%. UBS AG is represented on the Board of Directors.

Note 28 Interests in subsidiaries and other entities (continued)

c) Interests in unconsolidated structured entities

During 2016, UBS AG sponsored the creation of various SEs and interacted with a number of non-sponsored SEs, including securitization vehicles, client vehicles as well as certain investment funds, which UBS did not consolidate as of 31 December 2016 because it did not control these entities.

The table below presents UBS AG's interests in and maximum exposure to loss from unconsolidated SEs as well as the total assets held by the SEs in which UBS had an interest as of year-end, except for investment funds sponsored by third parties, for which the carrying value of UBS's interest as of year-end has been disclosed.

Interests in unconsolidated structured entities

	31.12.16				
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Trading portfolio assets	634	394	6,215	7,243	7,243
Positive replacement values	40	76	101	217	217
Loans	0	0	79	79	79
Financial assets designated at fair value	103	83[2]	0	186	1,765
Financial assets available for sale	0	3,381	58	3,439	3,439
Other assets	289	37[2]	0	327	1,490
Total assets	1,066[3]	3,971	6,454	11,491	
Negative replacement values	33[4]	346	67	446	90
Total liabilities	33	346	67	446	
Assets held by the unconsolidated structured entities in which UBS had an interest (CHF billion)	72[5]	102[6]	334[7]		

	31.12.15				
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Trading portfolio assets	1,060	463	6,102	7,624	7,624
Positive replacement values	41	101	57	200	200
Loans	0	0	101	101	101
Financial assets designated at fair value	0	97[2]	0	97	1,636
Financial assets available for sale	0	3,396	102	3,498	3,498
Other assets	0	45[2]	0	45	937
Total assets	1,101[3]	4,102	6,362	11,565	
Negative replacement values	30[4]	631	0	661	19
Total liabilities	30	631	0	661	
Assets held by the unconsolidated structured entities in which UBS had an interest (CHF billion)	141[5]	43[6]	320[7]		

1 For purposes of this disclosure, maximum exposure to loss amounts do not consider the risk-reducing effects of collateral or other credit enhancements. 2 Represents the carrying value of loan commitments, both designated at fair value and held at amortized cost. The maximum exposure to loss for these instruments is equal to the notional amount. 3 As of 31 December 2016, CHF 1.0 billion of the CHF 1.1 billion (31 December 2015: CHF 0.9 billion of the CHF 1.1 billion) was held in Corporate Center – Non-core and Legacy Portfolio. 4 Comprised of credit default swap (CDS) liabilities and other swap liabilities. The maximum exposure to loss for CDS is equal to the sum of the negative carrying value and the notional amount. For other swap liabilities, no maximum exposure to loss is reported. 5 Represents principal amount outstanding. 6 Represents the market value of total assets. 7 Represents the net asset value of the investment funds sponsored by UBS and the carrying value of UBS's interests in the investment funds not sponsored by UBS.

Note 28 Interests in subsidiaries and other entities (continued)

UBS AG retains or purchases interests in unconsolidated SEs in the form of direct investments, financing, guarantees, letters of credit, derivatives and through management contracts.

UBS AG's maximum exposure to loss is generally equal to the carrying value of UBS AG's interest in the SE, with the exception of guarantees, letters of credit and credit derivatives for which the contract's notional amount, adjusted for losses already incurred, represents the maximum loss that UBS AG is exposed to. In addition, the current fair value of derivative swap instruments with a positive replacement value only, such as total return swaps, is presented as the maximum exposure to loss. Risk exposure for these swap instruments could change over time with market movements.

The maximum exposure to loss disclosed in the table on the previous page does not reflect UBS AG's risk management activities, including effects from financial instruments that may be used to economically hedge the risks inherent in the unconsolidated SE or the risk-reducing effects of collateral or other credit enhancements.

In 2016 and 2015, UBS AG did not provide support, financial or otherwise, to an unconsolidated SE when not contractually obligated to do so, nor has UBS AG an intention to do so in the future.

In 2016 and 2015, income and expenses from interests in unconsolidated SEs primarily resulted from mark-to-market movements recognized in net trading income, which have generally been hedged with other financial instruments, as well as fee and commission income received from UBS sponsored funds.

Interests in securitization vehicles

As of 31 December 2016 and 31 December 2015, UBS AG held interests, both retained and acquired, in various securitization vehicles. As of 31 December 2016, a majority of UBS AG's interests in securitization vehicles related to a portfolio of asset-backed securities (ABS), which are held within Corporate Center – Non-core and Legacy Portfolio. The Investment Bank also retained interests in securitization vehicles related to financing, underwriting, secondary market and derivative trading activities. In some cases UBS AG may be required to absorb losses from an unconsolidated SE before other parties because UBS AG's interest is subordinated to others in the ownership structure. An overview of UBS AG's interests in unconsolidated securitization vehicles and the relative ranking and external credit rating of those interests is presented in the table on the following page.

→ **Refer to Note 1a item 1 for more information on UBS AG's accounting policies regarding consolidation and sponsorship of securitization vehicles and other structured entities**

Interests in client vehicles

As of 31 December 2016 and 31 December 2015, UBS AG retained interests in client vehicles sponsored by UBS and third parties that relate to financing and derivative activities and to hedge structured product offerings. Included within these investments are securities guaranteed by US government agencies.

Interests in investment funds

UBS AG holds interests in a number of investment funds, primarily resulting from seed investments or to hedge structured product offerings. In addition to the interests disclosed in the table on the previous page, UBS AG manages the assets of various pooled investment funds and receives fees that are based, in whole or part, on the net asset value of the fund and / or the performance of the fund. The specific fee structure is determined on the basis of various market factors and considers the nature of the fund, the jurisdiction of incorporation as well as fee schedules negotiated with clients. These fee contracts represent an interest in the fund as they align UBS AG's exposure with investors, providing a variable return that is based on the performance of the entity. Depending on the structure of the fund, these fees may be collected directly from the fund assets and / or from the investors. Any amounts due are collected on a regular basis and are generally backed by the assets of the fund. UBS AG did not have any material exposure to loss from these interests as of 31 December 2016 or as of 31 December 2015.

Note 28 Interests in subsidiaries and other entities (continued)

Interests in unconsolidated securitization vehicles[1]

	31.12.16				
CHF million, except where indicated	Residential mortgage-backed securities	Commercial mortgage- backed securities	Other asset-backed securities[2]	Re-securiti- zation[3]	Total
Sponsored by UBS					
Interests in senior tranches	103	34	0	14	151
of which: rated investment grade	*0*	*34*			*34*
of which: rated sub-investment grade	*103*				*103*
of which: defaulted				*14*	*14*
Interests in mezzanine tranches	1	0	0	0	1
of which: rated sub-investment grade	*1*				*1*
Total	104	34	0	14	152
of which: Trading portfolio assets	*1*	*34*	*0*	*14*	*49*
of which: Financial assets designated at fair value	*103*	*0*	*0*	*0*	*103*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	2	13	0	1	16
Not sponsored by UBS					
Interests in senior tranches	165	4	241	125	535
of which: rated investment grade	*165*	*4*	*241*	*125*	*535*
Interests in mezzanine tranches	32	0	0	0	32
of which: rated investment grade	*29*				*29*
of which: defaulted	*3*				*3*
Interests in junior tranches	18	0	0	0	18
of which: rated investment grade	*17*				*17*
of which: rated sub-investment grade	*1*				*1*
Total	215	4	241	125	585
of which: Trading portfolio assets	*215*	*4*	*241*	*125*	*585*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	41	8	5	1	56

1 This table excludes receivables and derivative transactions with securitization vehicles. 2 Includes credit card, auto and student loan structures. 3 Includes collateralized debt obligations.

Note 28 Interests in subsidiaries and other entities (continued)

Interests in unconsolidated securitization vehicles (continued)[1]

	31.12.15				
CHF million, except where indicated	Residential mortgage-backed securities	Commercial mortgage- backed securities	Other asset-backed securities[2]	Re-securiti- zation[3]	Total
Sponsored by UBS					
Interests in senior tranches	0	54	0	13	66
of which: rated investment grade		*54*	*0*		*54*
of which: defaulted				*13*	*13*
Interests in mezzanine tranches	3	7	0	0	10
of which: rated investment grade		*7*			*7*
of which: rated sub-investment grade	*2*				*2*
of which: defaulted	*1*				*1*
Total	3	61	0	13	77
of which: Trading portfolio assets	*3*	*61*	*0*	*13*	*77*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	0	28	0	1	29
Not sponsored by UBS					
Interests in senior tranches	284	66	383	140	873
of which: rated investment grade	*284*	*65*	*383*	*140*	*872*
Interests in mezzanine tranches	61	17	17	0	95
of which: rated investment grade	*58*	*17*	*17*	*0*	*92*
of which: defaulted	*3*				*3*
Interests in junior tranches	11	3	0	0	14
of which: rated investment grade	*11*	*0*			*11*
of which: not rated	*0*	*3*			*3*
Total	356	86	400	140	983
of which: Trading portfolio assets	*356*	*86*	*400*	*140*	*983*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	64	37	6	2	109

1 This table excludes receivables and derivative transactions with securitization vehicles. 2 Includes credit card, auto and student loan structures. 3 Includes collateralized debt obligations.

Note 28 Interests in subsidiaries and other entities (continued)

Sponsored unconsolidated structured entities in which UBS did not have an interest

For several sponsored SEs, no interest was held by UBS AG at year-end. However, during the respective reporting period UBS AG transferred assets, provided services and held instruments that did not qualify as an interest in these sponsored SEs, and accordingly earned income or incurred expenses from these entities. The table below presents the income earned and expenses incurred directly from these entities during the year as well as corresponding asset information. The table does not include income earned and expenses incurred from risk management activities, including income and expenses from financial instruments used to economically hedge instruments transacted with the unconsolidated SEs.

The majority of the fee income arose from investment funds that are sponsored and administrated by UBS AG, but managed by third parties. As UBS AG does not provide any active management services, UBS was not exposed to risk from the performance of these entities and was therefore deemed not to have an interest in them. In certain structures, the fees receivable may be collected directly from the investors and have therefore not been included in the table below.

UBS AG also recorded net trading income from mark-to-market movements arising primarily from derivatives, such as interest rate and currency swaps as well as credit derivatives, through which UBS AG purchases protection, and financial liabilities designated at fair value, which do not qualify as interests because UBS AG does not absorb variability from the performance of the entity. Total income reported does not reflect economic hedges or other mitigating effects from UBS AG's risk management activities.

During 2016, UBS and third parties transferred assets totaling CHF 13 billion (2015: CHF 9 billion) into sponsored securitization and client vehicles created in 2016. For sponsored investment funds, transfers arose during the period as investors invested and redeemed positions, thereby changing the overall size of the funds, which, when combined with market movements, resulted in a total closing net asset value of CHF 14 billion (31 December 2015: CHF 12 billion).

Sponsored unconsolidated structured entities in which UBS did not have an interest at year-end[1]

	As of or for the year ended			
	31.12.16			
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total
Net interest income	3	(6)	0	(3)
Net fee and commission income	0	0	53	53
Net trading income	2	(158)	29	(128)
Total income	4	(165)	82	(78)
Asset information (CHF billion)	7[2]	6[3]	14[4]	

	As of or for the year ended			
	31.12.15			
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total
Net interest income	2	(11)	0	(10)
Net fee and commission income	0	0	57	57
Net trading income	18	208	48	274
Total income	20	197	104	321
Asset information (CHF billion)	8[2]	1[3]	12[4]	

1 These tables exclude profit attributable to preferred note holders of CHF 78 million for the year ended 31 December 2016 and CHF 77 million for the year ended 31 December 2015. 2 Represents the amount of assets transferred to the respective securitization vehicles. Of the total amount transferred, CHF 2 billion was transferred by UBS (31 December 2015: CHF 3 billion) and CHF 5 billion was transferred by third parties (31 December 2015: CHF 5 billion). 3 Represents total assets transferred to the respective client vehicles. Of the total amount transferred, CHF 5 billion was transferred by UBS (31 December 2015: CHF 1 billion) and CHF 1 billion was transferred by third parties (31 December 2015: CHF 1 billion). 4 Represents the total net asset value of the respective investment funds.

Note 29 Business combinations

In 2016 and 2015, UBS AG did not complete any significant business combinations.

Note 30 Changes in organization and disposals

Measures to improve the resolvability of UBS Group in response to too big to fail requirements in Switzerland and other countries in which UBS Group operates

In December 2014, UBS Group AG completed an exchange offer for the shares of UBS AG and became the holding company of UBS Group. During 2015, UBS Group AG completed a court procedure under article 33 of the Swiss Stock Exchange Act (SESTA procedure) resulting in the cancelation of the shares of the remaining minority shareholders of UBS AG. As a result, UBS Group AG owns 100% of the outstanding shares of UBS AG.

In June 2015, UBS AG transferred its Personal & Corporate Banking and Wealth Management business booked in Switzerland to UBS Switzerland AG.

Also in 2015, a more self-sufficient business and operating model for UBS Limited was implemented. In the second half of 2015, the ownership of the majority of UBS AG's service subsidiaries outside the US was transferred to UBS Business Solutions AG, which was established to act as the UBS Group service company and is a direct subsidiary of UBS Group AG. The purpose of the service company structure is to improve the resolvability of UBS Group by enabling it to maintain operational continuity of critical services should a recovery or resolution event occur.

As of 1 January 2017, UBS AG completed the transfer of the shared service employees in the US to its US service company, UBS Business Solutions US LLC.

As of 1 July 2016, UBS Americas Holding LLC was designated as UBS AG's intermediate holding company for its US subsidiaries as required under the enhanced prudential standards regulations pursuant to the Dodd-Frank Act. UBS Americas Holding LLC holds all of UBS AG's US subsidiaries and is subject to US capital requirements, governance requirements and other prudential regulation.

In addition, UBS AG transferred the majority of the operating subsidiaries of Asset Management to UBS Asset Management AG during 2016. Furthermore, UBS AG merged its Wealth Management subsidiaries in Italy, Luxembourg (including its branches in Austria, Denmark and Sweden), the Netherlands and Spain into UBS Deutschland AG, which was renamed to UBS Europe SE, to establish UBS AG's new European legal entity which is headquartered in Frankfurt, Germany.

Sale of subsidiaries and businesses

In 2016, UBS AG agreed to sell a life insurance subsidiary within Wealth Management, which resulted in the recognition of a loss of CHF 23 million. This sale is currently expected to close in the first half of 2017 subject to customary closing conditions. As of 31 December 2016, the assets and liabilities of this business are presented as a disposal group held for sale within *Other assets* and *Other liabilities* and amounted to CHF 5,137 million and CHF 5,213 million, respectively.

In 2015, UBS AG sold its Alternative Fund Services (AFS) business to Mitsubishi UFJ Financial Group Investor Services. Upon completion of the sale, UBS AG recognized a gain on sale of CHF 56 million and reclassified an associated net foreign currency translation gain of CHF 119 million from *Other comprehensive income* to the income statement. Also during 2015, UBS AG completed the sale of certain subsidiaries and businesses within Wealth Management, which resulted in the recognition of a combined net gain of CHF 169 million.

Restructuring expenses

Restructuring expenses arise from programs that materially change either the scope of business that UBS AG engages in or the manner in which such business is conducted. Restructuring expenses are necessary to effect such programs and include items such as severance and other personnel-related expenses, duplicate headcount costs, impairment and accelerated depreciation of assets, contract termination costs, consulting fees, and related infrastructure and system costs. These costs are presented in the income statement according to the underlying nature of the expense.

Note 30 Changes in organization and disposals

Net restructuring expenses by business division and Corporate Center unit

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Wealth Management	447	323	185
Wealth Management Americas	139	137	55
Personal & Corporate Banking	117	101	64
Asset Management	100	82	50
Investment Bank	577	396	261
Corporate Center	62	194	61
of which: Services	*41*	*138*	*30*
of which: Non-core and Legacy Portfolio	*21*	*56*	*31*
Total net restructuring expenses	1,442	1,233	677
of which: personnel expenses	*731*	*458*	*327*
of which: general and administrative expenses	*700*	*760*	*319*
of which: depreciation and impairment of property, equipment and software	*11*	*12*	*29*
of which: amortization and impairment of intangible assets	*0*	*2*	*2*

Net restructuring expenses by personnel expense category

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Salaries	422	311	145
Variable compensation – performance awards	101	38	35
Variable compensation – other	208	108	138
Contractors	56	46	28
Social security	8	5	4
Pension and other post-employment benefit plans	(76)	(65)	(29)
Other personnel expenses	12	15	6
Total net restructuring expenses: personnel expenses	731	458	327

Net restructuring expenses by general and administrative expense category

	For the year ended		
CHF million	31.12.16	31.12.15	31.12.14
Occupancy	123	109	49
Rent and maintenance of IT and other equipment	93	31	23
Communication and market data services	1	0	0
Administration	28	7	3
Travel and entertainment	12	16	11
Professional fees	162	187	148
Outsourcing of IT and other services	287	316	82
Other[1]	(5)	95	2
Total net restructuring expenses: general and administrative expenses	700	760	319

1 Mainly comprised of onerous real estate lease contracts.

Note 31 Operating leases and finance leases

Information on lease contracts classified as operating leases where UBS is the lessee is provided in Note 31a and information on finance leases where UBS acts as a lessor is provided in Note 31b.

a) Operating lease commitments

As of 31 December 2016, UBS was obligated under a number of non-cancelable operating leases for premises and equipment used primarily for banking purposes. The significant premises leases usually include renewal options and escalation clauses in line with general office rental market conditions, as well as rent adjustments based on price indices. However, the lease agreements do not contain contingent rent payment clauses and purchase options, nor do they impose any restrictions on UBS's ability to pay dividends, engage in debt financing transactions or enter into further lease agreements.

CHF million	31.12.16
Expenses for operating leases to be recognized in:	
2017	708
2018	597
2019	516
2020	447
2021	385
2022 and thereafter	2,351
Subtotal commitments for minimum payments under operating leases	5,004
Less: Sublease rental income commitments	329
Net commitments for minimum payments under operating leases	4,675

CHF million	31.12.16	31.12.15	31.12.14
Gross operating lease expense recognized in the income statement	737	741	759
Sublease rental income	78	70	73
Net operating lease expense recognized in the income statement	659	671	686

b) Finance lease receivables

UBS leases a variety of assets to third parties under finance leases, such as commercial vehicles, production lines, medical equipment, construction equipment and aircraft. At the end of the respective lease term, assets may be sold to third parties or further leased. Lessees may participate in any sales proceeds achieved. Lease expenses cover the cost of the assets less their residual value as well as financing costs.

As of 31 December 2016, unguaranteed residual values of CHF 127 million had been accrued, and the accumulated allowance for uncollectible minimum lease payments receivable amounted to CHF 9 million. No contingent rents were received in 2016.

Lease receivables

CHF million	31.12.16		
	Total minimum lease payments	Unearned finance income	Present value
2017	327	21	306
2018–2021	601	32	568
Thereafter	115	3	112
Total	1,043	57	986

Note 32 Related parties

UBS AG defines related parties as associates (entities which are significantly influenced by UBS AG), joint ventures (entities in which UBS shares control with another party), post-employment benefit plans for UBS AG employees, key management personnel, close family members of key management personnel and entities which are, directly or indirectly, controlled or jointly controlled by key management personnel or their close family members. Key management personnel is defined as members of the Board of Directors (BoD) and Executive Board (EB).

a) Remuneration of key management personnel

The non-independent members of the BoD have top management employment contracts and receive pension benefits upon retirement. Total remuneration of the non-independent members of the BoD and EB members, including those who stepped down during 2016, is provided in the table below.

Remuneration of key management personnel

CHF million	31.12.16	31.12.15	31.12.14
Base salaries and other cash payments[1]	24	21	22
Incentive awards – cash[2]	10	9	8
Annual incentive award under DCCP	20	20	18
Employer's contributions to retirement benefit plans	2	1	2
Benefits in kind, fringe benefits (at market value)	2	2	1
Equity-based compensation[3]	38	39	35
Total	97	92	86

1 Includes role-based allowances that have been made in line with market practice in response to the EU Capital Requirements Directive of 2013 (CRD IV). 2 Includes immediate and deferred cash. 3 Expenses for shares granted are calculated at grant date of the respective award and allocated over the vesting period, generally for 5 years. Refer to Note 27 for more information. In 2016, 2015 and 2014, equity-based compensation was entirely comprised of EOP awards.

The independent members of the BoD do not have employment or service contracts with UBS AG, and thus are not entitled to benefits upon termination of their service on the BoD. Payments to these individuals for their services as external board members amounted to CHF 7.2 million in 2016, CHF 6.7 million in 2015 and CHF 7.1 million in 2014.

b) Equity holdings of key management personnel

Equity holdings of key management personnel

	31.12.16	31.12.15
Number of stock options from equity participation plans held by non-independent members of the BoD and the EB members[1]	620,950	1,401,686
Number of shares held by members of the BoD, EB and parties closely linked to them[2]	3,267,911	3,324,650

1 Refer to Note 27 for more information. 2 Excludes shares granted under variable compensation plans with forfeiture provisions.

Of the share totals above, 95,597 shares were held by close family members of key management personnel on 31 December 2016 and 31 December 2015. No shares were held by entities that are directly or indirectly controlled or jointly controlled by key management personnel or their close family members on 31 December 2016 and 31 December 2015. Refer to Note 27 for more information. As of 31 December 2016, no member of the BoD or EB was the beneficial owner of more than 1% of UBS Group AG's shares.

Note 32 Related parties (continued)

c) Loans, advances and mortgages to key management personnel

Non-independent members of the BoD and EB members have been granted loans, fixed advances and mortgages on substantially the same terms and conditions that are available to other employees, which are based on terms and conditions granted to third parties but are adjusted for differing credit risk. Independent BoD members are granted loans and mortgages under general market conditions.

Movements in the loan, advances and mortgage balances are as follows.

Loans, advances and mortgages to key management personnel[1]

CHF million	2016	2015
Balance at the beginning of the year	33	27
Additions	13	6
Reductions	(13)	(1)
Balance at the end of the year	33[2]	33

1 All loans are secured loans. 2 Excludes CHF 2,684,498 of unused uncommitted credit facilities of one EB and one BoD member.

d) Other related party transactions with entities controlled by key management personnel

In 2016 and 2015, UBS AG did not enter into transactions with entities which are directly or indirectly controlled or jointly controlled by UBS AG's key management personnel or their close family members and as of 31 December 2016, 31 December 2015 and 31 December 2014, there were no outstanding balances related to such transactions. Furthermore, in 2016 and 2015, entities controlled by key management personnel did not sell any goods or provide any services to UBS AG, and therefore did not receive any fees from UBS AG. UBS AG also did not provide services to such entities in 2015 and 2016, and therefore also received no fees.

Note 32 Related parties (continued)

e) Transactions with associates and joint ventures

Loans and outstanding receivables to associates and joint ventures

CHF million	2016	2015
Carrying value at the beginning of the year	476	552
Additions	4	9
Reductions	(8)	(85)
Foreign currency translation	0	0
Carrying value at the end of the year	472	476
of which: unsecured loans	*461*	*464*

Other transactions with associates and joint ventures

	As of or for the year ended	
CHF million	31.12.16	31.12.15
Payments to associates and joint ventures for goods and services received	153	149
Fees received for services provided to associates and joint ventures	3	7
Commitments and contingent liabilities to associates and joint ventures	4	4

→ **Refer to Note 28 for an overview of investments in associates and joint ventures**

f) Receivables and payables from / to UBS Group AG and other subsidiaries of UBS Group AG

CHF million	2016	2015
Receivables		
Loans	681	774
Trading portfolio assets	84	12
Other assets	35	93
Payables		
Due to customers	26,527	12,323
Other liabilities	1,111	943

Note 33 Invested assets and net new money

Invested assets

Invested assets include all client assets managed by or deposited with UBS AG for investment purposes. Invested assets include managed fund assets, managed institutional assets, discretionary and advisory wealth management portfolios, fiduciary deposits, time deposits, savings accounts and wealth management securities or brokerage accounts. All assets held for purely transactional purposes and custody-only assets, including corporate client assets held for cash management and transactional purposes, are excluded from invested assets as UBS AG only administers the assets and does not offer advice on how the assets should be invested. Also excluded are non-bankable assets (e.g., art collections) and deposits from third-party banks for funding or trading purposes.

Discretionary assets are defined as client assets that UBS AG decides how to invest. Other invested assets are those where the client ultimately decides how the assets are invested. When a single product is created in one business division and sold in another, it is counted in both the business division that manages the investment and the one that distributes it. This results in double counting within UBS AG's total invested assets, as both business divisions are independently providing a service to their respective clients, and both add value and generate revenue.

Net new money

Net new money in a reporting period is the amount of invested assets that are entrusted to UBS AG by new and existing clients, less those withdrawn by existing clients and clients who terminated their relationship with UBS AG.

Net new money is calculated using the direct method, under which inflows and outflows to / from invested assets are determined at the client level based on transactions. Interest and dividend income from invested assets are not counted as net new money inflows. Market and currency movements as well as fees, commissions and interest on loans charged are excluded from net new money, as are the effects resulting from any acquisition or divestment of a UBS AG subsidiary or business. Reclassifications between invested assets and custody-only assets as a result of a change in the service level delivered are generally treated as net new money flows; however, where such change in service level directly results from a new externally imposed regulation, the one-time net effect of the implementation is reported as an asset reclassification without net new money impact.

The Investment Bank does not track invested assets and net new money. However, when a client is transferred from the Investment Bank to another business division, this produces net new money even though client assets were already with UBS AG. There were no such transfers between the Investment Bank and other business divisions in 2016 and 2015.

Invested assets and net new money

	For the year ended	
CHF billion	31.12.16	31.12.15
Fund assets managed by UBS	275	282
Discretionary assets	885	830
Other invested assets	1,661	1,577
Total invested assets[1]	2,821	2,689
of which: double count	*176*	*185*
Net new money[1]	27.2	27.7

1 Includes double counts.

Development of invested assets

	For the year ended	
CHF billion	31.12.16	31.12.15
Total invested assets at the beginning of the year[1]	2,689	2,734
Net new money	27	28
Market movements[2]	98	(24)
Foreign currency translation	21	(31)
Other effects	(14)	(16)
of which: acquisitions / (divestments)	*(14)*	*(16)*
Total invested assets at the end of the year[1]	2,821	2,689

1 Includes double counts. 2 Includes interest and dividend income.

Note 34 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of foreign operations into Swiss francs.

	Spot rate		Average rate[1]		
	As of		For the year ended		
	31.12.16	31.12.15	31.12.16	31.12.15	31.12.14
1 USD	1.02	1.00	0.99	0.97	0.92
1 EUR	1.07	1.09	1.09	1.06	1.21
1 GBP	1.26	1.48	1.32	1.47	1.51
100 JPY	0.87	0.83	0.91	0.80	0.86

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a year represent an average of 12 month-end rates, weighted according to the income and expense volumes of all foreign operations with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for UBS AG.

Note 35 Events after the reporting period

Adjusting event subsequent to the publication of the unaudited fourth quarter 2016 report

The 2016 results and the balance sheet in this report differ from those presented in the unaudited fourth quarter 2016 report published on 27 January 2017 as a result of an adjusting event after the reporting period. Provisions for litigation, regulatory and similar matters increased reflecting an agreement in principle to resolve an RMBS matter related to the National Credit Union Association. This adjustment reduced 2016 net profit attributable to shareholders by CHF 102 million.

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Sale of Fund Services units in Luxembourg and Switzerland

On 20 February 2017, UBS announced that it has entered into an agreement to sell Asset Management's fund administration servicing units in Luxembourg and Switzerland to Northern Trust. The transaction is expected to close in the second half of the year, subject to relevant approvals and other customary conditions. These units provide fund administration services for both UBS and third party funds with approximately CHF 420 billion in assets under administration.

Dividend payment from UBS AG to UBS Group AG

On 2 March 2017, the Annual General Meeting of Shareholders of UBS AG approved an ordinary dividend distribution of CHF 2,250 million out of its capital contribution reserve to its shareholder, UBS Group AG.

Note 36 Main differences between IFRS and Swiss GAAP

The consolidated financial statements of UBS AG are prepared in accordance with International Financial Reporting Standards (IFRS). The Swiss Financial Market Supervisory Authority (FINMA) requires financial groups that present their financial statements under IFRS to provide a narrative explanation of the main differences between IFRS and Swiss GAAP (FINMA Circular 2015 / 1 and the Banking Ordinance). Included in this Note are the significant differences in the recognition and measurement between IFRS and the provisions of the Banking Ordinance and the guidelines of FINMA governing true and fair view financial statement reporting pursuant to Article 25 through Article 42 of the Banking Ordinance.

1. Consolidation

Under IFRS, all entities that are controlled by the holding entity are consolidated.

Under Swiss GAAP, controlled entities that are deemed immaterial to UBS AG or that are held temporarily only are exempt from consolidation, but instead are recorded as participations or financial investments.

2. Financial assets available for sale

Under IFRS, financial assets available for sale are carried at fair value. Changes in fair value are recorded directly in equity until an asset is sold, collected or otherwise disposed of, or until an asset is determined to be impaired. At the time an available-for-sale asset is determined to be impaired, the cumulative unrealized loss previously recognized in equity is included in net profit or loss for the respective period. On disposal of a financial asset available for sale, the cumulative unrealized gain or loss previously recognized in equity is reclassified to the income statement.

Under Swiss GAAP, classification and measurement of financial assets designated as available for sale depend on the nature of the asset. Equity instruments with no permanent holding intent, as well as debt instruments, are classified as *Financial investments* and measured at the lower of (amortized) cost or market value. Market value adjustments up to the original cost amount and realized gains or losses upon disposal of the investment are recorded in the income statement as *Other income from ordinary activities.* Equity instruments with a permanent holding intent are classified as participations in *Investments in subsidiaries and other participations* and measured at cost less impairment. Impairment losses are recorded in the income statement as *Impairment of investments in subsidiaries and other participations.* Reversal of impairments up to the original cost amount as well as realized gains or losses upon disposal of the investment are recorded as *Extraordinary income / Extraordinary expenses* in the income statement.

3. Cash flow hedges

Under IFRS, when hedge accounting is applied, the fair value gain or loss on the effective portion of the derivative designated as a cash flow hedge is recognized in equity. When the hedged cash flows materialize, the accumulated unrealized gain or loss is reclassified to the income statement.

Under Swiss GAAP, the effective portion of the fair value change of the derivative instrument used to hedge cash flow exposures is deferred on the balance sheet as *Other assets* or *Other liabilities*. The deferred amounts are released to the income statement when the hedged cash flows materialize.

4. Fair value option

Under IFRS, UBS AG applies the fair value option to certain financial assets and financial liabilities not held for trading. Instruments for which the fair value option is applied are accounted for at fair value with changes in fair value reflected in *Net trading income*. The fair value option is applied primarily to structured debt instruments, certain non-structured debt instruments, high-quality liquid debt securities, structured reverse repurchase and repurchase agreements and securities borrowing agreements, certain structured and non-structured loans as well as loan commitments.

Under Swiss GAAP, the fair value option can only be applied to structured debt instruments that consist of a debt host contract and one or more embedded derivatives that do not relate to own equity. Furthermore, changes in fair value attributable to changes in unrealized own credit are not recognized in the income statement and the balance sheet.

5. Goodwill and intangible assets

Under IFRS, goodwill acquired in a business combination is not amortized but tested annually for impairment. Intangible assets with an indefinite useful life are also not amortized but tested annually for impairment.

Under Swiss GAAP, goodwill and intangible assets with indefinite useful lives are amortized over a period not exceeding five years, unless a longer useful life, which may not exceed 10 years, can be justified.

6. Pension and other post-employment benefit plans

Swiss GAAP permits the use of IFRS or Swiss accounting standards for pension and other post-employment benefit plans, with the election made on a plan-by-plan basis.

UBS AG has elected to apply IFRS (IAS 19) for the non-Swiss defined benefit plans and Swiss GAAP (FER 16) for the Swiss pension plan in its standalone financial statements. The requirements of Swiss GAAP are better aligned with the specific nature of Swiss pension plans, which are hybrid in that they combine elements of defined contribution and defined benefit plans, but are treated as defined benefit plans under IFRS. Key differences between Swiss GAAP and IFRS include the treatment of dynamic elements, such as future salary increases and future interest credits on retirement savings, which are not considered under the static method used in accordance with Swiss GAAP. Also, the discount rate used to determine the defined benefit obligation in accordance with IFRS is based on the yield of high-quality corporate bonds of the market in the respective pension plan country. The discount rate used in accordance with Swiss GAAP, i.e., the technical interest rate, is determined by the Pension Foundation Board based on the expected returns of the Board's investment strategy.

For defined benefit plans, IFRS requires the full defined benefit obligation net of the plan assets to be recorded on the balance sheet, with changes resulting from remeasurements recognized directly in equity. However, for non-Swiss defined benefit plans for which IFRS accounting is elected, changes due to remeasurements are recognized in the income statement of UBS AG standalone under Swiss GAAP.

Swiss GAAP requires that employer contributions to the pension fund are recognized as personnel expenses in the income statement. Further, Swiss GAAP requires an assessment as to whether, based on the financial statements of the pension fund prepared in accordance with Swiss accounting standards (FER 26), an economic benefit to, or obligation of, the employer arises from the pension fund and is recognized in the balance sheet when conditions are met. Conditions for recording a pension asset or liability would be met if, for example, an employer contribution reserve is available or the employer is required to contribute to the reduction of a pension deficit (on an FER 26 basis).

7. Netting of replacement values

Under IFRS, replacement values and related cash collateral are reported on a gross basis unless the restrictive IFRS netting requirements are met: i) existence of master netting agreements and related collateral arrangements that are unconditional and legally enforceable, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS AG and its counterparties, and ii) UBS AG's intention to either settle on a net basis or to realize the asset and settle the liability simultaneously.

Under Swiss GAAP, replacement values and related cash collateral are generally reported on a net basis, provided the master netting and the related collateral agreements are legally enforceable in the event of default, bankruptcy or insolvency of UBS AG's counterparties.

8. Negative interest

Under IFRS, negative interest income arising on a financial asset does not meet the definition of interest income and, therefore, negative interest on financial assets and negative interest on financial liabilities are presented within interest expense and interest income, respectively.

Under Swiss GAAP, negative interest on financial assets is presented within interest income and negative interest on financial liabilities is presented within interest expense.

9. Extraordinary income and expense

Certain non-recurring and non-operating income and expense items, such as realized gains or losses from the disposal of participations, fixed and intangible assets, as well as reversals of impairments of participations and fixed assets, are classified as extraordinary items under Swiss GAAP. This distinction is not available under IFRS.

10. Other presentational differences

Under IFRS, financial statements are comprised of an Income statement, Statement of comprehensive income, Balance sheet, Statement of changes in equity, Statement of cash flows and Notes to the financial statements. Under Swiss GAAP, the concept of other comprehensive income does not exist and consequently no Statement of comprehensive income is required. In addition, various other presentational differences exist.

Note 37 Supplemental guarantor information required under SEC regulations

Guarantee of PaineWebber securities

Prior to its acquisition by UBS in 2000, Paine Webber Group Inc. (PaineWebber) was an SEC registrant. Upon acquisition, PaineWebber was merged into UBS Americas Inc., a wholly owned subsidiary of UBS AG. Following the acquisition, UBS AG entered into a full and unconditional guarantee of the senior notes (Debt Securities) issued by PaineWebber. Under the guarantee, if UBS Americas Inc. fails to make any timely payment under the Debt Securities agreements, the holders of the Debt Securities or the Debt Securities trustee may demand payment from UBS AG without first proceeding against UBS Americas Inc.

As of 31 December 2016, CHF 137 million of these Debt Securities were outstanding. These remaining notes mature in 2017 and 2018.

Guarantee of other securities

Trust preferred securities, which were registered under the US Securities Act and were issued by UBS Preferred Funding Trust IV and UBS Preferred Funding Trust V, both of which are US-domiciled entities that are 100% legally owned by UBS AG, were redeemed in 2016. UBS AG had fully and unconditionally guaranteed these securities.

As of 31 December 2016, UBS Preferred Funding Trust IV and UBS Preferred Funding Trust V had no balances outstanding. These entities are presented in a separate column in the supplemental guarantor information provided in the following tables. Amounts presented in this column are eliminated in the Elimination entries column, as these entities are not consolidated by UBS AG, as UBS AG does not absorb any variability from the performance of these entities.

Joint liability of UBS Switzerland AG

In 2015, the Retail & Corporate and Wealth Management businesses booked in Switzerland were transferred from UBS AG to UBS Switzerland AG through an asset transfer in accordance with the Swiss Merger Act. Under the terms of the asset transfer agreement, UBS Switzerland AG assumed joint liability for contractual obligations of UBS AG existing on the asset transfer date, including the existing guarantee of aforementioned PaineWebber and other securities. To reflect this joint liability, UBS Switzerland AG is presented in a separate column as a subsidiary co-guarantor.

Hard revenue and cost transfers

In 2016, the presentation of hard revenue and cost transfers between legal entities was revised. These transfers relate to services provided from one entity to another and are settled in cash. Hard revenue transfers paid and received are now shown on various income statement line items within *Operating income* based on the nature of the revenue transferred. Previously, such transfers were presented in *Other income*. Furthermore, hard cost transfers received are now shown in *Other income*, whereas previously these were shown in *General and administrative expenses*. Prior period information for 2015 and 2014 was restated accordingly. This change in presentation did not affect operating profit before tax for any entity.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million For the year ended 31 December 2016	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income							
Interest income	8,500	4,151	2,227	25	1,148	(2,269)	13,782
Interest expense	(6,686)	(714)	(1,135)		(919)	2,054	(7,399)
Net interest income	1,815	3,438	1,092	25	229	(215)	6,383
Credit loss (expense) / recovery	(24)	(3)	(6)		(3)		(37)
Net interest income after credit loss expense	1,790	3,434	1,086	25	226	(215)	6,346
Net fee and commission income	1,500	3,782	7,873		3,332	(40)	16,447
Net trading income	3,717	780	454		310	(318)	4,943
Other income	8,113	346	576		1,677	(10,027)	685
Total operating income	15,120	8,343	9,988	25	5,545	(10,600)	28,421
Operating expenses							
Personnel expenses	5,691	2,044	6,243		1,613	0	15,591
General and administrative expenses	5,213	3,507	3,402		2,458	(6,891)	7,690
Depreciation and impairment of property, equipment and software	699	12	184		85	0	980
Amortization and impairment of intangible assets	22	0	60		9	0	91
Total operating expenses	11,625	5,563	9,889		4,165	(6,891)	24,352
Operating profit / (loss) before tax	3,495	2,780	99	25	1,380	(3,710)	4,069
Tax expense / (benefit)	892	589	(1,175)		482	(7)	781
Net profit / (loss)	2,603	2,191	1,274	25	898	(3,703)	3,288
Net profit / (loss) attributable to preferred noteholders	78	0	0	31	0	(31)	78
Net profit / (loss) attributable to non-controlling interests	0	0	0		4	0	4
Net profit / (loss) attributable to shareholders	2,525	2,191	1,274	(6)	894	(3,672)	3,207

1 Amounts presented for UBS AG (standalone) and UBS Switzerland AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the year ended 31 December 2016	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders							
Net profit / (loss)	2,525	2,191	1,274	(6)	894	(3,672)	3,207
Other comprehensive income							
Other comprehensive income that may be reclassified to the income statement							
Foreign currency translation, net of tax	335	0	285		(707)	379	293
Financial assets available for sale, net of tax	(22)	(33)	(8)		(18)	6	(73)
Cash flow hedges, net of tax	(805)	109	0		0	29	(666)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(491)	77	277	0	(725)	415	(447)
Other comprehensive income that will not be reclassified to the income statement							
Defined benefit plans, net of tax	(651)	(54)	(59)		(36)	(25)	(824)
Own credit on financial liabilities designated at fair value, net of tax	(115)						(115)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(766)	(54)	(59)	0	(36)	(25)	(939)
Total other comprehensive income	(1,257)	23	218	0	(761)	390	(1,386)
Total comprehensive income attributable to shareholders	1,268	2,214	1,492	(6)	133	(3,282)	1,820
Total comprehensive income attributable to preferred noteholders	349						349
Total comprehensive income attributable to non-controlling interests	0				3		3
Total comprehensive income attributable to UBS Preferred Funding Trust IV & V							0
Total comprehensive income	1,617	2,214	1,492	(6)	137	(3,282)	2,173

1 Amounts presented for UBS AG (standalone) and UBS Switzerland AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated balance sheet

CHF million As of 31 December 2016	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Assets						
Cash and balances with central banks	40,538	44,528	8,925	13,775	0	107,767
Due from banks	30,008	3,886	3,759	33,420	(57,948)	13,125
Cash collateral on securities borrowed	6,561	6,657	13,173	5,004	(16,284)	15,111
Reverse repurchase agreements	52,782	19,273	14,406	7,507	(27,722)	66,246
Trading portfolio assets	74,172	1,673	4,702	22,729	(6,615)	96,661
of which: assets pledged as collateral which may be sold or repledged by counterparties	*39,596*	*0*	*1,960*	*5,850*	*(17,145)*	*30,260*
Positive replacement values	156,375	5,458	9,496	27,231	(40,149)	158,411
Cash collateral receivables on derivative instruments	22,117	913	2,701	12,068	(11,135)	26,664
Financial assets designated at fair value	35,498	16,416	5,371	41,199	(63,091)	65,024
Loans	94,506	184,241	50,150	11,589	(3,849)	307,004
Financial assets available for sale	8,104	2,046	6,593	3,469	(4,536)	15,676
Financial assets held to maturity	527	8,762	0	0	0	9,289
Investments in subsidiaries and associates	49,904	22	1	27	(48,991)	963
Property, equipment and software	6,961	19	1,075	241	0	8,297
Goodwill and intangible assets	297	0	5,130	1,161	(32)	6,556
Deferred tax assets	1,801	601	9,148	1,595	0	13,144
Other assets	10,645	1,526	9,071	7,241	(3,071)	25,412
Total assets	590,796	296,022	143,702	188,257	(283,424)	935,353
Liabilities						
Due to banks	27,992	13,204	5,288	32,733	(68,572)	10,645
Cash collateral on securities lent	13,193	1,518	2,549	1,841	(16,284)	2,818
Repurchase agreements	16,944	5,385	2,710	9,295	(27,722)	6,612
Trading portfolio liabilities	15,535	154	3,643	9,780	(6,287)	22,825
Negative replacement values	151,274	4,982	9,491	28,213	(40,149)	153,810
Cash collateral payables on derivative instruments	31,585	109	2,409	12,504	(11,135)	35,472
Due to customers	118,934	248,731	85,702	53,474	(56,641)	450,199
Financial liabilities designated at fair value	54,504	0	1	4,559	(4,047)	55,017
Debt issued	70,558	8,330	145	401	(437)	78,998
Provisions	1,483	186	2,168	312	21	4,169
Other liabilities	31,879	2,212	11,100	18,352	(3,099)	60,443
Total liabilities	533,881	284,811	125,206	171,464	(234,353)	881,009
Equity attributable to shareholders	56,273	11,211	18,496	16,754	(49,072)	53,662
Equity attributable to preferred noteholders	642	0	0	0	0	642
Equity attributable to non-controlling interests	0	0	0	40	0	40
Total equity	56,915	11,211	18,496	16,793	(49,072)	54,343
Total liabilities and equity	590,796	296,022	143,702	188,257	(283,424)	935,353

1 Amounts presented for UBS AG (standalone) and UBS Switzerland AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the year ended 31 December 2016	UBS AG[1]	UBS Switzerland AG[1]	UBS Americas Inc.[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	(26,981)	(3,914)	8,979	4,503	(17,413)
Cash flow from / (used in) investing activities					
Purchase of subsidiaries, associates and intangible assets	0	(3)	0	(23)	(26)
Disposal of subsidiaries, associates and intangible assets[2]	93	0	0	0	93
Purchase of property, equipment and software	(1,332)	(16)	(288)	(111)	(1,746)
Disposal of property, equipment and software	175	0	1	32	209
Purchase of financial assets available for sale	(694)	(998)	(2,792)	(2,788)	(7,271)
Disposal and redemption of financial assets available for sale	24,902	21,729	1,694	5,772	54,097
Net (purchase) / redemption of financial assets held to maturity	(527)	(8,468)	0	0	(8,996)
Net cash flow from / (used in) investing activities	22,616	12,245	(1,384)	2,882	36,359
Cash flow from / (used in) financing activities					
Net short-term debt issued / (repaid)	8,229	(7)	(2,975)	193	5,440
Distributions paid on UBS AG shares	(3,434)	0	0	0	(3,434)
Issuance of long-term debt, including financial liabilities designated at fair value	31,484	733	196	1,039	33,453
Repayment of long-term debt, including financial liabilities designated at fair value	(32,279)	(669)	(8)	(1,126)	(34,081)
Dividends paid and repayments of preferred notes	(1,366)	0	0	0	(1,366)
Net changes in non-controlling interests	0	0	0	(5)	(5)
Net activity related to group internal capital transactions and dividends	(1,333)	(2,000)	0	3,333	0
Net cash flow from / (used in) financing activities	1,300	(1,943)	(2,786)	3,435	6
Total cash flow					
Cash and cash equivalents at the beginning of the year	47,902	40,246	7,084	7,731	102,962
Net cash flow from / (used in) operating, investing and financing activities	(3,065)	6,388	4,808	10,821	18,952
Effects of exchange rate differences on cash and cash equivalents	(569)	(4)	0	(234)	(807)
Cash and cash equivalents at the end of the year[3]	44,269	46,629	11,892	18,317	121,107
of which: cash and balances with central banks	*40,486*	*44,528*	*8,925*	*13,775*	*107,715*
of which: due from banks	*2,836*	*2,095*	*2,931*	*4,065*	*11,927*
of which: money market paper[4]	*946*	*7*	*36*	*477*	*1,465*

1 Cash flows generally represent a third-party view from a UBS AG (consolidated) perspective. As a consequence, the non-consolidated UBS Preferred Funding Trusts IV and V are not presented in this table. For the year ended 31 December 2016, these trusts had cash inflows of CHF 1,317 million from operating activities and an equivalent cash outflow for dividends paid to preferred note holders. 2 Includes dividends received from associates. 3 CHF 2,662 million of cash and cash equivalents were restricted. 4 Money market paper is included in the balance sheet under Trading portfolio assets, Financial investments available for sale and Financial assets designated at fair value.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million For the year ended 31 December 2015	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income							
Interest income	9,102	3,039	1,367	63	1,626	(2,020)	13,178
Interest expense	(5,885)	(545)	(501)		(1,410)	1,892	(6,449)
Net interest income	3,218	2,494	866	63	217	(128)	6,729
Credit loss (expense) / recovery	(109)	(12)	0		4	0	(117)
Net interest income after credit loss expense	3,109	2,482	866	63	220	(128)	6,612
Net fee and commission income	2,738	3,001	7,940		3,586	(81)	17,184
Net trading income	5,031	735	355		331	(756)	5,696
Other income	15,371	120	774		89	(15,243)	1,112
Total operating income	26,249	6,338	9,935	63	4,227	(16,208)	30,605
Operating expenses							
Personnel expenses	6,800	1,607	6,281		1,265	0	15,954
General and administrative expenses	5,439	2,621	3,785		2,254	(5,880)	8,219
Depreciation and impairment of property, equipment and software	672	11	159		76	0	918
Amortization and impairment of intangible assets	22	0	73		12	0	107
Total operating expenses	12,934	4,239	10,298		3,607	(5,880)	25,198
Operating profit / (loss) before tax	13,315	2,099	(362)	63	619	(10,327)	5,407
Tax expense / (benefit)	1,136	489	(1,200)		(1,317)	(16)	(908)
Net profit / (loss)	12,180	1,610	837	63	1,936	(10,313)	6,314
Net profit / (loss) attributable to preferred noteholders	77	0	0	31	0	(31)	77
Net profit / (loss) attributable to non-controlling interests	0	0	0		3	0	3
Net profit / (loss) attributable to shareholders	12,103	1,610	837	32	1,933	(10,281)	6,235

1 Amounts presented for UBS AG (standalone) and UBS Switzerland AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the year ended 31 December 2015	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders							
Net profit / (loss)	12,103	1,610	837	32	1,933	(10,281)	6,235
Other comprehensive income							
Other comprehensive income that may be reclassified to the income statement							
Foreign currency translation, net of tax	(11)	0	121		(843)	467	(266)
Financial assets available for sale, net of tax	(51)	43	(21)		(16)	(19)	(64)
Cash flow hedges, net of tax	(503)	(72)	0		0	57	(518)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(564)	(29)	100	0	(859)	504	(848)
Other comprehensive income that will not be reclassified to the income statement							
Defined benefit plans, net of tax	701	(337)	(71)		27	(15)	304
Total other comprehensive income that will not be reclassified to the income statement, net of tax	701	(337)	(71)	0	27	(15)	304
Total other comprehensive income	136	(366)	29	0	(832)	489	(545)
Total comprehensive income attributable to shareholders	12,239	1,244	866	32	1,101	(9,792)	5,690
Total comprehensive income attributable to preferred noteholders	18	0	0	0	0	0	18
Total comprehensive income attributable to non-controlling interests	0	0	0	0	1	0	1
Total comprehensive income attributable to UBS Preferred Funding Trust IV & V	0	0	0	40	0	(40)	0
Total comprehensive income	12,257	1,244	866	72	1,102	(9,832)	5,709

1 Amounts presented for UBS AG (standalone) and UBS Switzerland AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated balance sheet

CHF million As of 31 December 2015	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Assets							
Cash and balances with central banks	45,125	38,701	4,971		2,509	0	91,306
Due from banks	29,225	3,224	12,776		27,510	(60,868)	11,866
Cash collateral on securities borrowed	27,925	7,414	38,007		6,506	(54,268)	25,584
Reverse repurchase agreements	61,253	16,258	21,039		14,586	(45,243)	67,893
Trading portfolio assets	94,132	1,736	5,931	1,310	30,132	(9,194)	124,047
of which: assets pledged as collateral which may be sold or repledged by counterparties	*53,708*	*0*	*3,038*		*2,264*	*(7,066)*	*51,943*
Positive replacement values	175,943	6,033	21,463		28,921	(64,925)	167,435
Cash collateral receivables on derivative instruments	19,026	1,056	5,964		12,678	(14,962)	23,763
Loans	89,052	186,872	47,054		14,554	(24,809)	312,723
Financial assets designated at fair value	6,303	0	199		2,628	(3,322)	5,808
Financial assets available for sale	32,044	23,184	5,360		5,996	(4,042)	62,543
Investments in subsidiaries and associates	45,689	14	1		1	(44,751)	954
Property, equipment and software	6,499	15	972		197	0	7,683
Goodwill and intangible assets	347	0	5,112		1,139	(30)	6,568
Deferred tax assets	2,332	845	7,766		1,890	0	12,833
Other assets	12,108	1,255	10,041		3,111	(4,266)	22,249
Total assets	647,006	286,608	186,654	1,310	152,359	(330,680)	943,256
Liabilities							
Due to banks	31,725	18,948	26,320	4	5,782	(70,944)	11,836
Cash collateral on securities lent	34,094	2,493	23,437		2,274	(54,268)	8,029
Repurchase agreements	20,658	6,505	11,490		16,244	(45,243)	9,653
Trading portfolio liabilities	21,193	128	3,919		11,317	(7,420)	29,137
Negative replacement values	170,718	5,655	21,109		29,877	(64,928)	162,430
Cash collateral payables on derivative instruments	31,399	374	6,438		15,033	(14,962)	38,282
Due to customers	102,483	231,252	53,633		34,002	(18,848)	402,522
Financial liabilities designated at fair value	61,630	0	288		4,675	(3,598)	62,995
Debt issued	70,792	8,274	3,126		321	(153)	82,359
Provisions	1,680	179	1,969		319	17	4,163
Other liabilities	40,255	1,806	16,683	1	20,179	(4,318)	74,606
Total liabilities	586,628	275,611	168,411	4	140,023	(284,664)	886,013
Equity attributable to shareholders	58,423	10,997	18,243	4	12,296	(44,714)	55,248
Equity attributable to preferred noteholders	1,954	0	0	1,302	0	(1,302)	1,954
Equity attributable to non-controlling interests	0	0	0	0	41	0	41
Total equity	60,378	10,997	18,243	1,306	12,336	(46,016)	57,243
Total liabilities and equity	647,006	286,608	186,654	1,310	152,359	(330,680)	943,256

1 Amounts presented for UBS AG (standalone) and UBS Switzerland AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the year ended 31 December 2015	UBS AG[1]	UBS Switzerland AG[1]	UBS Americas Inc.[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	(1,457)	2,681	(525)	1,298	1,997
Cash flow from / (used in) investing activities					
Purchase of subsidiaries, associates and intangible assets	(12)	0	1	0	(13)
Disposal of subsidiaries, associates and intangible assets[2]	464	0	13	0	477
Purchase of property, equipment and software	(1,423)	(5)	(299)	(114)	(1,841)
Disposal of property, equipment and software	503	0	9	35	547
Purchase of financial assets available for sale	(66,659)	(18,686)	(2,722)	(13,123)	(101,189)
Disposal and redemption of financial assets available for sale	51,515	22,501	2,952	16,616	93,584
Net (purchase) / redemption of financial assets held to maturity					
Net cash flow from / (used in) investing activities	(15,613)	3,810	(47)	3,415	(8,434)
Cash flow from / (used in) financing activities					
Net short-term debt issued / (repaid)	(5,603)	24	(826)	0	(6,404)
Distributions paid on UBS AG shares	(2,626)	0	0	0	(2,626)
Issuance of long-term debt, including financial liabilities designated at fair value	46,882	772	7	129	47,790
Repayment of long-term debt, including financial liabilities designated at fair value	(42,415)	(402)	(129)	(1,274)	(44,221)
Dividends paid and repayments of preferred notes	(108)	0	0	0	(108)
Net changes in non-controlling interests	0	0	0	(5)	(5)
Net activity related to group internal capital transactions and dividends[3]	(30,512)	33,293	(114)	(2,666)	0
Net cash flow from / (used in) financing activities	(34,382)	33,687	(1,062)	(3,817)	(5,573)
Total cash flow					
Cash and cash equivalents at the beginning of the year	100,662	0	8,960	7,093	116,715
Net cash flow from / (used in) operating, investing and financing activities	(51,451)	40,178	(1,634)	896	(12,010)
Effects of exchange rate differences on cash and cash equivalents	(1,309)	67	(241)	(259)	(1,742)
Cash and cash equivalents at the end of the year[4]	47,902	40,246	7,084	7,731	102,962
of which: cash and balances with central banks	*45,125*	*38,701*	*4,971*	*2,509*	*91,306*
of which: due from banks	*2,072*	*1,438*	*2,009*	*5,213*	*10,732*
of which: money market paper[5]	*704*	*107*	*104*	*9*	*924*

1 Cash flows generally represent a third-party view from a UBS AG (consolidated) perspective. As a consequence, the non-consolidated UBS Preferred Funding Trusts IV and V are not presented in this table. For the year ended 31 December 2015, these trusts had cash inflows of CHF 77 million from operating activities and an equivalent cash outflow for dividends paid to preferred note holders. 2 Includes dividends received from associates. 3 Includes a transfer of cash and cash equivalents from UBS AG to UBS Switzerland AG of CHF 33,283 million. Refer to "Establishment of UBS Switzerland AG" in the "Legal entity financial and regulatory information" section of the UBS Group AG Annual Report 2015 for more information on the business transfer from UBS AG to UBS Switzerland AG. 4 CHF 3,963 million of cash and cash equivalents were restricted. 5 Money market paper is included in the balance sheet under Trading portfolio assets and Financial investments available for sale.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million

For the year ended 31 December 2014	UBS AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income					
Interest income	11,585	1,591	1,160	(1,143)	13,194
Interest expense	(6,287)	(597)	(898)	1,143	(6,639)
Net interest income	5,298	995	262	0	6,555
Credit loss (expense) / recovery	(108)	9	9	13	(78)
Net interest income after credit loss expense	5,190	1,003	270	13	6,477
Net fee and commission income	6,111	7,288	3,799	(122)	17,076
Net trading income	2,750	438	237	416	3,841
Other income	7,967	438	580	(8,354)	632
Total operating income	22,019	9,168	4,887	(8,047)	28,026
Operating expenses					
Personnel expenses	7,991	5,806	1,483	0	15,280
General and administrative expenses	8,004	2,759	1,966	(3,352)	9,377
Depreciation and impairment of property, equipment and software	595	139	83	0	817
Amortization and impairment of intangible assets	7	59	16	0	83
Total operating expenses	16,597	8,764	3,548	(3,352)	25,557
Operating profit / (loss) before tax	5,421	404	1,339	(4,695)	2,469
Tax expense / (benefit)	949	(2,375)	248	(2)	(1,180)
Net profit / (loss)	4,472	2,779	1,091	(4,693)	3,649
Net profit / (loss) attributable to preferred noteholders	142	0	0	0	142
Net profit / (loss) attributable to non-controlling interests	0	0	5	0	5
Net profit / (loss) attributable to shareholders	4,330	2,779	1,086	(4,693)	3,502

1 Amounts presented for UBS AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG (consolidated) financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the year ended 31 December 2014	UBS AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders					
Net profit / (loss)	4,330	2,779	1,086	(4,693)	3,502
Other comprehensive income					
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation, net of tax	325	928	1,500	(920)	1,834
Financial assets available for sale, net of tax	32	78	37	(6)	140
Cash flow hedges, net of tax	693	0	0	0	693
Total other comprehensive income that may be reclassified to the income statement, net of tax	1,050	1,006	1,537	(926)	2,667
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans, net of tax	(999)	(167)	(56)	14	(1,208)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(999)	(167)	(56)	14	(1,208)
Total other comprehensive income	51	838	1,481	(912)	1,459
Total comprehensive income attributable to shareholders	4,381	3,617	2,567	(5,605)	4,961
Total comprehensive income attributable to preferred noteholders	260	0	0	0	260
Total comprehensive income attributable to non-controlling interests	0	0	7	0	7
Total comprehensive income	4,641	3,617	2,575	(5,605)	5,229

1 Amounts presented for UBS AG (standalone) and UBS Switzerland AG (standalone) represent IFRS-standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Disclosure for legal entities" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the year ended 31 December 2014	UBS AG[1]	UBS Americas Inc.[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	7,438	(1,814)	1,608	7,231
Cash flow from / (used in) investing activities				
Purchase of subsidiaries, associates and intangible assets	(18)	0	0	(18)
Disposal of subsidiaries, associates and intangible assets[2]	41	9	20	70
Purchase of property, equipment and software	(1,521)	(300)	(94)	(1,915)
Disposal of property, equipment and software	313	14	23	350
Purchase of financial assets available for sale	(115,807)	(1,965)	(18,559)	(136,330)
Disposal and redemption of financial assets available for sale	123,581	1,397	15,460	140,438
Net (purchase) / redemption of financial assets held to maturity				
Net cash flow from / (used in) investing activities	6,589	(845)	(3,149)	2,596
Cash flow from / (used in) financing activities				
Net short-term debt issued / (repaid)	(3,984)	0	1,064	(2,921)
Net movements in treasury shares and own equity derivative activity	(719)	0	0	(719)
Distributions paid on UBS AG shares	(938)	0	0	(938)
Issuance of long-term debt, including financial liabilities designated at fair value	40,272	24	686	40,982
Repayment of long-term debt, including financial liabilities designated at fair value	(32,083)	(494)	(1,632)	(34,210)
Dividends paid and repayments of preferred notes	(110)	0	0	(110)
Net changes in non-controlling interests	0	0	(3)	(3)
Net activity related to group internal capital transactions and dividends	(319)	0	319	0
Net cash flow from / (used in) financing activities	2,118	(470)	434	2,081

Total cash flow

Cash and cash equivalents at the beginning of the year	77,123	11,249	7,911	96,284
Net cash flow from / (used in) operating, investing and financing activities	16,145	(3,129)	(1,107)	11,908
Effects of exchange rate differences on cash and cash equivalents	7,394	840	289	8,522
Cash and cash equivalents at the end of the year[3]	100,662	8,960	7,093	116,715
of which: cash and balances with central banks	*95,711*	*6,440*	*1,923*	*104,073*
of which: due from banks	*4,119*	*2,489*	*5,164*	*11,772*
of which: money market paper[4]	*832*	*31*	*6*	*869*

1 Cash flow generally represent a third-party view from a UBS AG (consolidated) perspective. 2 Includes dividends received from associates. 3 CHF 4,178 million of cash and cash equivalents were restricted. 4 Money market paper is included in the balance sheet under Trading portfolio assets and Financial investments available for sale.

Appendix 2 – Excerpts from the UBS AG Standalone Financial Statements and Regulatory Information for the Year Ended 31 December 2016

It should be noted that the term "pro-forma" as used in this Appendix 2 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

UBS AG standalone financial statements (audited)

Income statement

		For the year ended		% change from
CHF million	Note	31.12.16	31.12.15[1]	31.12.15
Interest and discount income		5,776	6,204	(7)
Interest and dividend income from trading portfolio		2,060	2,602	(21)
Interest and dividend income from financial investments		165	199	(17)
Interest expense		(6,251)	(5,917)	6
Gross interest income		1,749	3,088	(43)
Credit loss (expense) / recovery		(32)	(158)	(80)
Net interest income		1,717	2,929	(41)
Fee and commission income from securities and investment business and other fee and commission income		2,154	3,526	(39)
Credit-related fees and commissions		217	285	(24)
Fee and commission expense		(829)	(1,012)	(18)
Net fee and commission income		1,541	2,799	(45)
Net trading income	3	3,930	3,725	6
Net income from disposal of financial investments		117	150	(22)
Dividend income from investments in subsidiaries and other participations		3,041	1,218	150
Income from real estate holdings		563	565	0
Sundry ordinary income	4	4,740	4,706	1
Sundry ordinary expenses	4	(539)	(831)	(35)
Other income from ordinary activities		7,922	5,809	36
Total operating income		15,111	15,263	(1)
Personnel expenses	5	6,350	6,438	(1)
General and administrative expenses	6	5,073	5,615	(10)
Subtotal operating expenses		11,422	12,053	(5)
Impairment of investments in subsidiaries and other participations		1,099	413	166
Depreciation and impairment of property, equipment and software		700	674	4
Amortization and impairment of goodwill and other intangible assets		22	22	0
Changes in provisions and other allowances and losses		109	25	336
Total operating expenses		13,352	13,187	1
Operating profit		1,759	2,076	(15)
Extraordinary income	7	1,637	10,264	(84)
Extraordinary expenses	7	2	136	(99)
Tax expense / (benefit)	8	150	220	(32)
Net profit / (loss)		3,244	11,984	(73)

1 Comparative amounts presented for the year ended 31 December 2015 include the results of the Personal & Corporate Banking and Wealth Management businesses booked in Switzerland for the first three months of 2015. These businesses were transferred from UBS AG to UBS Switzerland AG effective 1 April 2015. Refer to "Establishment of UBS Switzerland AG" in the "Legal entity financial and regulatory information" section of the UBS Group AG Annual Report 2015 for more information.

Balance sheet

CHF million	Note	31.12.16	31.12.15	% change from 31.12.15
Assets				
Cash and balances with central banks		40,778	45,125	(10)
Due from banks		40,700	40,611	0
Receivables from securities financing transactions	9	59,778	90,479	(34)
of which: cash collateral on securities borrowed		*6,561*	*27,925*	*(77)*
of which: reverse repurchase agreements		*53,217*	*62,553*	*(15)*
Due from customers	10, 11	103,880	97,401	7
Mortgage loans	10, 11	4,312	4,679	(8)
Trading portfolio assets	12	74,282	94,210	(21)
Positive replacement values	13	20,951	20,987	0
Financial investments	14	34,669	27,528	26
Accrued income and prepaid expenses		1,595	1,708	(7)
Investments in subsidiaries and other participations		48,262	43,791	10
Property, equipment and software		6,961	6,503	7
Goodwill and other intangible assets		13	36	(64)
Other assets	15	3,295	3,986	(17)
Total assets		439,476	477,045	(8)
of which: subordinated assets		*6,851*	*5,752*	*19*
of which: subject to mandatory conversion and / or debt waiver		*4,521*	*4,020*	*12*
Liabilities				
Due to banks		32,781	36,669	(11)
Payables from securities financing transactions	9	30,275	55,457	(45)
of which: cash collateral on securities lent		*13,193*	*34,094*	*(61)*
of which: repurchase agreements		*17,082*	*21,363*	*(20)*
Due to customers		152,690	144,842	5
Trading portfolio liabilities	12	15,535	21,179	(27)
Negative replacement values	13	23,896	24,669	(3)
Financial liabilities designated at fair value	12, 18	51,806	58,104	(11)
Bonds issued		71,215	72,750	(2)
Accrued expenses and deferred income		4,125	4,356	(5)
Other liabilities	15	4,113	5,505	(25)
Provisions	11	1,501	1,786	(16)
Total liabilities		387,937	425,316	(9)
Equity				
Share capital	19	386	386	0
General reserve		38,149	33,669	13
of which: statutory capital reserve		*38,149*	*38,149*	*0*
of which: capital contribution reserve		*38,149*	*38,149*	*0*
of which: statutory earnings reserve		*0*	*(4,480)*	*(100)*
Voluntary earnings reserve		9,760	5,689	72
Net profit / (loss) for the period		3,244	11,984	(73)
Total equity		51,539	51,728	0
Total liabilities and equity		439,476	477,045	(8)
of which: subordinated liabilities		*17,692*	*16,139*	*10*
of which: subject to mandatory conversion and / or debt waiver		*15,877*	*11,858*	*34*

Balance sheet (continued)

CHF million	31.12.16	31.12.15	% change from 31.12.15
Off-balance sheet items			
Contingent liabilities, gross	25,395	27,787	(9)
Sub-participations	(1,905)	(1,866)	2
Contingent liabilities, net	23,489	25,920	(9)
of which: guarantees to third parties related to subsidiaries	*17,505*	*19,392*	*(10)*
of which: credit guarantees and similar instruments	*3,607*	*4,224*	*(15)*
of which: performance guarantees and similar instruments	*68*	*26*	*162*
of which: documentary credits	*2,310*	*2,278*	*1*
Irrevocable commitments, gross	47,273	50,901	(7)
Sub-participations	(1,512)	(1,559)	(3)
Irrevocable commitments, net	45,761	49,342	(7)
of which: loan commitments	*45,761*	*49,342*	*(7)*
Forward starting transactions[1]	10,549	4,195	151
of which: reverse repurchase agreements	*7,238*	*1,626*	*345*
of which: securities borrowing agreements	*36*	*6*	*500*
of which: repurchase agreements	*3,267*	*2,561*	*28*
of which: securities lending agreements	*8*	*2*	*300*
Liabilities for calls on shares and other equity instruments	5	7	(29)

1 Cash to be paid in the future by either UBS AG or the counterparty.

Off-balance sheet items

Off-balance sheet items include indemnities and guarantees issued by UBS AG for the benefit of subsidiaries and creditors of subsidiaries.

Where the indemnity amount issued by UBS AG is not specifically defined, the indemnity relates to the solvency or minimum capitalization of a subsidiary, and therefore no amount is included in the table above.

In addition, UBS AG is jointly and severally liable for the combined value added tax (VAT) liability of UBS entities that belong to the VAT group of UBS in Switzerland. This contingent liability is not included in the table above.

Guarantee to UBS Limited

UBS AG has issued a guarantee for the benefit of each counterparty of UBS Limited. Under this guarantee, UBS AG irrevocably and unconditionally guarantees each and every obligation that UBS Limited enters into. UBS AG promises to pay to that counterparty on demand any unpaid balance of such liabilities under the terms of the guarantee.

Joint and several liability

In June 2015, the Personal & Corporate Banking and Wealth Management businesses booked in Switzerland were transferred from UBS AG to UBS Switzerland AG through an asset transfer in accordance with the Swiss Merger Act. Under the Swiss Merger Act, UBS AG assumed joint liability for obligations existing on the asset transfer date, 14 June 2015, that were transferred to UBS Switzerland AG, excluding the collateralized portion of secured contractual obligations.

As of the asset transfer date, this joint liability amounted to approximately CHF 260 billion. UBS AG has no liability for new obligations incurred by UBS Switzerland AG after the asset transfer date. The joint liability amount declines as obligations mature, terminate or are novated following the asset transfer date.

As of 31 December 2016, the joint liability of UBS AG for contractual obligations of UBS Switzerland AG amounted to less than CHF 1 billion compared with CHF 55 billion as of 31 December 2015. As of 31 December 2016, the probability of an outflow under this joint and several liability was assessed to be remote, and as a result, the table above does not include any exposures arising under this joint and several liability.

→ **Refer to "Establishment of UBS Switzerland AG" in the "Legal entity financial and regulatory information" section of the UBS Group AG Annual Report 2015 for more information**

Limited indemnity UBS Europe SE

In connection with the establishment of UBS Europe SE in 2016, UBS AG entered into an agreement with UBS Europe SE under which UBS AG would provide UBS Europe SE with limited indemnification of payment obligations that may arise from certain litigation, regulatory and similar matters.

As of 31 December 2016, the amount of such potential payment obligations could not be reliably estimated and the table above does therefore not include any amount related to this limited indemnification.

Statement of changes in equity

CHF million	Share capital	Statutory capital reserve	Statutory earnings reserve	Voluntary earnings reserve	Net profit / (loss) for the period	Total equity
Balance as of 1 January 2015	**384**	**40,782**	**(12,329)**	**5,689**	**7,849**	**42,376**
Capital increase	1					1
Dividends and other distributions		(2,633)				(2,633)
Net profit / (loss) appropriation			7,849		(7,849)	0
Net profit / (loss) for the period					11,984	11,984
Balance as of 31 December 2015	**386**	**38,149**	**(4,480)**	**5,689**	**11,984**	**51,728**
Balance as of 1 January 2016	**386**	**38,149**	**(4,480)**	**5,689**	**11,984**	**51,728**
Capital increase						0
Dividends and other distributions			(3,434)			(3,434)
Net profit / (loss) appropriation			7,914	4,070	(11,984)	0
Net profit / (loss) for the period					3,244	3,244
Balance as of 31 December 2016	**386**	**38,149**	**0**	**9,760**	**3,244**	**51,539**

Statement of appropriation of retained earnings and proposed dividend distribution out of capital contribution reserve

Proposed appropriation of retained earnings

The Board of Directors proposes that the Annual General Meeting of Shareholders (AGM) on 2 March 2017 approve the following appropriation of retained earnings.

	For the year ended
CHF million	31.12.16
Net profit for the period	3,244
Retained earnings carried forward	0
Total retained earnings available for appropriation	3,244
Appropriation of retained earnings	
Appropriation to voluntary earnings reserve	(3,244)
Retained earnings carried forward	0

Proposed dividend distribution out of capital contribution reserve

The Board of Directors proposes that the Annual General Meeting of Shareholders (AGM) on 2 March 2017 approve an ordinary dividend distribution of CHF 2,250 million out of the capital contribution reserve.

	For the year ended
CHF million	31.12.16
Total statutory capital reserve: capital contribution reserve before distribution[1]	38,149
Distribution of capital contribution reserve within statutory capital reserve	(2,250)
Total capital contribution reserve after distribution	35,899

1 Effective 1 January 2011, the Swiss withholding tax law provides that payments out of the capital contribution reserve are not subject to withholding tax. This law has led to interpretational differences between the Swiss Federal Tax Administration and companies about the qualifying amounts of capital contribution reserve and the disclosure in the financial statements. In view of this, the Swiss Federal Tax Administration has confirmed that UBS AG would be able to repay to shareholders CHF 23.0 billion of disclosed capital contribution reserve (status as of 1 January 2015) without being subject to the withholding tax deduction that applies to dividends paid out of retained earnings. This amount has not changed subsequent to the dividend payment in 2016 out of retained earnings. The decision about the remaining amount has been deferred to a future point in time.

Note 1 Name, legal form and registered office

UBS AG is incorporated and domiciled in Switzerland. Its registered offices are at Bahnhofstrasse 45, CH-8001 Zurich and Aeschenvorstadt 1, CH-4051 Basel, Switzerland. UBS AG operates under the Swiss Code of Obligations and Swiss federal banking law as a corporation limited by shares (Aktiengesellschaft), a corporation that has issued shares of common stock to investors. UBS AG is 100% owned by UBS Group AG, the ultimate parent of the UBS Group.

Note 2 Accounting policies

UBS AG standalone financial statements are prepared in accordance with Swiss GAAP (FINMA Circular 2015 / 1 and Banking Ordinance) and represent "reliable assessment statutory single-entity financial statements". The accounting policies are principally the same as for the consolidated financial statements of UBS AG outlined in Note 1 to the consolidated financial statements of UBS AG included in the UBS Group AG and UBS AG Annual Report 2016. Major differences between the Swiss GAAP requirements and International Financial Reporting Standards are described in Note 36 to the consolidated financial statements of UBS AG. The significant accounting policies applied for the standalone financial statements of UBS AG are discussed below.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2016 for more information**

Risk management

UBS AG is fully integrated into the Group-wide risk management process described in the audited part of the "Risk management and control" section of the UBS Group AG and UBS AG Annual Report 2016.

Further information on the use of derivative instruments and hedge accounting is provided in Notes 1 and 12 to the consolidated financial statements of UBS AG.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2016 for more information**

Compensation policy

The compensation structure and processes of UBS AG conform to the compensation principles and framework of UBS Group AG. For detailed information refer to the Compensation Report of UBS Group AG.

Foreign currency translation

Transactions denominated in foreign currency are translated into Swiss francs at the spot exchange rate on the date of the transaction. At the balance sheet date, all monetary assets and liabilities, as well as equity instruments recorded in *Trading portfolio assets* and *Financial investments* denominated in foreign currency, are translated into Swiss francs using the closing exchange rate. Non-monetary items measured at historic cost are translated at the spot exchange rate on the date of the transaction. Assets and liabilities of foreign branches are translated into Swiss francs at the closing exchange rate. Income and expense items of foreign branches are translated at weighted average exchange rates for the period. All currency translation effects are recognized in the income statement.

The main currency translation rates used by UBS AG are provided in Note 34 to the consolidated financial statements of UBS AG.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2016 for more information**

Structured debt instruments

Structured debt instruments consist of a host contract and one or more embedded derivatives that do not relate to UBS AG's own equity. The embedded derivatives are assessed for bifurcation for measurement purposes and presented in the same balance sheet line as the host contract. By applying the fair value option, the vast majority of structured debt instruments are measured at fair value as a whole and recognized in *Financial liabilities designated at fair value.* Structured debt instruments comprise structured debt instruments issued and structured over-the-counter debt instruments. The fair value option for structured debt instruments can be applied only if the following criteria are cumulatively met:

- the structured debt instrument is measured on a fair value basis and is subject to risk management that is equivalent to risk management for trading activities;
- the application of the fair value option eliminates or significantly reduces an accounting mismatch that would otherwise arise; and
- changes in fair value attributable to changes in unrealized own credit are not recognized in the income statement and the balance sheet.

Fair value changes related to *Financial liabilities designated at fair value,* excluding changes in unrealized own credit, are recognized in *Net trading income.* Interest expense on *Financial liabilities designated at fair value* is recognized in *Interest expense.*

→ **Refer to Note 18 for more information**

Note 2 Accounting policies (continued)

Investments in subsidiaries and other participations

Investments in subsidiaries and other participations are equity interests that are held to carry on the business of UBS AG or for other strategic purposes. They include all subsidiaries directly held by UBS AG through which UBS AG conducts its business on a global basis. The investments are measured individually and carried at cost less impairment. The carrying value is tested for impairment when indications for a decrease in value exist, which include incurrence of significant operating losses or a severe depreciation of the currency in which the investment is denominated. If an investment in a subsidiary is impaired, its value is generally written down to the net asset value. Subsequent recoveries in value are recognized up to the original cost value based on either the increased net asset value or a value above the net asset value if, in the opinion of management, forecasts of future profitability provide sufficient evidence that a carrying value above net asset value is supported. Management may exercise its discretion as to what extent and in which period a recovery in value is recognized.

Impairments of investments are presented *as Impairment of investments in subsidiaries and other participations*. Reversals of impairments are presented as *Extraordinary income* in the income statement. Impairments and partial or full reversals of impairments for a subsidiary during the same annual period are determined on a net basis.

Deferred taxes

Deferred tax assets are not recognized in UBS AG's standalone financial statements. However, deferred tax liabilities may be recognized for taxable temporary differences. Changes in the deferred tax liability balance are recognized in the income statement.

Services provided to and received from subsidiaries, affiliated entities and UBS Group AG

Services provided to and received from UBS Group AG or any of its subsidiaries are settled in cash as hard cost transfers or hard revenue transfers paid or received.

When the nature of the underlying transaction between UBS AG and UBS Group AG or any of its subsidiaries contains a single, clearly identifiable service element, related income and expenses are presented in the respective income statement line item, e.g., *Fee and commission income from securities and investment business, Other fee and commission income, Fee and commission expense, Net trading income* or *General and administrative expenses*. To the extent the nature of the underlying transaction contains various service elements and is not clearly attributable to a particular income statement line item, related income and expenses are presented in *Sundry ordinary income* and *Sundry ordinary expenses*.

→ **Refer to Notes 4 and 6 for more information**

Pension and other post-employment benefit plans

Swiss GAAP permits the use of IFRS or Swiss accounting standards for pension and other post-employment benefit plans, with the election made on a plan-by-plan basis.

UBS AG has elected to apply Swiss GAAP (FER 16) for the Swiss pension plan in its standalone financial statements. The requirements of Swiss GAAP are better aligned with the specific nature of Swiss pension plans, which are hybrid in that they combine elements of defined contribution and defined benefit plans, but are treated as defined benefit plans under IFRS. Swiss GAAP requires that the employer contributions to the pension fund are recognized as *Personnel expenses* in the income statement. The employer contributions to the Swiss pension fund are determined as a percentage of contributory compensation. Furthermore, Swiss GAAP requires an assessment as to whether, based on the financial statements of the pension fund prepared in accordance with Swiss accounting standards (FER 26), an economic benefit to, or obligation of, UBS AG arises from the pension fund and is recognized in the balance sheet when conditions are met. Conditions for recording a pension asset or liability would be met if, for example, an employer contribution reserve is available or UBS AG is required to contribute to the reduction of a pension deficit (on a FER 26 basis).

Key differences between Swiss GAAP and IFRS include the treatment of dynamic elements, such as future salary increases and future interest credits on retirement savings, which are not considered under the static method used in accordance with Swiss GAAP. Also, the discount rate used to determine the defined benefit obligation in accordance with IFRS is based on the yield of high-quality corporate bonds of the market in the respective pension plan country. The discount rate used in accordance with Swiss GAAP, i.e., the technical interest rate, is determined by the Pension Foundation Board based on the expected returns of the Board's investment strategy.

→ **Refer to Note 20 for more information**

UBS AG has elected to apply IFRS (IAS 19) for its non-Swiss defined benefit plans. However, remeasurements of the defined benefit obligation and the plan assets are recognized in the income statement rather than directly in equity. For corresponding disclosures in accordance with IAS 19 requirements, refer to Note 26 to the consolidated financial statements of UBS AG.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2016 for more information**

Note 2 Accounting policies (continued)

Subordinated assets and liabilities

Subordinated assets are comprised of claims that, based on an irrevocable written declaration, in the event of liquidation, bankruptcy or restructuring of the debtor, rank after the claims of all other creditors and may not be offset against amounts payable to the debtor nor secured by its assets. Subordinated liabilities are comprised of corresponding obligations.

Subordinated assets and liabilities that contain a point-of-non-viability clause in accordance with Swiss capital requirements per articles 29 and 30 of the Capital Adequacy Ordinance are disclosed as being *subject to mandatory conversion and / or debt waiver* and provide for the claim or the obligation to be written off or converted into equity in the event that the issuing bank reaches a point of non-viability.

Dispensations in the standalone financial statements

As UBS AG prepares consolidated financial statements in accordance with IFRS, UBS AG is exempt from various disclosures in the standalone financial statements. The dispensations include the management report, the statement of cash flows and various note disclosures, as well as the publication of interim financial statements.

Note 3a Net trading income by business

	For the year ended		% change from
CHF million	31.12.16	31.12.15	31.12.15
Investment Bank	3,203	3,520	(9)
of which: Corporate Client Solutions	*(2)*	*318*	
of which: Investor Client Services	*3,205*	*3,203*	*0*
Other business divisions and Corporate Center	727	205	255
Total net trading income	3,930	3,725	6

Note 3b Net trading income by underlying risk category

	For the year ended		% change from
CHF million	31.12.16	31.12.15	31.12.15
Interest rate instruments (including funds)	939	(346)	
Foreign exchange instruments	1,208	1,912	(37)
Equity instruments (including funds)	1,797	1,822	(1)
Credit instruments	(44)	290	
Precious metals / commodities	31	47	(34)
Total net trading income	3,930	3,725	6
of which: net gains / (losses) from financial liabilities designated at fair value[1]	*(1,416)*	*3,139*	

1 Excludes fair value changes of hedges related to financial liabilities designated at fair value and foreign currency effects arising from translating foreign currency transactions into the respective functional currency, both of which are reported within Net trading income.

Note 4 Sundry ordinary income and expenses

	For the year ended		% change from
CHF million	31.12.16	31.12.15	31.12.15
Gains from sale of loans and receivables	0	23	(100)
Income from hard cost transfers[1]	4,699	4,580	3
Other	41	104	(61)
Total sundry ordinary income	4,740	4,706	1
Losses from early redemption of debt	(2)	(275)	(99)
Expenses from hard revenue transfers	(440)	(497)	(11)
Other	(97)	(59)	64
Total sundry ordinary expenses	(539)	(831)	(35)

1 Represents income received from UBS Group AG and subsidiaries in the UBS Group for services provided by UBS AG. Services provided by UBS AG primarily related to Corporate Center functions.

Note 5 Personnel expenses

	For the year ended		% change from
CHF million	31.12.16	31.12.15	31.12.15
Salaries	2,901	3,459	(16)
Variable compensation – performance awards	1,448	1,707	(15)
Variable compensation – other	164	191	(14)
Contractors	331	303	9
Social security	314	408	(23)
Pension and other post-employment benefit plans	966	122	692
of which: value adjustments for economic benefits or obligations from pension funds[1]	*620*	*(318)*	
Wealth Management Americas: Financial advisor compensation	9	8	13
Other personnel expenses	218	240	(9)
Total personnel expenses	6,350	6,438	(1)

1 Reflects the remeasurement of the defined benefit obligation and return on plan assets excluding amounts included in interest income for the non-Swiss defined benefit plans, for which IAS 19 is applied.

Note 6 General and administrative expenses

	For the year ended		% change from
CHF million	31.12.16	31.12.15	31.12.15
Occupancy	589	588	0
Rent and maintenance of IT equipment	384	383	0
Communication and market data services	313	322	(3)
Administration	1,334	1,413	(6)
of which: hard cost transfers paid[1]	*929*	*955*	*(3)*
Marketing and public relations	231	283	(18)
Travel and entertainment	167	226	(26)
Fees to audit firms	44	53	(17)
of which: financial and regulatory audits	*41*	*44*	*(7)*
of which: audit-related services	*2*	*6*	*(67)*
of which: tax and other services	*1*	*3*	*(67)*
Other professional fees	584	776	(25)
Outsourcing of IT and other services	1,427	1,571	(9)
Total general and administrative expenses	5,073	5,615	(10)

1 Represents expenses for services provided by UBS Group AG and subsidiaries in the UBS Group to UBS AG.

Note 7 Extraordinary income and expenses

	For the year ended		% change from
CHF million	31.12.16	31.12.15	31.12.15
Gains from disposals of subsidiaries and other participations	78	334	(77)
Reversal of impairments and provisions of subsidiaries and other participations	1,415	9,551	(85)
Net gains from disposals of properties	121	378	(68)
Other extraordinary income	23	1	
Total extraordinary income	1,637	10,264	(84)
Losses from disposals of subsidiaries and other participations	1	1	0
Other extraordinary expenses	1	134	(99)
Total extraordinary expenses	2	136	(99)

In 2016, UBS AG contributed the majority of its non-US participations conducting Asset Management businesses into UBS Asset Management AG, a direct subsidiary of UBS AG. The contribution was made at the aggregate cost value of the transferred investments of CHF 1.5 billion. This resulted in a gain of CHF 1.1 billion, recognized within *Extraordinary income*, as impairment losses recorded in previous years on some of these investments were reversed.

Also in 2016, UBS AG's direct Wealth Management subsidiaries UBS (Italia) SpA, UBS (Luxembourg) S.A. (including its branches in Austria, Denmark and Sweden), UBS Bank S.A. (Madrid) and UBS Bank (Netherlands) B.V. were merged into UBS Deutschland AG, which was renamed to UBS Europe SE and is headquartered in Frankfurt, Germany. The merger resulted in the recognition of a gain of CHF 0.3 billion, recognized within *Extraordinary income*, as certain impairment losses recorded in previous years were reversed.

In 2015, UBS AG contributed its participations in UBS Americas Inc., UBS Securities LLC and three Asset Management subsidiaries into UBS Americas Holding LLC, a direct subsidiary of UBS AG. This contribution was made at a fair value of CHF 21.2 billion, resulting in a gain of CHF 10.0 billion that was recognized in the income statement, largely as *Extraordinary income*, and which increased UBS AG's investment value in UBS Americas Holding LLC.

Note 8 Taxes

	For the year ended		% change from
CHF million	31.12.16	31.12.15	31.12.15
Income tax expense / (benefit)	118	186	(37)
of which: current	*109*	*185*	*(41)*
of which: deferred	*9*	*1*	*800*
Capital tax	32	34	(6)
Total tax expense / (benefit)	150	220	(32)

For the year ended 31 December 2016, the average tax rate, defined as income tax expense divided by the sum of operating profit and extraordinary income minus extraordinary expenses and capital tax, was 3.5% (2015: 1.5%). Income tax expense for the year ended 31 December 2016 included a benefit of CHF 256 million (2015: CHF 3,188 million) from the utilization of tax losses carried forward in UBS AG's main tax jurisdictions.

Note 9 Securities financing transactions

CHF billion	31.12.16	31.12.15
On-balance sheet		
Receivables from securities financing transactions, gross	109.3	133.3
Netting of securities financing transactions	(49.5)	(42.8)
Receivables from securities financing transactions, net	59.8	90.5
Payables from securities financing transactions, gross	79.8	98.2
Netting of securities financing transactions	(49.5)	(42.8)
Payables from securities financing transactions, net	30.3	55.5
Assets pledged as collateral in connection with securities financing transactions	39.9	54.0
of which: trading portfolio assets	*39.1*	*52.8*
of which: assets which may be sold or repledged by counterparties	*38.4*	*51.9*
of which: financial assets available for sale	*0.8*	*1.2*
of which: assets which may be sold or repledged by counterparties	*0.8*	*1.2*
Off-balance sheet		
Fair value of assets received as collateral in connection with securities financing transactions	257.1	249.9
of which: repledged	*199.4*	*183.0*
of which: sold in connection with short sale transactions	*15.5*	*21.2*

Note 10a Collateral for loans and off-balance sheet transactions

	31.12.16					31.12.15				
	Secured			Unsecured	Total	Secured			Unsecured	Total
	Secured by collateral		Secured by other credit enhancements[2]			Secured by collateral		Secured by other credit enhancements[2]		
CHF million	Real estate	Other collateral[1]				Real estate	Other collateral[1]			
On-balance sheet										
Due from customers, gross[3]	4	60,922	224	42,811[4]	103,961	4	64,223	1,457	31,947[4]	97,630
Mortgage loans, gross	4,314	0	0	0	4,314	4,681	0	0	0	4,681
of which: residential mortgages	*4,225*				*4,225*	*4,605*				*4,605*
of which: office and business premises mortgages	*36*				*36*	*4*				*4*
of which: industrial premises mortgages	*30*				*30*	*44*				*44*
of which: other mortgages	*23*				*23*	*28*				*28*
Total on-balance sheet, gross	4,319	60,922	224	42,811	108,275	4,684	64,223	1,457	31,947	102,311
Allowances	(2)	(20)	0	(62)	(83)	(2)	(152)	0	(77)	(231)
Total on-balance sheet, net	4,317	60,902	224	42,749	108,192	4,683	64,071	1,457	31,870	102,080
Off-balance sheet										
Contingent liabilities, gross	0	2,219	1,993	21,183	25,395	0	2,121	2,093	23,573	27,787
Irrevocable commitments, gross	342	12,301	5,516	29,114	47,273	456	9,673	7,515	33,256	50,901
Forward starting reverse repurchase and securities borrowing transactions	0	7,196	0	78	7,274	0	1,632	0	0	1,632
Liabilities for calls on shares and other equities	0	0	0	5	5	0	0	0	7	7
Total off-balance sheet	342	21,716	7,509	50,380	79,946	456	13,425	9,608	56,837	80,327

1 Mainly comprised of cash and securities. 2 Includes credit default swaps and guarantees. 3 Includes prime brokerage margin lending receivables and prime brokerage receivables relating to securities financing transactions. 4 Primarily comprised of amounts due from subsidiaries.

Note 10b Impaired financial instruments

	31.12.16				31.12.15			
CHF million	Gross impaired financial instruments	Allowances and provisions	Estimated liquidation proceeds of collateral	Net impaired financial instruments	Gross impaired financial instruments	Allowances and provisions	Estimated liquidation proceeds of collateral	Net impaired financial instruments
Amounts due from customers	157	81	0	76	474	229	0	245
Mortgage loans	5	2	3	0	5	2	4	0
Guarantees and loan commitments	24	13	0	11	17	3	0	14
Total impaired financial instruments	186	96	3	87	496	234	4	259

Note 11a Allowances

CHF million	Balance as of 31.12.15	Increase recognized in the income statement	Release recognized in the income statement	Write-offs	Recoveries and past due interest	Foreign currency translation	Balance as of 31.12.16
Specific allowances for amounts due from customers and mortgage loans	231	82	(64)	(168)	20	(22)	78
Specific allowances for amounts due from banks	0	0	0	0	0	0	0
Collective allowances[1]	0	5	0	0	0	0	5
Total allowances	231	87	(64)	(168)	20	(22)	83

1 Mainly relates to amounts due from customers.

Note 11b Provisions

CHF million	Balance as of 31.12.15	Increase recognized in the income statement	Release recognized in the income statement	Provisions used in conformity with designated purpose	Recoveries	Foreign currency translation	Balance as of 31.12.16
Default risk related to loan commitments and guarantees	3	15	(5)	0	0	0	13
Operational risks	20	6	(2)	(7)	0	(1)	15
Litigation, regulatory and similar matters[1]	1,063	167	(67)	(66)	0	(2)	1,096
Restructuring	288	169	(49)	(233)	6	(2)	178
Real estate[2]	94	4	0	(19)	0	(2)	77
Employee benefits	165	3	(22)	(85)	1	(12)	50
Parental support to subsidiaries	96	0	0	(96)	0	0	0
Deferred taxes	10	9	0	0	0	0	18
Other	47	15	(7)	0	0	0	54
Total provisions	1,786	387	(153)	(506)	7	(19)	1,501

1 Includes provisions for litigation resulting from security risks. 2 Includes provisions for onerous lease contracts of CHF 16 million as of 31 December 2016 (31 December 2015: CHF 25 million) and reinstatement cost provisions for leasehold improvements of CHF 61 million as of 31 December 2016 (31 December 2015: CHF 69 million).

Note 12 Trading portfolio and other financial instruments measured at fair value

CHF million	31.12.16	31.12.15
Assets		
Trading portfolio assets	74,282	94,210
of which: debt instruments[1]	*16,073*	*22,261*
of which: listed	*11,840*	*13,831*
of which: equity instruments	*55,304*	*70,035*
of which: precious metals and other physical commodities	*2,905*	*1,915*
Total assets measured at fair value	74,282	94,210
of which: fair value derived using a valuation model	*11,159*	*18,783*
of which: securities eligible for repurchase transactions in accordance with liquidity regulations[2]	*10,249*	*15,894*
Liabilities		
Trading portfolio liabilities	15,535	21,179
of which: debt instruments[1]	*3,884*	*4,190*
of which: listed	*3,540*	*3,899*
of which: equity instruments	*11,651*	*16,989*
Financial liabilities designated at fair value[3]	51,806	58,104
Total liabilities measured at fair value	67,341	79,283
of which: fair value derived using a valuation model	*53,974*	*60,520*

1 Includes money market paper. 2 Consists of high quality liquid debt securities that are eligible for repurchase transactions at the Swiss National Bank or other central banks. 3 Refer to Note 18 for more information.

Note 13 Derivative instruments

	31.12.16			31.12.15		
CHF billion	PRV[2]	NRV[3]	Total notional values	PRV[2]	NRV[3]	Total notional values
Interest rate contracts						
Forwards[1]	0.1	0.2	2,283	0.1	0.3	2,458
Swaps	47.3	39.8	8,222	69.3	60.7	7,636
of which: designated in hedge accounting relationships	*0.2*	*0.0*	*4*	*0.4*	*0.0*	*6*
Futures	0.0	0.0	319	0.0	0.0	335
Over-the-counter (OTC) options	12.5	13.9	959	17.4	19.2	1,132
Exchange-traded options	0.0	0.0	146	0.0	0.0	208
Total	59.9	54.0	11,928	86.9	80.1	11,769
Foreign exchange contracts						
Forwards	21.7	19.0	1,365	17.7	16.5	1,388
Interest and currency swaps	43.3	42.4	2,393	38.8	38.0	2,837
Futures	0.0	0.0	6	0.0	0.0	8
Over-the-counter (OTC) options	11.1	11.0	1,045	9.6	9.3	975
Exchange-traded options	0.0	0.1	9	0.0	0.0	8
Total	76.2	72.5	4,818	66.1	63.8	5,217
Equity / index contracts						
Forwards	0.1	0.1	14	0.1	0.1	15
Swaps	4.5	5.6	147	3.5	4.6	150
Futures	0.0	0.0	28	0.0	0.0	25
Over-the-counter (OTC) options	3.8	5.8	149	4.7	6.7	156
Exchange-traded options	6.1	7.0	299	5.5	6.5	231
Total	14.4	18.4	637	13.8	18.0	577
Credit derivative contracts						
Credit default swaps	3.7	3.8	251	6.0	5.9	318
Total return swaps	0.2	0.9	10	0.6	0.7	12
Other	0.0	0.0	3	0.0	0.0	4
Total	3.9	4.8	264	6.7	6.5	334
Commodity, precious metals and other contracts						
Forwards	0.3	0.2	8	0.3	0.3	5
Swaps	0.4	0.5	24	0.7	0.5	19
Futures	0.0	0.0	9	0.0	0.0	8
Over-the-counter (OTC) options	0.5	0.2	24	0.9	0.6	19
Exchange-traded options	0.7	0.7	19	0.7	0.9	11
Total	1.9	1.7	84	2.5	2.3	63
Total before netting	156.4	151.3	17,732	176.0	170.7	17,960
of which: trading derivatives	*156.2*	*151.3*		*175.6*	*170.7*	
of which: fair value derived using a valuation model	*155.9*	*150.8*		*175.2*	*170.3*	
of which: derivatives designated in hedge accounting relationships	*0.2*	*0.0*		*0.4*	*0.0*	
of which: fair value derived using a valuation model	*0.2*	*0.0*		*0.4*	*0.0*	
Netting with cash collateral payables / receivables	(19.5)	(11.5)		(18.7)	(9.7)	
Replacement value netting	(115.9)	(115.9)		(136.3)	(136.3)	
Total after netting	21.0	23.9		21.0	24.7	
of which: with central clearing counterparties	*0.0*	*0.2*		*0.0*	*0.6*	
of which: with bank and broker-dealer counterparties	*7.7*	*8.6*		*7.4*	*9.2*	
of which: other client counterparties	*13.2*	*15.0*		*13.6*	*14.9*	

1 Includes forward rate agreements. 2 PRV: positive replacement values. 3 NRV: negative replacement values.

Note 14a Financial investments by instrument type

	31.12.16		31.12.15	
CHF million	Carrying value	Fair value	Carrying value	Fair value
Debt instruments	34,427	34,463	27,296	27,354
of which: held to maturity	*527*	*527*	*0*	*0*
of which: available for sale	*33,900*	*33,936*	*27,296*	*27,354*
Equity instruments	233	244	223	234
of which: qualified participations[1]	*82*	*84*	*133*	*137*
Property	8	8	9	9
Total financial investments	34,669	34,715	27,528	27,598
of which: securities eligible for repurchase transactions in accordance with liquidity regulations[2]	*33,326*	*33,360*	*27,127*	*27,181*

1 Qualified participations are investments in which UBS AG holds 10% or more of the total capital or has at least 10% of total voting rights. 2 Consists of high quality liquid debt securities that are eligible for repurchase transactions at the Swiss National Bank or other central banks.

Note 14b Financial investments by counterparty rating – debt instruments

CHF million	31.12.16	31.12.15
Internal UBS rating[1]		
0–1	27,607	26,632
2–3	6,817	653
4–5	0	0
6–8	0	0
9–13	0	0
Non-rated	4	10
Total financial investments	34,427	27,296

1 Refer to Note 17 for more information.

Note 15a Other assets

CHF million	31.12.16	31.12.15
Settlement and clearing accounts	136	116
VAT and other indirect tax receivables	182	226
Bail deposit[1]	1,202	1,210
Other	1,775	2,435
of which: other receivables due from UBS Group AG and subsidiaries in the UBS Group	*1,284*	*1,850*
Total other assets	3,295	3,986

1 Refer to item 1 in Note 20b to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2016 for more information.

Note 15b Other liabilities

CHF million	31.12.16	31.12.15
Deferral position for hedging instruments	1,259	2,826
Settlement and clearing accounts	247	232
Net defined benefit liabilities	697	129
VAT and other indirect tax payables	126	110
Other	1,785	2,208
of which: other payables due to UBS Group AG and subsidiaries in the UBS Group	*1,521*	*1,694*
Total other liabilities	4,113	5,505

Note 16 Pledged assets

As of 31 December 2016, assets pledged by UBS AG were entirely comprised of securities with a carrying value of CHF 1,809 million (31 December 2015: CHF 2,597 million) with a related effective commitment of CHF 160 million (31 December 2015: CHF 258 million). These assets were primarily pledged for derivative transactions and exclude assets pledged for securities financing transactions. They also exclude assets placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes that together amounted to CHF 1.8 billion as of 31 December 2016 (31 December 2015: CHF 2.1 billion).

→ **Refer to Note 9 for more information on securities financing transactions**

Note 17 Country risk of total assets

The table below provides a breakdown of total non-Swiss assets by credit rating. These credit ratings reflect the sovereign credit rating of the country to which the ultimate risk of the underlying asset is related. The ultimate country of risk for unsecured loan positions is the domicile of the immediate borrower or, in the case of a legal entity, the domicile of the ultimate parent entity. For collateralized or guaranteed positions, the ultimate country of risk is the domicile of the provider of the collateral or guarantor or, if applicable, the domicile of the ultimate parent entity of the provider of the collateral or guarantor. For mortgage loans, the ultimate country of risk is the country where the real estate is located. Similarly, the ultimate country of risk for property and equipment is the country where the property and equipment is located. Assets for which Switzerland is the ultimate country of risk are provided separately in order to reconcile them to total balance sheets assets.

→ **Refer to the "Risk management and control" section of the UBS Group AG and UBS AG Annual Report 2016 for more information**

						31.12.16		31.12.15	
Classification	Internal UBS rating	Description	Moody's Investors Service	Standard & Poor's	Fitch	CHF million	%	CHF million	%
	0 and 1	Investment grade	Aaa	AAA	AAA	204,113	46	227,855	48
Low risk	2		Aa1 to Aa3	AA+ to AA–	AA+ to AA–	127,349	29	141,073	30
	3		A1 to A3	A+ to A–	A+ to AA–	38,915	9	39,846	8
Medium risk	4		Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	13,810	3	19,053	4
	5		Baa3	BBB–	BBB–	4,477	1	4,399	1
High risk	6	Sub-investment grade	Ba1	BB+	BB+	1,308	0	2,430	1
	7		Ba2	BB	BB	1,241	0	84	0
	8		Ba3	BB–	BB–	61	0	73	0
	9		B1	B+	B+	192	0	173	0
Very high risk	10		B2	B	B	1,065	0	93	0
	11		B3	B–	B–	156	0	954	0
	12		Caa	CCC	CCC	361	0	216	0
	13		Ca to C	CC to C	CC to C	121	0	82	0
Distressed	Default	Defaulted	D	D	D	6	0	5	0
Subtotal						393,175	89	436,336	91
Switzerland						46,301	11	40,709	9
Total assets						439,476	100	477,045	100

Note 18 Structured debt instruments

The table below provides a breakdown of financial liabilities designated at fair value that are considered structured debt instruments.

CHF million	31.12.16	31.12.15
Fixed-rate bonds with structured features	1,778	3,017
Structured debt instruments issued:		
Equity-linked	29,648	30,236
Rates-linked	10,013	16,118
Credit-linked	2,444	2,949
Commodities-linked[1]	1,949	1,075
FX-linked	826	218
Structured over-the-counter (OTC) debt instruments	5,149	4,491
Total financial liabilities designated at fair value	51,806	58,104

1 Includes precious metals-linked debt instruments issued.

In addition to financial liabilities designated at fair value, certain structured debt instruments were reported within the balance sheet lines *Due to banks, Due to customers* and *Bonds issued.* These instruments were bifurcated for measurement purposes. As of 31 December 2016, the total carrying value of the host instruments was CHF 5,197 million (31 December 2015: CHF 3,624 million) and the total carrying value of the bifurcated embedded derivatives was positive CHF 116 million (31 December 2015: negative CHF 60 million).

Note 19a Share capital

UBS AG shares

UBS AG's share capital consists of fully paid up registered issued shares with a par value of CHF 0.10, which entitle the holder to one vote at the UBS AG shareholders' meeting, if entered into the share register as having the right to vote, as well as a proportionate share of distributed dividends. UBS AG does not apply any restrictions or limitations on the transferability of shares.

As of 31 December 2016, shares issued by UBS AG totaled 3,858,408,466 shares (unchanged from 31 December 2015) that were all dividend bearing and held by UBS Group AG.

Additionally, as of 31 December 2016, 516,200,312 registered shares with a par value of CHF 0.10 each were available to be issued out of conditional capital (31 December 2015: 552,352,759).

During 2016, there were no new share issuances out of conditional capital. During 2015, shares issued by UBS AG increased by 13,847,553 shares due to the issuance of new UBS AG shares out of conditional share capital upon distribution of a share dividend in May 2015.

Non-distributable reserves

Non-distributable reserves consist of 50% of the share capital of UBS AG, amounting to CHF 193 million as of 31 December 2016 (unchanged from 31 December 2015).

Note 19b Significant shareholders

The sole direct shareholder of UBS AG is UBS Group AG, which holds 100% of UBS AG shares. These shares are entitled to voting rights. Indirect shareholders of UBS AG included in the table below comprise direct shareholders of UBS Group AG (acting in their own name or in their capacity as nominees for other investors or beneficial owners) that were registered in the UBS Group AG share register with 3% or more of the share capital of UBS Group AG as of 31 December 2016 or as of 31 December 2015. The shares and share capital of UBS AG held by indirect shareholders represent their relative holding of UBS Group AG shares. They do not have voting rights in UBS AG.

→ **Refer to Note 23 to the UBS Group AG standalone financial statements in the UBS Group AG Annual Report 2016 for more information on significant shareholders of UBS Group AG**

	31.12.16		31.12.15	
CHF million, except where indicated	Share capital held	Shares held (%)	Share capital held	Shares held (%)
Significant direct shareholder of UBS AG				
UBS Group AG	386	100	386	100
Significant indirect shareholders of UBS AG				
Chase Nominees Ltd., London	36	9	35	9
GIC Private Limited, Singapore			25	6
DTC (Cede & Co.), New York[1]	26	7	24	6
Nortrust Nominees Ltd., London	15	4	14	4

1 DTC (Cede & Co.), New York, "The Depository Trust Company," is a US securities clearing organization.

Note 20 Swiss pension plan and non-Swiss defined benefit plans

a) Liabilities related to Swiss pension plan and non-Swiss defined benefit plans

CHF million	31.12.16	31.12.15
Provision for Swiss pension plan	0	0
Net defined benefit liabilities for non-Swiss defined benefit plans[1]	697	129
Total provision for Swiss pension plan and net defined benefit liabilities for non-Swiss defined benefit plans	697	129
Bank accounts at UBS and UBS debt instruments held by Swiss pension fund	220	260
UBS derivative financial instruments held by Swiss pension fund	47	27
Total liabilities related to Swiss pension plan and non-Swiss defined benefit plans	964	416

1 As of 31 December 2016, CHF 529 million related to the UK defined benefit pension plan and CHF 26 million related to the UK post-employment medical insurance plan. As of 31 December 2015, CHF 25 million related to the UK post-employment medical insurance plan. The UK defined benefit pension plan was in a surplus situation as of 31 December 2015.

b) Swiss pension plan

	As of or for the year ended	
CHF million	31.12.16	31.12.15
Pension plan surplus[1]	2,508	2,243
Economic benefit / (obligation) of UBS AG	0	0
Change in economic benefit / obligation recognized in the income statement	0	0
Employer contributions in the period recognized in the income statement	216	270
Performance awards-related employer contributions accrued	21	30
Total pension expense recognized in the income statement within Personnel expenses	238	300

1 The pension plan surplus is determined in accordance with FER 26 and consists of the reserve for the fluctuation in asset value. The surplus did not represent an economic benefit for UBS AG in accordance with FER 16 both as of 31 December 2016 and 31 December 2015.

UBS AG has elected to apply FER 16 for its Swiss pension plan and IFRS (IAS 19) for its UK and other non-Swiss defined benefit plans. However, remeasurements of the defined benefit obligations for UK and other non-Swiss defined benefit plans are recognized in the income statement rather than directly in equity.

→ **Refer to Note 2 for more information**

→ **Refer to Note 26 to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2016 for more information on non-Swiss defined benefit plans in accordance with IAS 19**

The Swiss pension plan had no employer contribution reserve both as of 31 December 2016 and 31 December 2015.

Note 21 Share-based compensation

Expenses for awards under employee share, option, notional fund and deferred cash compensation plans granted to UBS AG employees are generally charged by UBS Group AG to UBS AG. Obligations related to other compensation vehicles, such as defined benefit pension plans and other local awards, are held by the relevant employing and / or sponsoring subsidiaries, such as UBS AG.

→ **Refer to Note 27 to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2016 for more information**

Note 22 Related parties

Transactions with related parties are conducted at internally agreed transfer prices, at arm's length, or with respect to loans, fixed advances and mortgages to non-independent members of the Board of Directors and Group Executive Board members on the same terms and conditions that are available to other employees.

	31.12.16		31.12.15	
CHF million	Amounts due from	Amounts due to	Amounts due from	Amounts due to
Qualified shareholders[1]	522	8,536	581	5,776
of which: due from / to customers	*505*	*7,865*	*567*	*5,171*
Subsidiaries	94,171	59,553	119,900	87,059
of which: due from / to banks	*36,151*	*25,256*	*37,278*	*28,685*
of which: due from / to customers	*33,994*	*2,272*	*23,308*	*8,558*
of which: receivables / payables from securities financing transactions	*19,029*	*25,114*	*54,422*	*44,149*
Affiliated entities[2]	121	17,476	117	5,752
of which: due from / to customers	*108*	*17,291*	*39*	*5,699*
Members of the Board of Directors and Group Executive Board	41		33	
External auditors		11		20
Other related parties[3]	8		9	

1 The qualified shareholder of UBS AG is UBS Group AG. 2 Affiliated entities of UBS AG are all direct subsidiaries of UBS Group AG. 3 Primarily relates to SIX Group AG, in which UBS AG has a 17.3% equity interest.

As of 31 December 2016, off-balance sheet positions related to subsidiaries amounted to CHF 24.8 billion (31 December 2015: CHF 26.5 billion), of which CHF 17.5 billion were guarantees to third parties (31 December 2015: CHF 19.4 billion) and CHF 4.5 billion were loan commitments (31 December 2015: CHF 5.3 billion).

Note 23 Fiduciary transactions

CHF million	31.12.16	31.12.15
Fiduciary deposits	349	310
of which: placed with third-party banks	*349*	*310*
of which: placed with subsidiaries and affiliated entities	*0*	*0*
Total fiduciary transactions	349	310

Fiduciary transactions encompass transactions entered into or granted by UBS AG that result in holding or placing assets on behalf of individuals, trusts, defined benefit plans and other institutions. Unless the recognition criteria for the assets are satisfied, these assets and the related income are excluded from UBS AG's balance sheet and income statement, but disclosed in this Note as off-balance sheet fiduciary transactions. Client deposits that are initially placed as fiduciary transactions with UBS AG may be recognized on UBS AG's balance sheet in situations in which the deposit is subsequently placed within UBS AG. In such cases, these deposits are not reported in the table above.

Note 24a Invested assets and net new money

	For the year ended	
CHF billion	31.12.16	31.12.15
Fund assets managed	12	11
Discretionary assets	168	166
Other invested assets	329	311
Total invested assets	509	488
of which: double count	*3*	*2*
Net new money	17.2	0.0

Note 24b Development of invested assets

	For the year ended	
CHF billion	31.12.16	31.12.15
Total invested assets at the beginning of the year[1]	488	1,076
Net new money	17	0
Market movements[2]	17	8
Foreign currency translation	0	(29)
Transfer to UBS Switzerland AG		(557)
Other effects	(13)	(10)
of which: acquisitions / (divestments)	*(12)*	*(10)*
Total invested assets at the end of the year[1]	509	488

1 Includes double counts. 2 Includes interest and dividend income.

→ **Refer to Note 33 to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2016 for more information**

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To the General Meeting of
UBS AG, Zurich and Basel

Basel, 2 March 2017

Report of the statutory auditor on the financial statements

As statutory auditor, we have audited the financial statements of UBS AG, which comprise the balance sheet, income statement and notes (pages 1 to 21), for the year ended 31 December 2016.

Board of Directors' responsibility
The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the company's articles of incorporation. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the financial statements for the year ended 31 December 2016 comply with Swiss law and the company's articles of incorporation.

Building a better working world

Report on key audit matters based on the circular 1/2015 of the Federal Audit Oversight Authority

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the financial statements.

Valuation of complex or illiquid trading portfolio assets and liabilities and other financial assets, financial liabilities and derivative financial instruments held at fair value

Area of focus	We focused on this area because of the complexity and judgments and assumptions over the fair valuation of assets and liabilities with unobservable inputs. We have continued to focus on market developments in fair value methodologies and specifically on UBS AG's higher estimation uncertainty products and valuation adjustments. See notes 12 and 13 to the UBS AG financial statements on pages 13 and 14.
Our audit response	We tested the design and operating effectiveness of UBS AG key controls over the financial instrument valuation processes, including controls over market data inputs into valuation models, model governance and valuation adjustments. We tested a sample of the valuation models and the inputs used in those models, using a variety of techniques, including comparing inputs to available market data. We selected a sample of positions and independently determined estimated values and compared the values to those recorded by UBS AG. In addition, we evaluated the methodology and inputs used by UBS AG in determining valuation adjustments.

Valuation of investments in subsidiaries and other participations

Area of focus	We focused on this area because of the judgments and assumptions over the valuation of the investments in subsidiaries and other participations. Investments in subsidiaries and other participations comprise directly held equity interests. The relevant accounting policies of UBS AG are described in note 2 to the financial statements on page 6.
Our audit response	We tested the design and operating effectiveness of UBS AG key controls over the valuation of investments in subsidiaries and other participations. Our audit work included testing the valuation models and the data and assumptions used in those models.

Legal provision and contingent liabilities

Area of focus	We focused on this area because UBS AG operates in a legal and regulatory environment that is exposed to significant litigation and similar risks arising from disputes and regulatory proceedings. Such matters are subject to many uncertainties and the outcome may be difficult to predict. These uncertainties inherently affect the amount and timing of potential outflows with respect to the provisions which have been established and contingent liabilities. Overall, the legal provision should represent the best estimate of UBS AG for existing legal matters that have a probable and estimable impact on the financial position of UBS AG. See note 11b to the UBS AG financial statements on page 12.
Our audit response	We tested the design and operational effectiveness of UBS AG key controls over the legal provision and contingencies process. We assessed the methodology on which the estimate of the provision amounts are based, recalculated the provisions, and tested the completeness and accuracy of the underlying information. We read the legal analyses that support the judgmental aspects impacted by legal interpretations. We obtained correspondence directly from external legal counsel to corroborate the information provided by UBS AG and followed up directly with external counsel as deemed necessary.

IT Controls relevant to financial reporting

Area of focus	We focused on this area because UBS AG is highly dependent on its IT systems for business processes and financial reporting. UBS AG continues to invest in its IT systems to meet client needs and business requirements including the effectiveness of its logical access and change management IT controls.
Our audit response	In assessing the reliability of electronic data processing, we included specialized IT auditors as part of our audit team. Our audit procedures focused on the IT infrastructure and applications relevant to financial reporting including testing of the design and operating effectiveness of key IT general controls and IT automated controls. Our audit procedures related to logical access included testing of user access management, privileged user access, periodic access right recertifications and user authentication controls.

Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a para. 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

Building a better working world

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

Ernst & Young Ltd

Marie-Laure Delarue
Licensed audit expert
(Auditor in charge)

Bruno Patusi
Licensed audit expert

Appendix 3 – Excerpts from the Annual Report 2017 as at 31 December 2017

It should be noted that the term "pro-forma" as used in this Appendix 3 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

Current market climate and industry trends

Global economic developments in 2017

In 2017, the world economy grew at the fastest rate since 2011: global GDP expanded 3.9%, from a rate of 3.2% in 2016, with each member of the G20 seeing economic growth – the first time since 2010.

Economic activity increased worldwide amid a recovery in Chinese property construction, Russia and Brazil emerging from multi-year recessions and renewed US energy sector investment in response to higher oil prices.

Equity markets responded, aided by higher corporate earnings growth and low real interest rates. Global equities rose by more than 20%, with emerging market stocks outperforming their developed market peers. European markets lagged in local currency terms, in part due to the euro's strength. The year was also notable for a lack of equity market volatility: at no point did global equities register a greater than 2.0% decline from their prior highs.

Government bond yields generally remained stable in spite of accelerating global growth. Rising US interest rates primarily affected short-dated US dollar-denominated bonds, resulting in the flattest US government bond yield curve in more than a decade. Euro- and Swiss franc-denominated bonds were largely unaffected by US rate moves.

The US dollar depreciated by around 10% on a trade-weighted basis, losing ground against most other global currencies. The euro strengthened significantly to rank as the best-performing major currency, as markets began pricing in reduced monetary stimulus from the European Central Bank.

US growth accelerated, as widely expected, thanks to robust consumption, energy investment and export growth. Reduced government expenditure proved to be the only significant drag. Despite three rate hikes from the US Federal Reserve Board, financial conditions eased throughout the year.

Eurozone growth accelerated to its fastest pace since 2007. Improved business sentiment spurred capital expenditure and private consumption remained robust alongside declining unemployment. UK growth slowed but proved more resilient to uncertainty from the UK's withdrawal from the EU than initially expected, with investment accelerating and exports benefiting from a weak British pound.

Switzerland's headline growth was disappointing, but fundamentals remained sound. Business confidence surveys rose to multi-year highs, the Swiss franc depreciated relative to the euro and falling unemployment benefited consumption.

Japan prospered, with improved trade performance helping drive the fastest pace of economic expansion since 2013. Higher rates of inflation suggest that the country's multi-year monetary stimulus program may be beginning to bear results.

In emerging markets, China's reported growth accelerated for the first time since 2010. This was largely driven by the country's property sector, which increased import demand and helped other economies in the region. Brazil emerged from a deep two-year recession, with falling inflation contributing to a significant improvement in private consumption. Russia also returned to growth after two years of contraction, driven by a recovery in energy prices, good domestic demand and lower interest rates. The economies of South Korea, Taiwan and Indonesia all grew, while India and Mexico were the only large emerging markets to decelerate. South Africa saw faster growth, although it remains at a low level.

Economic and market outlook for 2018

We forecast little change in the economic outlook. We expect growth of 4.1% in 2018, similar to the healthy 3.9% global GDP growth rate recorded last year. Slight slowdowns in Europe and China should be offset by higher growth in the US, India and Brazil.

US economic activity should be buoyed by the passage of corporate tax cuts, which should boost consumption and corporate earnings in 2018. European growth should remain above its long-term trend rate, broadly similar to 2017, although uncertainties over the UK's withdrawal from the EU could weigh on the UK's growth. A weaker Swiss franc bodes well for Switzerland, where exports also stand to benefit from a solid global growth outlook. Cooling property construction will likely decelerate China's growth rate, but resilient consumption and exports should prevent too sharp of a slowdown.

The primary risks to the outlook relate to uncertainty over the impact of central banks' withdrawal of quantitative easing, the threat of greater protectionism in US trade policy, a more rapid increase in inflation rates that might lead to faster-than-expected interest rate hikes, a continued increase in energy prices and geopolitical instability, in particular in relation to the Middle East and North Korea. China's management of its rising debt levels and economic transition remains an important medium-term factor.

Industry trends

Trends by UBS business divisions

Global Wealth Management

Industry estimates suggest that global private wealth will grow by 6% per annum until 2021, with the higher wealth segments expected to grow at over 10% per annum during the same period. From a geographical perspective, the strongest growth is expected to come from Asia Pacific, with estimated annual market growth of 9.9%, according to the Boston Consulting Group Global Wealth Report 2017. Developed markets are expected to grow in line with or below the global growth rate (e.g., 5.6% per annum for North America and 3.5% per annum for Western Europe). We expect this growth profile to be favorable for our strategy of focusing on the largest and fastest-growing markets, which informed our early push to build up our capabilities in Asia and the ultra high net worth segments. We are the largest foreign wealth management firm by assets under management in key Asia Pacific markets as a result of our early entry into the region. We are also well positioned in the ultra high net worth segment, where we leverage the capabilities of our wealth management business and the Investment Bank as well as Asset Management.

Personal & Corporate Banking

Our home market, Switzerland, is an attractive market for personal and corporate banking. Switzerland is one of the wealthiest countries in the world, with average net wealth per person of approximately CHF 185,000 according to our research. However, sustained negative interest rates in Swiss francs have put pressure on banks' net interest income. From a corporate banking perspective, Switzerland is home to a significant number of large multinational corporations and exporters that have performed well despite pressure related to the strength of the Swiss franc in recent years. UBS has built a leading position with personal as well as corporate and institutional clients in Switzerland. Our objective from here is to strengthen that position through comprehensive digitalization efforts aiming to deliver a superior client experience.

Asset Management

The asset management industry is forecast to grow by approximately USD 20 trillion over the next four years, primarily driven by increases in private provision for retirement and wealth accumulation in emerging middle classes. The biggest growth is expected to come from passive assets and customized solutions, with only moderate growth in actively managed strategies. Due to our diversified offering, ranging from our passive and differentiated traditional active investment strategies to our industry-leading alternative capabilities, we believe that we are well positioned to benefit from this trend. With a view toward further strengthening our position in the market, we continue to expand initiatives in line with our clients' needs, such as our Platform Services offering, sustainable and impact investing, and our extensive offering in China.

Investment Bank

The shift in global revenue pools from investment banks to other capital markets players (i.e., custodians, buy-side firms, information providers and exchanges) observed in recent years is expected to ease. Specifically, an external survey forecasts that investment banks' market share will stabilize at about 34% of global industry revenues in 2020, corresponding to USD 249 billion, i.e., a 2% compound annual growth rate from 2016 through 2020. M&A will likely be a material revenue driver for investment banks as a consequence of the Tax Cuts and Jobs Act signed in December 2017, which may cause corporations to allocate capital to deal-making. We believe UBS is well positioned to capture the value generated from this expected increase in activity due to its client-centric business model and global M&A infrastructure.

Wealth transfers

Demographic and socioeconomic developments continue to generate shifts in wealth among age and gender groups. As a result, the client base of the wealth management industry is becoming increasingly diverse. The industry is therefore likely to adapt its services and offerings to meet the specific needs and expectations of growing client groups. UBS strives to become the preferred wealth manager of these clients through its active segment management strategy. This includes bespoke product offerings, such as UBS Unique, which focuses on improving female client satisfaction. Additionally, we offer wealth planning expertise that is supported by dedicated intergenerational wealth transfer services for all segments, such as Great Wealth for ultra high net worth clients.

Retirement funding

Over recent years, the pension industry has faced two key challenges: fundamental demographic shifts, such as aging populations, and lower expected returns.

Beyond structural answers to these challenges, such as the progressive shift from defined benefit to defined contribution pensions, we believe pension funds are reassessing their asset allocation approach. Indeed, many pension funds are now allocating a higher share of their portfolios to alternative investments such as private equity, hedge funds, real estate and infrastructure in a search for higher-yielding exposures.

We see this development as positive for UBS as these funds will likely need further support to define their investment strategy and target portfolio allocation. In addition, our private banking and wealth management clients are expected to need further financial and retirement planning advice, which we are able to provide holistically through our wealth planning services.

Digitalization

Technology is transforming the way banks operate and is expected to remain the key change driver for the financial industry in the years to come. While IT spend used to be considered a means to make banks more efficient, it has now become an imperative to stay relevant in the face of competition from other banks as well as non-traditional financial services providers.

Banks are increasingly leveraging digital technology to provide a more compelling client experience. Additionally, client advisors benefit from integrated IT solutions that reduce the time required for administrative tasks and increase capacity for value-adding activities for clients and for UBS.

We believe that technology-driven changes in bank operations will allow efficiency gains through automation. Technologies such as artificial intelligence and robotics can be used to automate selected back- and middle-office processes, thus reducing error rates and increasing efficiency.

Consolidation

We expect further consolidation in the financial services industry. In many regions and business areas, there are many small players and, as a result, the search for scale and cost efficiencies will be a key M&A driver in such markets. Additionally, many banks are seeking exposure to regions with attractive growth profiles, such as Asia and emerging markets, through local acquisitions. Lastly, the increased focus on core capabilities or geographical footprints and the ongoing simplification of operating models to decrease operational and compliance risks should also lead to asset sales.

New competitors

Our competitive environment is also evolving. In addition to our traditional competitors in the asset-gathering businesses, new entrants, including fintechs and other companies targeting selected components of the value chain, present new competitive challenges. A fundamental unbundling of the value chain and client relationships, ultimately resulting in the disintermediation of banks by fintechs or other competitors, has not yet materialized. Over the longer term, we believe the entry of large platform companies into the financial services industry could result in a significant competitive threat due to their strong franchise and access to a large base of clients and client data.

Regulation

The flow of new regulations has been gradually slowing and there has been initial movement to reduce some of the regulatory burdens, primarily in the US. Nevertheless, a number of post-financial crisis reforms, such as the Basel III finalization, are expected to continue to increase risk-weighted assets. Additionally, the revised Markets in Financial Instruments Directive (MiFID II) will have an impact on the way we do business. The investor protection component of MiFID II requires us to review suitability and appropriateness and enhance transparency toward clients with extended disclosures, e.g., on costs and charges, and reporting. The market structure component of MiFID II will lead to increased pre- and post-trade transparency requirements across a broad range of asset classes, including derivatives and bonds, in addition to enhanced record-keeping and transaction reporting obligations.

Over the past years, we have adapted our business model and believe that we are well positioned to operate efficiently while absorbing upcoming changes to the regulatory environment.

→ **Refer to the "Regulatory and legal developments" and "Capital management" sections of this report for more information**

Regulation and supervision

The Swiss Financial Market Supervisory Authority (FINMA) is UBS's home country regulator and consolidated supervisor. As a financial services provider with an international footprint, we are also regulated and supervised by the relevant authorities in each of the jurisdictions where we conduct business, including the US, the UK and other member states of the EU. Through UBS AG and UBS Switzerland AG, which are licensed as banks in Switzerland, we may engage in a full range of financial services activities in Switzerland and abroad, including personal banking, commercial banking, investment banking and asset management.

As we are a designated global systemically important bank (G-SIB) and a systemically relevant bank (SRB) in Switzerland, we are subject to more rigorous regulatory requirements and supervision than most other Swiss banks. Since the financial crisis of 2008, regulation of financial services firms has been undergoing significant changes globally. These changes, which continue to require significant resources to implement, have had a material effect on how we conduct our business and have led to increased costs.

→ **Refer to the "Our evolution" section of this report for more information**

→ **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Regulation and supervision in Switzerland

Supervision

UBS Group AG and its subsidiaries are subject to consolidated supervision by FINMA under the Swiss Federal Law on Banks and Savings Banks (Swiss Banking Act) and the related ordinances that impose, among other requirements, minimum standards for capital, liquidity, risk concentration and organizational structure. FINMA fulfills its statutory supervisory responsibilities through licensing, regulation, monitoring and enforcement. FINMA is responsible for prudential supervision and mandates audit firms to perform on its behalf a regulatory audit and certain other supervisory tasks.

Liquidity and capital adequacy

As an internationally active Swiss SRB, we are subject to capital and total loss-absorbing capacity requirements, which are based on both risk-weighted assets and leverage ratio denominator and are among the most stringent in the world. We are also required to maintain a minimum liquidity coverage ratio of high-quality liquid assets to estimated stressed short-term net cash outflows. Following the postponed implementation of the net stable funding ratio requirements and subject to finalization of the rules, we will be required to maintain a minimum net stable funding ratio.

→ **Refer to the "Capital management" section of this report for more information on the Swiss SRB framework and the Swiss too big to fail requirements**

→ **Refer to the "Treasury management" section of this report for more information on liquidity coverage ratio requirements**

Resolution planning and resolvability

The Swiss Banking Act and related ordinances provide FINMA with additional powers to intervene in order to prevent a failure or resolve a failing financial institution, including UBS Group AG, UBS AG and UBS Switzerland AG. These measures may be triggered when certain thresholds are breached and permit the exercise of considerable discretion by FINMA in determining whether, when or in what manner to exercise such powers. In case of a possible insolvency, FINMA may impose more onerous requirements on us, including restrictions on the payment of dividends and interest as well as measures to alter our legal structure (e.g., to separate lines of business into dedicated entities, with limitations on our intra-Group funding and certain guarantees) or to reduce business risk in some manner. The Swiss Banking Act provides FINMA with the ability to extinguish or convert to common equity the liabilities of the Group in connection with its resolution.

Furthermore, Swiss too big to fail provisions require Swiss SRBs, including UBS, to put in place a viable emergency plan to preserve the operation of systemically important functions in case of a failure of the institution. In response to these requirements in Switzerland, as well as to similar requirements in other jurisdictions, UBS has developed comprehensive recovery plans that provide the tools to manage a severe loss event. UBS also provides relevant authorities with resolution plans for restructuring or winding down certain businesses in the event the firm could not be stabilized. Alongside these measures, we have invested significantly in structural, financial and operational ring-fencing measures to improve the Group's resolvability.

Regulation and supervision outside Switzerland

Regulation and supervision in the US

In the US, UBS is subject to regulation and supervision by the Board of Governors of the Federal Reserve System (Federal Reserve Board) under a number of laws. UBS Group AG and UBS AG are both subject to the Bank Holding Company Act as foreign banking organizations, under which the Federal Reserve Board has supervisory authority over our US operations. Furthermore, our US operations are subject to oversight by the Federal Reserve Board's Large Institution Supervision Coordinating Committee, which coordinates supervision of large or complex financial institutions.

In addition to being a financial holding company under the Bank Holding Company Act, UBS AG maintains several branches and representative offices in the US, which are authorized and supervised by the Office of the Comptroller of the Currency. UBS AG is currently registered as a swap dealer with the Commodity Futures Trading Commission (CFTC), and we expect it will register as a security-based swap dealer with the Securities and Exchange Commission (SEC) when such registration is required.

UBS Americas Holding LLC, the intermediate holding company for our non-branch operations in the US as required under the Dodd-Frank Act, is subject to requirements established by the Federal Reserve Board related to risk-based capital, liquidity, the Comprehensive Capital Analysis and Review (CCAR) stress testing and capital planning process, resolution planning and governance. Beginning in 2018, the Federal Reserve Board will publish its CCAR assessment for UBS Americas Holding LLC and other large foreign banking organizations subject to CCAR.

UBS Bank USA, a Federal Deposit Insurance Corporation (FDIC)-insured depository institution subsidiary, is licensed and regulated by state regulators in Utah and the FDIC.

UBS Financial Services Inc., UBS Securities LLC and several other US subsidiaries are subject to regulation by a number of different government agencies and self-regulatory organizations, including the SEC, the Financial Industry Regulatory Authority, the CFTC, the Municipal Securities Rulemaking Board and national securities exchanges, depending on the nature of their business.

Regulation and supervision in the UK

Our regulated operations in the UK are mainly subject to the authority of the Prudential Regulation Authority (PRA), which is part of the Bank of England, and the Financial Conduct Authority (FCA). We are also subject to the rules of the London Stock Exchange and other securities and commodities exchanges of which UBS AG and UBS Limited are members.

UBS Limited is a private limited company incorporated in the UK and is authorized by the PRA and regulated by the PRA and the FCA to conduct a broad range of banking and investment businesses.

UBS AG maintains a UK-registered branch in London that serves as a global booking center for our Investment Bank.

In addition, our regulated subsidiaries in the UK that provide asset management services are authorized and regulated mainly by the FCA, with one entity being also subject to the authority of the PRA.

Financial services regulation in the UK is currently conducted in accordance with EU directives covering, among other topics, compliance with certain capital and liquidity adequacy standards, client protection requirements and business conduct principles. This may be subject to change depending on how the relationship between the UK and the EU evolves as a result of the UK's decision to leave the EU.

Regulation and supervision in Germany

UBS Europe SE, headquartered in Frankfurt, Germany, is prudentially supervised by the Bundesanstalt für Finanzdienstleistungsaufsicht (Federal Financial Supervisory Authority – BaFin) and subject to EU and German laws and regulations. In addition to Germany, UBS Europe SE has branches in Austria, Denmark, Italy, Luxembourg, Spain and Sweden and it is subject to conduct supervision by local authorities in all of these countries. An additional branch in the Netherlands is currently being wound down.

Anti-money laundering and anti-corruption

Combating money laundering and terrorist financing has been a major focus of government policy relating to financial institutions in recent years. The US Bank Secrecy Act and other laws and regulations applicable to UBS require the maintenance of effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing, and to verify the identity of our clients. Failure to maintain and implement adequate programs to prevent money laundering and terrorist financing could result in significant legal and reputation risk.

Additionally, we are subject to laws and regulations in jurisdictions in which we operate prohibiting corrupt or illegal payments to government officials and others, including the US Foreign Corrupt Practices Act and the UK Bribery Act. We maintain policies, procedures and internal controls intended to comply with these laws and regulations.

Data protection

We are subject to laws and regulations concerning the use and protection of customer, employee, and other personal and confidential information, including provisions under Swiss law, the EU General Data Protection Regulation (GDPR), which provides significant new data protection, and laws of other jurisdictions.

If implemented as proposed, we will become subject to the revised Swiss data protection law (Swiss Federal Act on Data Protection), which seeks to improve data protection for individuals by, among other measures, enhancing the transparency and accountability rules applicable to companies processing data. This change in the law would align Swiss data regulation with revised European legislation, including the EU GDPR, and is intended to ensure the equivalence necessary for the continued cross-border transmission of data. We expect the revised law to take effect in 2019.

→ **Refer to the "Risk factors" section of this report for more information on regulatory change**

Regulatory and legal developments

Significant tax law changes enacted in the US

In December 2017, the Tax Cuts and Jobs Act (TCJA) was signed into law. The act includes a reduction in the federal corporate tax rate to 21% from 35%. The rate reduction resulted in a CHF 2.9 billion net write-down in the Group's deferred tax assets (DTAs) in the fourth quarter of 2017. The net decrease in DTAs had a negligible impact on our fully applied CET1 capital.

The TCJA also introduced a new minimum tax regime, referred to as the base erosion and anti-abuse tax (BEAT), which targets US businesses benefiting from deductible payments made to non-US related parties. The BEAT rate, which is 6% for banks in 2018, increasing to 11% in 2019 and to 13.5% in 2026, applies if BEAT, calculated on a modified taxable income base, is higher than the regular federal corporate tax in a given year. We currently expect that BEAT could increase our current tax expense by up to CHF 60 million in 2018. We are considering options to mitigate its effects and awaiting guidance from the US Department of Treasury on key aspects of the new tax law. Additionally, the enactment of the TCJA, and the narrowing of the window between the end of the forecast period and the expiry of our US net operating losses, may lead us to review our approach to periodically remeasuring our US DTAs and the timing for recognizing deferred tax in our income statement. For 2018, we currently forecast a full-year tax rate of approximately 25%, including the effects of BEAT, and excluding the effects from any periodic remeasurement of DTAs and any change in the manner in which we remeasure DTAs.

→ **Refer to the "Group performance" section and "Note 8 Income taxes" in the "Consolidated financial statements" section of this report for more information**

US Department of Labor fiduciary rule becomes effective

Following various delays, the US Department of Labor (DOL) fiduciary rule became effective on 9 June 2017. Since then, UBS has been operating under the rule, which expands the circumstances that cause a person to become a fiduciary subject to the Employee Retirement Income Security Act of 1974 (ERISA) in relation to corporate and individual retirement plans. Under ERISA, UBS is required to adhere to strict standards of prudence and loyalty when dealing with affected retirement accounts and is prohibited from entering into transactions where there is a conflict of interest unless an exemption applies. Exemptions applicable to our wealth management business in the US under the rule require compliance with impartial conduct principles. Moreover, the exemptions require compliance with significant additional technical conditions. In November 2017, the DOL extended the transition period and delayed the applicability of these technical conditions to 1 July 2019 while it continues to consider potential changes to the exemptions. Absent further changes to the rule, we would be required to make significant investments in order to comply with these technical conditions.

Swiss corporate tax reform

Following the rejection of the Swiss corporate tax reform by popular referendum in February 2017, the Swiss Federal Council consulted on a revised proposal from September to December 2017. The new proposal has been modified in response to the referendum outcome, while maintaining the overall objective of the original reform proposals, seeking to align the respective cantonal corporate tax regimes with international standards by, among other things, eliminating reduced holding company tax rates and other privileges. The final proposal by the Federal Council is expected to be submitted to the Swiss Parliament in spring 2018. The effect of the proposed reform on UBS will depend on the final federal legislation and the subsequent cantonal implementation.

Financial services regulation

Implementation of margin requirements for non-cleared OTC derivatives

The G20 commitments on derivatives call for adoption of mandatory exchange of initial and variation margin for non-cleared over-the-counter (OTC) derivative transactions (margin rules). Margin rules for the largest counterparties have been in effect in major jurisdictions since early 2017, with phase-in periods, by counterparty size, lasting through 2020. In September 2018, initial margin requirements will apply to the next group of counterparties (phase 3) in the US, the EU, Switzerland, Japan and other major jurisdictions in Asia Pacific. These requirements, along with differences in the timing of implementation across jurisdictions, will likely continue to require ongoing operational effort by us and our clients.

Developments related to the implementation of MiFID II / MiFIR

In the EU, the revised Markets in Financial Instruments Directive and the associated Regulation (MiFID II / MiFIR) took effect on 3 January 2018. MiFID II, among other things, introduces substantial new regulation of exchanges and trading venues, including new pre-trade and post-trade transparency requirements, a ban on the practice of using commission on transactions to compensate for research services and substantial new conduct requirements for financial services firms when dealing with clients.

In December 2017, the European Commission made equivalence determinations for trading venues in Switzerland, the US, Australia and Hong Kong. The equivalence decisions were necessary to permit EU-domiciled institutions and clients to continue to execute transactions on non-EU-domiciled trading venues. The Swiss equivalence decision is limited to one year and is linked to the progress of negotiations on the future establishment of an EU-Swiss institutional agreement. Compliance with the new requirements has required significant investment and changes to operations for us, our clients and other financial services firms. Given the scale of the change and, in some cases, the short time between finalization of requirements and the effective date, we expect that the changes introduced by MiFID II will result in changes to relevant markets and businesses, which may include a reduction in commission rates and trading margins. We continue to assess the effect on our businesses, in particular the requirement to price research and execution services separately, and whether these changes affect the timing of recognition of certain fee income.

Developments related to LIBOR benchmarks and other benchmarks and reference rates

Efforts to transition from the London Interbank Offered Rate (LIBOR) benchmarks to alternative benchmark rates are under way in several jurisdictions. The UK Financial Conduct Authority announced in July 2017 that it will not intervene beyond 2021 to sustain LIBOR and urged users to plan the transition to alternative reference rates. In April 2017, the Working Group on Sterling Risk-Free Reference Rates selected the Sterling Overnight Index Average as the recommended British pound risk-free rate. In the US, the Alternative Reference Rates Committee has recommended a broad Treasuries repo financing rate as the new US dollar secured risk-free rate, which is expected to be available in 2018. The Federal Reserve Bank of New York has launched a consultation on the construction of this and two other Treasury repurchase agreement-derived rates. The European Central Bank (ECB) has also recently announced its decision to develop, before 2020, a euro unsecured overnight interest rate based on transaction data already reported to the ECB by banks.

From 1 January 2018, the EU Benchmarks Regulation (EBR) became fully applicable. The EBR regulates the administration of, contribution to and usage of benchmarks falling within the scope of the regulation. The regulation covers benchmarks on interest rates, currencies, securities, commodities and indices as well as on other reference prices.

UBS has significant contractual rights and obligations referenced to LIBOR and other benchmark rates. Discontinuance of, or changes to, benchmark rates as a result of these developments or other initiatives or investigations, as well as uncertainty about the timing and manner of implementation of such changes or discontinuance, may require adjustments to agreements that are referenced to current benchmarked rates by us, our clients and other market participants as well as to our systems and processes.

Developments related to recovery and resolution

A number of developments have further shaped the regulatory framework on recovery and resolution for banks.

In Switzerland, FINMA published a partial revision of its Banking Insolvency Ordinance, which became effective on 1 April 2017. The amendments require banks to include a contractual acknowledgment of FINMA's ability to temporarily postpone the exercise of remedies against banks in financial contracts that are subject to foreign laws or foreign places of jurisdiction. Such postponement is intended to ensure the continuation of key contractual relationships without interruption in crisis situations. According to the revised ordinance, contracts entered into by non-Swiss entities within a group will only be subject to the rule if the respective financial contract was guaranteed or otherwise secured by a bank or securities dealer domiciled in Switzerland. In addition, FINMA has granted exceptions for contracts with individuals and extended the implementation period to April 2018 for contracts with banks and securities dealers, and to October 2018 for contracts with other counterparties.

In November 2017, similar rules on resolution stays were published In the United States by the Office of the Comptroller of the Currency. The rules address concerns relating to the exercise of default rights in financial contracts that could interfere with the orderly resolution of systematically important financial institutions.

In the UK, in July 2017, the Bank of England (BoE) consulted on its policy for setting minimum requirements for own funds and eligible liabilities (MREL) within groups. It proposes to require internal MREL at between 75% and 90% of the Pillar 1 external MREL requirement, which will be phased in between 1 January 2019 and 1 January 2022. The BoE also proposes to take into account the equivalent requirements used in other jurisdictions, which could result in a required internal MREL level at the higher end of the range. We expect that UBS Limited will be subject to these requirements. In addition, firms would need to hold loss-absorbing capacity for operational continuity for each provider of critical services within the group calibrated at 25% of total operating costs. This proposal could apply to a number of UBS entities in different jurisdictions that provide services to UBS Limited and is expected to take effect on 1 January 2019. The exact impact of these changes can only be determined once the BoE finalizes its policy.

In November 2017, the Financial Stability Board opened consultations on bail-in execution and on funding in resolution. The consultation on bail-in proposes principles to make resolution strategies operational, including disclosures on the instruments and liabilities within the scope of bail-in, the valuation process, governance issues and market and creditor communications. The consultation on funding in resolution proposes guidelines to support the monitoring, reporting and estimation of funding needs in resolution and to facilitate execution of the funding strategy.

Changes to the Swiss prudential regulatory framework

Regulators made further changes to strengthen the Swiss prudential regulatory framework and to align it with Basel IIII rules. Based on the biennial review of systemically important banks (SIBs) concluded in June 2017, the Swiss Federal Department of Finance (FDF) initiated a consultation in February 2018, proposing the introduction of gone concern requirements for domestically focused SIBs. These requirements would be conceptually similar to those in effect since July 2016 for the two largest Swiss banks, including UBS. However, they would be limited to 40% of the going concern capital requirements, would be phased in over seven years and could be met by a cantonal guarantee or similar mechanism.

In February 2018, the Swiss Federal Council proposed amendments to the participation relief provisions under current Swiss tax law that, if enacted, would reduce the additional tax burden on debt issuances by bank top holding companies. The proposed tax law changes would permit SIBs, such as UBS, to issue debt directly from their holding companies, as is contemplated under the international capital framework and the Swiss Capital Adequacy Ordinance, without incurring significant corporate tax disadvantages, as is the case today under Swiss tax law. As a next step, the proposal will be subject to debate in the Swiss Parliament.

Separately, Switzerland has been moving ahead with the implementation of existing Basel Committee on Banking Supervision (BCBS) standards. In October 2017, FINMA issued a consultation on the implementation of changes to Basel III rules, covering interest rate risk in the banking book, disclosure requirements, credit risk and eligible capital. These changes are expected to take effect on 1 January 2019. Also, the Swiss Federal Council adopted revisions to the Capital Adequacy Ordinance that will introduce a more restrictive treatment of risk concentrations. From 1 January 2019, risk concentration limits for exposures with global systemically important banks will be lowered and calculated on the basis of tier 1 capital, excess capital will no longer be able to be used to compensate for exposures above the limit and the standardized approach for calculation of exposures will be required. In addition, direct and indirect exposures will need to be aggregated at counterparty level.

Swiss Federal Council proposes changes to the depositor protection scheme

In February 2017, the Swiss Federal Council proposed changes to the Swiss depositor protection scheme. The proposed changes include introducing a target level for depositor protection, set at 1.6% of the value of the protected deposits in the Swiss financial system, using the current cap of CHF 6 billion as a floor, and significantly shortening the time within which payments to depositors must be made in the event of a bank insolvency. These changes would replace the current requirement that each bank has to hold 50% of its commitment to the depositor protection scheme as high-quality liquid assets with a requirement to pledge collateral equal to 50% of its commitment. The Federal Council also intends to issue new rules for banks to segregate custody assets from own assets through the entire domestic custody chain. The proposed changes may require UBS to make adjustments to operational processes and funding. The FDF is expected to issue a draft consultation by the end of August 2018.

Finalization of the Basel III capital framework

In December 2017, the BCBS announced the finalization of the Basel III reforms. The most significant changes include:

- placing floors on certain model inputs under the internal ratings-based (IRB) approach to calculate credit risk risk-weighted assets (RWA);
- requiring the use of standardized approaches for calculation of credit valuation adjustment and for operational risk RWA;
- placing an aggregate output floor on the Group RWA equal to 72.5% of the RWA calculated using a revised standardized approach; and
- revising the leverage ratio denominator (LRD) calculation and introducing a leverage ratio surcharge for global systematically important banks.

The revised standards will take effect from 1 January 2022, with a phase-in period of five years for the aggregate output floor.

We currently estimate that the introduction of the revised Basel III framework will likely lead to a net increase in RWA of around CHF 35 billion, before taking into account mitigation actions. These estimates are based on our current understanding of the relevant standards and may change as a result of new or changed regulatory interpretations, implementation of the Basel III standards into national law, changes in business growth, market conditions and other factors. We will update our common equity tier 1 (CET1) ratio guidance when further details on the implementation of the final Basel III standards become available.

In addition, over the next three years, as a result of other known regulatory changes and estimated business growth, we estimate our RWA may increase by around CHF 40 billion and our LRD may rise by around CHF 85 billion. Actual increases may vary depending on growth opportunities, market conditions and mitigation actions. As a consequence, and based on the estimates above, we may build approximately CHF 4 billion of additional fully applied CET1 capital over the next three years, subject to market conditions, as well as RWA and LRD development.

→ **Refer to the "Capital management" section of this report for more information on the current Swiss SRB capital framework**

→ **Refer to the "Risk factors" section of this report for more information on regulatory change**

Significant accounting and financial reporting changes in 2018

IFRS 9, *Financial Instruments*

We adopted IFRS 9, *Financial Instruments* from 1 January 2018. IFRS 9 imposes expected credit loss (ECL) requirements that change the accounting and reporting for the majority of our credit exposures. Additionally, IFRS 9 introduces new classification and measurement guidelines that require a consideration of the contractual cash flow characteristics of financial assets and the associated business models under which we operate, and eliminate, among other things, the previous accounting and reporting treatment of investments classified as available for sale and held to maturity.

We also early adopted the Amendment to IFRS 9, *Prepayment Features with Negative Compensation*, which allows us to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs. We did not adopt the optional IFRS 9 hedge accounting requirements pending completion of the International Accounting Standards Board's (IASB) project on macro hedge accounting strategies.

We will recognize the estimated pre-tax transition impact from adopting IFRS 9 of approximately CHF 0.7 billion, as well as a tax credit of CHF 0.1 billion, as a CHF 0.6 billion reduction in our IFRS consolidated equity as of 1 January 2018, which will be reflected in our first quarter 2018 report. Approximately half of this amount is attributable to mark-to-market adjustments on certain loans and securities that no longer qualify for amortized cost accounting due to their cash flow characteristics or underlying business model. These instruments will now be measured at fair value through profit or loss under IFRS 9. The remainder of the reduction results from recognizing ECL, primarily on financial assets measured at amortized cost, financial guarantees and loan commitments.

Our fully applied common equity tier 1 (CET1) capital is expected to be reduced by approximately CHF 0.3 billion as of 1 January 2018, predominantly due to the reclassification of certain loans and securities from amortized cost to fair value through profit or loss, with no material impact on our capital ratios.

→ **Refer to "Note 1c International Financial Reporting Standards and Interpretations to be adopted in 2018 and later and other changes" in the "Consolidated financial statements" section of this report for more information**

Transition

IFRS 9 is a key strategic initiative for UBS and has been implemented under the joint sponsorship of the Group Chief Financial Officer and the Group Chief Risk Officer. As part of our implementation program, we have performed an assessment of the population of financial instruments impacted by the classification and measurement requirements of IFRS 9 and developed an impairment methodology to support the calculation of the ECL allowance.

Our ECL calculation, including the processes to derive appropriate forward-looking information, and the related reporting processes and controls have been tested through parallel runs.

Detailed transition disclosures, including a full reconciliation on the changes arising from adopting IFRS 9, will be provided in our first quarter 2018 report.

Classification

IFRS 9 requires all financial assets, except equity instruments, to be classified at amortized cost, at fair value through other comprehensive income (OCI) or at fair value through profit or loss, based on the business model for managing the respective assets and their contractual cash flow characteristics.

Expected credit losses

IFRS 9 introduces a forward-looking ECL approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39, *Financial Instruments: Recognition and Measurement* and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*. The new impairment model applies to financial assets measured at amortized cost, investments in debt instruments measured at fair value through OCI, lease receivables, loan commitments and financial guarantee contracts that are not measured at fair value through profit or loss. The majority of the ECL calculated as of the transition date relates to our private and commercial mortgage portfolio in Switzerland within our Personal & Corporate Banking division. Under IFRS 9, a maximum 12-month ECL must be recognized from initial recognition on in-scope instruments, referred to as instruments within stage 1. Lifetime ECL must be recognized if a significant increase in credit risk (SICR) arises after the instrument was originally recognized, referred to as instruments in stage 2, or if the instrument is credit impaired, referred to as instruments in stage 3.

Measurement of expected credit losses

The methodology we apply to calculate an individual probability-weighted unbiased ECL in line with IFRS 9 is aligned with the complexity, structure and risk profile of relevant portfolios and is mainly based on a combination of the following principal factors: probability of default (PD), loss given default (LGD), exposure at default (EAD) and discounting to the reporting date, with respective parameters generally determined on a transaction basis.

PDs and LGDs used in the IFRS 9 ECL calculation are point in time (PIT) based. To derive the PIT-based parameters, we leverage our existing Pillar 1 internal ratings-based (IRB) models and Pillar 2 stress loss models. We make certain necessary adjustments to account for current conditions and to incorporate forward-looking economic information, which includes gross domestic product forecasts, interest and foreign exchange rates, unemployment rates, real estate price indices and other relevant risk parameters. In addition, the prudential adjustments from Basel III, such as downturn LGD assumptions and floors, are removed.

We have selected a range of scenarios (upside, baseline, mild downside, and downside) to capture material non-linearity and asymmetries between different possible forward-looking scenarios and associated credit losses, and we apply scenario weights to reflect the likelihood of their occurrence. We have aligned our baseline scenario selection with the baseline used for business planning purposes.

For ECL calculation purposes, we consider the maximum contractual period over which we are exposed to credit risk, taking into account the respective counterparty's contractual extension, termination and prepayment options. For certain credit card facilities without a defined contractual end date, which are callable on demand and where the drawn and undrawn portions are managed as one unit, the period over which UBS is exposed to credit risk exceeds the contractual notice period and therefore this longer period is used within the ECL calculation.

Determination of a significant increase in credit risk

Qualitative and quantitative criteria are used to determine whether the credit risk on an instrument has significantly increased from the date of initial recognition, with the primary assessment based on a comparison of the annualized forward-looking and scenario-weighted lifetime PIT-based PDs at inception of the instrument, and at the reporting date. This assessment is made at an individual financial asset level, with specific criteria and thresholds applied based on the applicable portfolio. Qualitative factors are additionally considered, including internal indicators of credit risk such as days-past-due information, external market indicators of credit risk and general economic conditions. We generally consider that an SICR occurs no later than when the asset is 30 days past due.

Lombard loans, securities financing transactions and certain other asset-based lending transactions that are subject to daily risk management and monitoring processes with strict margining requirements are not subject to the SICR determination process given the transactions are closed out immediately if margin calls are not satisfied, whereupon they move directly from stage 1 into stage 3 as defaulted positions.

Governance

The incorporation of forward-looking information in the ECL calculation and the definition and assessment of what constitutes an SICR are inherently subjective and involve the use of significant judgment. Therefore, we have developed a front-to-back governance framework over the ECL calculation process jointly owned by the Group Chief Financial Officer and the Group Chief Risk Officer and have designed controls to be in compliance with the requirements of the Sarbanes-Oxley Act.

Our economists, risk methodology personnel and credit risk officers are involved in developing the forward-looking macroeconomic assumptions used in the ECL calculation. Assumptions and scenarios are validated and approved through a scenario committee and an operating committee, which have been established as part of a new governance process. This process also facilitates a consistent use of forward-looking information throughout UBS, including in our business planning process. New models have been approved as part of our existing model validation and oversight processes. Governance has also specifically been established around the SICR decision process given management judgment is required. We test ECL and SICR inputs in a controlled environment and determine sensitivities with a risk simulation engine.

Group regulatory capital and IFRS 9

The table on the next page sets out key differences in the scope and factors applied in determining expected losses (EL) under the current Basel III advanced internal ratings-based approach and those used in determining ECL for IFRS 9 purposes.

→ **Refer to "Credit risk models" in the "Risk management and control" section of this report for more information**

In March 2017, the Basel Committee on Banking Supervision (BCBS) finalized guidance on an interim approach for the regulatory treatment of accounting provisions and defined standards for transitional arrangements, following the introduction of IFRS 9. The BCBS confirmed that for an interim period the current treatment of accounting provisions, under both the standardized approach and the IRB approach, should continue to be applied until the longer-term treatment is confirmed. The BCBS recommended that jurisdictions issue guidance to categorize new accounting provisions as general provisions or specific provisions for regulatory purposes. Additionally, jurisdictions may implement transitional arrangements to spread the adoption impacts over time, using either a static or a dynamic approach, including limiting the transition period to a maximum of five years. The consultation period on the related FINMA guidance ended on 31 January 2018. It includes the option of phasing the initial effect of adopting the new accounting provisions into regulatory capital, using a static approach. The final guidance is expected to be published during 2018 with an effective date of 1 January 2019.

Comparison of IFRS 9 ECL with Basel III EL

	Basel III (advanced internal ratings-based approach)	IFRS 9
Scope	The Basel III advanced internal ratings-based (A-IRB) approach applies to most credit risk exposures. It includes transactions measured at amortized cost, at fair value through profit or loss and at fair value through OCI, including loan commitments and financial guarantees.	The IFRS 9 expected credit loss calculation mainly applies to financial assets measured at amortized cost and debt instruments measured at fair value through OCI, as well as loan commitments and financial guarantee contracts not at fair value through profit or loss.
12-month versus lifetime expected loss	The Basel III A-IRB approach takes into account expected losses resulting from expected default events occurring within the next 12 months.	In the absence of an SICR event, a maximum 12-month ECL is recognized to reflect lifetime cash shortfalls that will result if a default event occurs in the 12 months after the reporting date (or a shorter period if the expected lifetime is less). Once an SICR event has occurred, a lifetime ECL is recognized considering expected default events over the life of the transaction.
Exposure at default (EAD)	EAD is the amount we expect a counterparty to owe us at the time of a possible default. For banking products, the EAD equals the book value as of the reporting date, whereas for traded products, such as securities financing transactions, the EAD is modeled. The EAD is expected to remain constant over the 12-month period. For loan commitments, a credit conversion factor is applied to model expected future drawdowns over the 12-month period, irrespective of the actual maturity of a particular transaction. The credit conversion factor includes downturn adjustments.	EAD is generally calculated on the basis of the cash flows that are expected to be outstanding at the individual points in time during the life of the transaction, discounted to the reporting date using the effective interest rate. For loan commitments, a credit conversion factor is applied to model expected future drawdowns over the life of the transaction without including downturn assumptions. In both cases the time period is capped at 12 months, unless an SICR has occurred.
Probability of default (PD)	PD estimates are determined on a through the cycle (TTC) basis. They represent historical average PDs, taking into account observed losses over a prolonged historical period, and are therefore less sensitive to movements in the underlying economy.	PD estimates will be determined on a PIT basis, based on current conditions and incorporating forecasts for future economic conditions at the reporting date.
Loss given default (LGD)	LGD includes prudential adjustments, such as downturn LGD assumptions and floors. Similar to PD, LGD is determined on a TTC basis.	LGD should reflect the losses that are reasonably expected and prudential adjustments should therefore not be applied. Similar to PD, LGD is determined on the basis of a PIT approach.
Use of scenarios	N/A	Multiple forward-looking scenarios have to be taken into account to determine a probability-weighted ECL.

IFRS 9 and our significant regulated subsidiaries and sub-groups

FINMA's plan to implement ECL under Swiss GAAP has been deferred. We will continue to apply the incurred loss model in the UBS AG standalone and UBS Switzerland AG standalone financial statements, which are prepared in accordance with Swiss GAAP (FINMA Circular 2015 / 1 and the Banking Ordinance).

UBS Limited prepares standalone financial statements in accordance with IFRS, and adopted IFRS 9 on 1 January 2018.

UBS Americas Holding LLC expects to early adopt Accounting Standards Update (ASU) 2016-13, *Measurement of Credit Losses on Financial Instruments* on 1 January 2020 for its consolidated financial statements to align with the mandatory effective date for some of its subsidiaries.

IFRS 15, *Revenue from Contracts with Customers*

We adopted IFRS 15, *Revenue from Contracts with Customers* from 1 January 2018. The new standard will affect when certain revenue can be recognized, with some performance-based fees in Asset Management and research revenues in the Investment Bank deferred until it is certain that the fee has been earned. In addition, IFRS 15 requires a change to the presentation of certain revenues and expenses in the income statement, with enhanced disclosures. The cumulative effect of initially applying the standard will be recognized as an adjustment to our IFRS consolidated equity as of 1 January 2018 and, as permitted by the standard, we will not restate prior-period information. The transition effect will not be material and we also do not expect a material effect on the Group's annual revenues and expenses going forward.

Potential change of functional and presentation currency

In light of cumulative changes in our legal structure, business activities and evolving changes to our structural currency management strategy, we anticipate that during the second half of 2018 we may conclude under IAS 21, *The Effects of Changes in Foreign Exchange Rates*, that the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland will change from Swiss francs to US dollars, and the functional currency of UBS AG's London Branch operations will change from British pounds to US dollars, where such changes would be made on a prospective basis. If such determinations are made, we would also expect to change the presentation currency of UBS Group AG's consolidated and UBS AG's consolidated financial statements from Swiss francs to US dollars, with prior periods restated. Assets, liabilities and total equity would be converted to US dollars at historic closing rates prevailing on the respective balance sheet dates. No material changes are expected to our capital ratios nor are material changes expected to our other key performance indicators.

Our strategy

Who we are

The world's largest and only truly global wealth manager

Our strategy is centered on our leading Global Wealth Management business and our premier universal bank in Switzerland, which are enhanced by Asset Management and the Investment Bank. We focus on businesses that have a strong competitive position in their targeted markets, are capital efficient and have an attractive long-term structural growth or profitability outlook. We are the world's largest and only truly global wealth manager. We have a strong presence in the largest market, the United States, and a leading position in the fastest-growing regions, including Asia Pacific and the other emerging markets. Our wealth management business benefits from significant scale in an industry with attractive growth prospects and increasingly high barriers to entry, and from its leading position across the attractive high net worth and ultra high net worth client segments. We are the preeminent universal bank in Switzerland, the only country where we operate in all of our business lines: wealth management, personal & corporate banking, asset management and investment banking. Our leading position in our home market is central to UBS's global brand and profit stability. The partnership between our wealth management business and our other business divisions is a key differentiating factor and a source of competitive advantage.

Strong capital position and capital-efficient business model

Capital strength is the foundation of our strategy and provides another competitive advantage. We are well positioned to meet the fully applied Swiss too big to fail capital and total loss-absorbing capacity requirements when they become effective on 1 January 2020. Our capital-accretive and capital-efficient business model helps us adapt to changes in regulatory requirements, while pursuing growth opportunities without the need for significant earnings retention. We believe that our business model can generate an adjusted return on tangible equity (excluding deferred tax expense / benefit and deferred tax assets) of around 15% in normal market conditions.

We have an attractive and flexible capital returns policy

Our earnings capacity and capital efficiency support our objective to deliver sustainable and increasing capital returns to our shareholders. We aim to increase our ordinary dividend per share at a mid-to-high single-digit percent per annum. We may also return excess capital, after accruals for ordinary dividends, most likely in the form of share repurchases, after considering our outlook and subject to regulatory approval.

Our priorities

1. Drive profitable growth in Global Wealth Management

In Global Wealth Management, we target 10–15% adjusted profit before tax growth annually over the cycle, while growing net new money at 2–4% per annum and aiming to operate within an adjusted cost / income ratio range of 65–75%. The creation of the integrated business division on 1 February 2018 aims to further enhance the client experience and our product offering in line with an increasingly global client base. We expect to more effectively capture the purchasing power of Global Wealth Management's CHF 2.3 trillion invested asset base and generate greater synergies across technology, innovation and other areas of investment. Regional variations in the client service model will be maintained, while middle- and back-office functions will be more closely aligned and integrated.

2. Maintain focused leadership and grow profits in Asset Management, Investment Bank and Personal & Corporate Banking

Our strength in Global Wealth Management also relies on the stand alone strength of our other businesses. Together, they make a significant contribution to earnings, diversify revenues and generate high-quality returns.

3. Enhance diversification by capturing superior growth in Asia Pacific and the Americas, leverage our Europe, Middle East and Africa capabilities and reinforce our leadership position in Switzerland

From a geographic standpoint, we aim to grow in the Americas and to reinforce leadership in our home market in Switzerland. In Europe, Middle East and Africa, we want to leverage our capabilities to grow our market share during likely consolidation. Asia Pacific, and particularly China, presents a significant growth opportunity, given the economic expansion and rate of increase in the number of billionaires. UBS's competitive position in Asia Pacific is strong and we are well positioned to capture opportunities in the region across our businesses.

4. Invest in technology with a focus on superior client experience, product capabilities, efficiency and effectiveness

We will continue to invest in technology to drive growth, better serve our clients and improve efficiency and effectiveness. We intend to secure our position as a leader in the digital age by maintaining expenditure on technology of at least 10% of the Group's revenues for the foreseeable future.

Performance targets and capital guidance 2018–2020

The table below shows our performance targets and capital guidance for the Group and the business divisions for the 2018–2020 period. The targets and guidance reflect what we believe can be achieved in normal market conditions.

All targets are measured on an annual basis, except our adjusted profit before tax growth targets for Global Wealth Management and Asset Management, which represent the average annual growth we aim to deliver over the cycle.

→ **Refer to the "Group performance" section of this report for more information on adjusted results and adjusting items**
→ **Refer to the "Measurement of performance" section of this report for more information on key performance indicators**
→ **Refer to the "Risk factors" section of this report for more information on factors that may affect our ability to deliver on our strategy**

	Cost / income ratio[1]	Profitability and growth[1]	Capital and resource guidance
Group	<75%	~15% RoTE excluding DTAs[2]	~13% common equity tier 1 capital ratio[3]
			~3.7% common equity tier 1 leverage ratio[3]
Global Wealth Management	65–75%	10–15% pre-tax profit growth[4]	
		2–4% net new money growth	
Personal & Corporate Banking	50–60%	1–4% net new business volume (personal banking)	
		150–165 bps net interest margin	
Asset Management	60–70%	~10% pre-tax profit growth[4, 5]	
		3–5% net new money growth, excluding money market flows	
Investment Bank	70–80%	>15% RoAE[6]	RWA and LRD around one-third of the Group total[7]

1 Annual targets; cost / income ratio, pre-tax profit growth and return targets are on an adjusted basis. 2 Return on tangible equity (RoTE) excluding deferred tax expense / benefit and deferred tax assets (DTAs); calculated as adjusted net profit / loss attributable to shareholders excluding deferred tax expense / benefit, such as the net write-down due to the Tax Cuts and Jobs Act (TCJA) enacted in the fourth quarter of 2017, divided by average tangible equity attributable to shareholders excluding any DTAs that do not qualify as fully applied CET1 capital. 3 Based on fully applied CET1 capital. 4 Over the cycle. 5 Excluding the impact of business exits. 6 Return on attributed equity. 7 Including risk-weighted assets (RWA) and leverage ratio denominator (LRD) directly associated with activity that Corporate Center – Group ALM manages centrally on the Investment Bank's behalf; proportion may fluctuate around this level due to factors such as equity market levels and FX rates.

Measurement of performance

Performance measures

Key performance indicators

The Group and business divisions are managed on the basis of a key performance indicator (KPI) framework, which identifies profit and growth financial measures, in the context of sound risk and capital management objectives. When determining variable compensation, both Group and business division KPIs are taken into account.

We review the KPI framework on a regular basis, considering our strategy and the market environment in which we operate.

KPIs are disclosed in our quarterly and annual reporting to allow comparison of our performance over the reporting periods. For certain KPIs we have performance targets in place, which are defined in order to measure our performance against our strategy. Our KPIs are designed to be assessed on an over-the-cycle basis and are subject to seasonal patterns.

→ **Refer to the "Our strategy" section of this report for more information on performance targets**

Changes to our key performance indicators in 2018

We reviewed our performance targets and KPI framework in January 2018, taking into account the developments in the regulatory environment and the achievement of our CHF 2.1 billion net cost reduction target by the fourth quarter of 2017. We will introduce "Common equity tier 1 leverage ratio (%)" as a KPI for the Group alongside the existing "Going concern leverage ratio (%)" KPI. The existing "Return on tangible equity (RoTE) (%)" KPI will be complemented by "RoTE excluding deferred tax assets (RoTE ex DTAs) (%)."

"Gross margin on invested assets (bps)" for the Group, Wealth Management and Asset Management will be removed from the KPI framework as this will no longer be used as a strategic steering metric. Cost control will remain in focus through the cost / income ratio, which remains a KPI and performance target for the Group and all business divisions.

From 1 February 2018, performance targets and KPIs for Wealth Management and Wealth Management Americas were merged and are reported for the Global Wealth Management business.

2017 Group and business division key performance indicators

Key performance indicators	Definition	Group	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank
Net profit growth (%)	Change in net profit attributable to shareholders from continuing operations between current and comparison periods / net profit attributable to shareholders from continuing operations of comparison period	●					
Pre-tax profit growth (%)[1]	Change in business division operating profit before tax between current and comparison periods / business division operating profit before tax of comparison period		●	●	●	●	●
Cost / income ratio (%)	Operating expenses / operating income before credit loss (expense) or recovery	●	●	●	●	●	●
Return on tangible equity (RoTE) (%)[2]	Net profit attributable to shareholders before amortization and impairment of goodwill and intangible assets (annualized as applicable) / average equity attributable to shareholders less average goodwill and intangible assets	●					
Return on attributed equity (RoAE) (%)[2]	Business division operating profit before tax (annualized as applicable) / average attributed equity						●
Going concern leverage ratio (%)[3]	Total going concern capital / leverage ratio denominator as of period end	●					
Common equity tier 1 capital ratio (%)[3]	Common equity tier 1 capital / risk-weighted assets as of period end	●					
Net new money growth (%)	Net new money for the period (annualized as applicable) / invested assets at the beginning of the period. Group net new money growth is reported as net new money growth for combined wealth management businesses. Asset Management net new money excludes money market flows	●	●	●		●	
Gross margin on invested assets (bps)[2, 4]	Operating income before credit loss (expense) or recovery (annualized as applicable) / average invested assets		●	●		●	
Net margin on invested assets (bps)[2]	Business division operating profit before tax (annualized as applicable) / average invested assets		●	●		●	
Net new business volume growth for personal banking (%)	Net new business volume (i.e., total net inflows and outflows of client assets and loans) for the period (annualized as applicable) / business volume (i.e., total of client assets and loans) at the beginning of the period				●		
Net interest margin (%)	Net interest income (annualized as applicable) / average loans				●		
Cost reduction[4]	Net exit rate cost reduction	●					

1 Excluding the impact of business exits, for Asset Management only. 2 Denominator based on a five-point average of quarter-end values with the beginning and end values weighted with a factor of 0.5 for the full-year calculations and based on a simple average for the quarterly calculations. 3 Based on fully applied CET1 capital. 4 Removed from the key performance indicator framework in 2018.

New key performance indicators in 2018

Key performance indicators	Definition	Group	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank
Return on tangible equity excluding deferred tax assets (RoTE ex DTAs) (%)[1, 2]	Adjusted net profit attributable to shareholders before amortization and impairment of goodwill and intangible assets and before deferred tax expense / benefit (annualized as applicable) / average equity attributable to shareholders less average goodwill and intangible assets and less average deferred tax assets that do not qualify as fully applied CET1 capital	●				
Common equity tier 1 leverage ratio (%)[3]	Common equity tier 1 capital / leverage ratio denominator as of period end	●				

1 Excluding deferred tax expense / benefit such as the net write-down due to the Tax Cuts and Jobs Act enacted in the fourth quarter of 2017. 2 Denominator based on a five-point average of quarter-end values with the beginning and end values weighted with a factor of 0.5 for the full-year calculations and based on a simple average for the quarterly calculations. 3 Based on fully applied CET1 capital.

Global Wealth Management

Integration of our wealth management businesses

On 1 February 2018, Wealth Management and Wealth Management Americas were combined into the unified business division Global Wealth Management. The creation of the integrated business division aims to further enhance our superior client experience and product offering in line with an increasingly global client base. Global Wealth Management provides our clients with broader access to more diversified global products and services and an integrated multi-shore offering. Our clients benefit from the scale and insights of a truly global business, while we retain the distinct client service models that we believe are best suited to each of the regions in which we operate. We believe that our platform, combined with a global suite of products and services, bolsters our ability to attract the strongest investment talent, both inside and outside of UBS, to best serve our clients. We want to leverage our scale to generate greater synergies through joint investments in technology, new products, new business lines and our people.

Business

Global Wealth Management provides comprehensive advice and tailored financial services to wealthy private clients around the world. Our clients benefit from the full spectrum of resources that a global firm can offer, including investment management, wealth planning, banking and lending, and corporate financial advice. Our model gives clients access to a wide range of products from the world's leading third-party institutions that complement our own offerings.

Strategy and clients

We are the global leader in wealth management for private clients, particularly in the ultra high net worth and high net worth segments.

We seek to capitalize on our market-leading position in the ultra high net worth business and to increase our market share considerably in this segment. We also invest significantly in growing our high net worth and core affluent businesses.

Wealth planning, investment management and portfolio construction are at the heart of our offering. We aspire to provide our clients with a wider selection of discretionary and advisory services, helping them to more effectively achieve their goals. This in turn would further increase our mandate penetration and contribute to higher recurring revenues. Where possible, our integrated client service model allows us to bundle capabilities across the Group to identify investment opportunities in varying market conditions and create solutions that suit individual client needs. For example, ultra high net worth clients benefit from tailored institutional coverage and global execution provided by dedicated specialist teams from Global Wealth Management and the Investment Bank through the Global Family Office Group.

We continue to invest in our digital capabilities to offer clients a combination of market-leading investment advice tailored to their personal goals and innovative digital service solutions.

We have unique scale and a global footprint with booking centers across the globe. These give us a strong local presence allowing us to serve our clients and book their assets in multiple locations, according to client preferences.

In Asia Pacific, we have further strengthened our position as the largest wealth manager. Capturing growth opportunities in China is central to our strategy. We have accelerated our growth and expanded our business across the region, with a particular focus on Hong Kong and Singapore, as well as onshore markets, for example, Japan, China and Taiwan.

The Americas region covers both North America and Latin America. In North America, we continue to execute on our distinct opportunity to "feel small and play big" by combining the agility of a boutique firm with all of the capabilities of a premier, truly global wealth manager. We continue to execute on our operating model to move decision-making closer to clients, better leverage global capabilities and invest in next-generation technology. We expect these efforts to enable us to achieve higher levels of client satisfaction, strengthen our client relationships, increase productivity of our financial advisors and support the organic growth of our franchise. In Latin America, we continue to leverage our global booking model capabilities. We regularly assess our local presence to ensure proximity to our clients in key markets and to make sure we meet our clients' needs for global diversification and local offerings. In 2017, we enhanced our presence in Brazil with the acquisition of Consenso Investimentos, the country's largest independent multi-family office. This transaction demonstrates our long-standing strategic priority to grow in this key market.

In Europe, Middle East and Africa, our Western Europe business has a long-established local presence in all major markets. In 2017, and early 2018, we announced the acquisition of businesses in Europe that are complementary to our strategy. The acquisition will enable us to grow our presence in Europe and further build our position as a key wealth manager for Nordic clients in Europe. In line with our strategy to focus on our main markets, we sold our domestic wealth management operations in the Netherlands in August 2017. Outside Western Europe, we focus on key emerging markets, for example, Russia, Turkey and Israel.

In Switzerland, we collaborate closely with our colleagues in Personal & Corporate Banking, Asset Management and the Investment Bank. This creates opportunities to expand our business through client referrals and generates efficiencies by enabling us to use UBS's extensive branch network.

We evaluate our performance against key performance indicators and our respective targets.

→ **Refer to the "Our strategy" section of this report for information on our performance targets**

→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

Products and services

Our approach to clients focuses on understanding their financial objectives and providing solutions tailored to their individual needs. Clients benefit from a comprehensive set of capabilities and expertise, including wealth planning, investing, lending, protection, philanthropy and corporate and banking services. Investment management is a core component of this value proposition.

Our global Chief Investment Office (CIO) draws on approximately 200 analysts, strategists, and investment professionals present in 10 key financial hubs globally and leverages access to buy-side partners and client networks. Seeking to add alpha to our clients' portfolios, the CIO provides clear, independent investment views, known as the UBS House View.

The UBS House View identifies and communicates investment opportunities and market risks to help protect and grow our clients' wealth over generations. We apply it to our clients' portfolios and asset allocations, and it underpins the investment strategies for our flagship discretionary mandates. The strategic asset allocation is an essential part of our disciplined style of managing our clients' wealth and strives to ensure that our clients remain on course to meet their financial goals over the long term. It is complemented by our tactical asset allocation, which uses our global expertise to help our clients navigate markets tactically and ultimately improve the risk and return trade-off potential of their portfolios.

Our Investment Platforms and Solutions (IPS) unit provides clients with portfolio-based investment advice and solutions in line with their overall investment goals. Clients can choose to delegate their investment decisions to our team of investment experts through a discretionary mandate. Those who wish to be more actively involved in their investment activities can choose to receive recommendations on an advisory basis. IPS seeks to ensure our solutions are in step with market conditions by aligning our discretionary and advisory offerings with the UBS House View. Clients can invest in a full range of financial instruments, from single securities across asset classes to investment funds, structured products and alternative investments. Additionally, we offer our clients advice on structured lending and corporate finance.

We continue to develop innovative solutions to help our clients address the challenges of an increasingly complex financial world and to respond to their evolving needs. We have expanded our discretionary mandate solutions to meet specific client needs and preferences. We are also strongly committed to broadening our sustainable and impact investment offering. For example, in 2017, we offered our clients access to the Rise Fund, a private equity impact investment vehicle that aims to achieve measurable, positive social and environmental outcomes combined with competitive financial returns.

→ **Refer to the "UBS and Society" section of this report for more information on sustainable investing products and services**

Organizational structure

We are organized along regional lines, with our business areas being the Americas, including the US, Canada and Latin America; Europe, Middle East and Africa; Asia Pacific; Switzerland; and the business area for our global ultra high net worth clients.

We are governed by executive, risk and operating committees. In the US and Puerto Rico, we operate primarily through UBS Financial Services Inc. and UBS Financial Services Incorporated of Puerto Rico. Our banking services in the US include those conducted through UBS Bank USA, a Federal Deposit Insurance Corporation-insured depository institution subsidiary, and branches of UBS AG. Canadian wealth management and banking operations are conducted through UBS Bank (Canada). Outside North America and Puerto Rico, we mainly operate through UBS Switzerland AG and UBS AG branches. In Europe, we further operate through UBS Europe SE. We have a presence in more than 40 countries.

Competitors

Our main competitors include the private banking operations of BNP Paribas, Citigroup, Credit Suisse, Deutsche Bank, HSBC, JPMorgan Chase, Julius Baer, and the large US-based wirehouses Morgan Stanley, Bank of America Merrill Lynch and Wells Fargo, in addition to the banks and independent financial advisors in each market we operate.

Personal & Corporate Banking

Business

As the leading personal & corporate banking business in Switzerland, we provide comprehensive financial products and services to private, corporate and institutional clients in Switzerland. We are among the leading players in the private and corporate loan market in Switzerland, with a well-collateralized and conservatively managed lending portfolio.

Our business is central to UBS's universal bank delivery model in Switzerland. We work with the Group's wealth management, investment bank and asset management businesses to help our clients receive the best products and solutions for their specific financial needs. We are also an important source of growth for these business divisions through client referrals. In addition, we manage a substantial part of UBS's Swiss infrastructure and banking products platform, both of which are leveraged across the Group.

Our distribution model is based on a multi-channel strategy. With a steadily rising number of users and client interactions for our digital banking offering, we continue to strengthen our position as the leading multi-channel bank in Switzerland.

Strategy and clients

Our strategy focuses on promoting profitable growth while continuously improving our banking services for clients within Switzerland. To achieve this, we have launched Client Experience 2020, our strategic digitalization program, which aims to strengthen our position as the leading universal bank in Switzerland and enhance our digital leadership position.

In the personal banking business, we aspire to be the bank of choice for private clients in Switzerland. Currently, we serve one in three Swiss households through our branch network, customer service centers and digital banking services. We continue to pursue our strategy of moderately and selectively growing our business in high-quality loans and endeavor to expand our multi-channel offering.

In the corporate and institutional business, we want to be our clients' main bank. We aim to continuously improve our profitability and capital efficiency, striving to expand our market share in Switzerland, centered on cash flow-based lending and our strategic advisory and trading business. Additionally, we are selectively expanding our offering at our international hubs to serve Swiss-based corporate clients operating globally. We also assist our Swiss-based corporate clients with sustainability measures, such as the energy check-up offered by the Energy Agency of the Swiss Private Sector (EnAW), that contribute toward enhancing energy efficiency, thereby reducing operating costs.

Our clients value their relationship with us and our efforts to provide them with superior service. In 2017, for the sixth consecutive year, the international finance magazine *Euromoney* named UBS Best Bank in Switzerland, recognizing our experience, client centricity, focus on innovation, and the quality of our employees. Additionally, and for the seventh consecutive year, UBS was rated Best Domestic Cash Manager Switzerland based on a survey of cash managers and chief financial officers.

Continuous employee development, including client advisor certification, is a crucial element of our divisional strategy, as this is our key to providing superior client service.

Moreover, we continuously strive to simplify structures and processes in order to improve client experience without compromising our risk standards.

We evaluate our performance against key performance indicators and our respective targets.

→ **Refer to the "Our strategy" section of this report for more information on our performance targets**

→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

→ **Refer to the "UBS and Society" section of this report for more information on sustainable investing products and services**

Products and services

Our private clients have access to a comprehensive life cycle-based offering and convenient digital banking, targeting the specific needs of day-to-day banking, retirement and investment goals, and real estate transactions.

Our corporate and institutional clients benefit from our financing and investment solutions, notably regarding access to equity and debt capital markets, syndicated and structured credit, private placements, leasing and traditional financing. Our transaction banking offers solutions for payment and cash management services, trade and export finance, receivable finance, as well as global custody solutions to institutional clients.

In 2017, we implemented a number of product and service innovations:

- Remote Expert: a videoconferencing tool that allows clients to interact with our product specialists in areas such as trade finance or cash management.
- Improvements to the UBS account opening app: clients can now open an account via smartphone using video identification and use paperless signing with a qualified electronic signature for various services, including credit card applications.
- Liquidity Cockpit: a product that uses specific business software to help small businesses manage their liquidity.
- KeyPort: a connectivity solution with multi-banking functionality for our midsize and larger corporate clients.
- UBS Atrium: a platform that intermediates between Swiss institutional investors looking to invest in mortgages and owners of investment properties seeking mortgage financing.

We collaborate closely with the Investment Bank to offer capital market and foreign exchange products, hedging strategies and trading capabilities, as well as corporate finance advice. Working with Asset Management, we also provide fund and portfolio management solutions.

Organizational structure

Our divisional business is organized into Personal Banking and Corporate & Institutional Clients, and is the core of Region Switzerland, which in addition contains Wealth Management Switzerland, the Investment Bank Switzerland and Asset Management Switzerland. The Swiss network includes around 280 branches, covering 10 geographical regions.

We are governed by executive, risk and operating committees and operate mainly through UBS Switzerland AG.

Competitors

In the Swiss retail business, our competitors include Credit Suisse, PostFinance, Raiffeisen, the cantonal banks and other regional and local Swiss banks.

In the Swiss corporate and institutional business, our main competitors are Credit Suisse, the cantonal banks and globally active foreign banks in Switzerland.

Asset Management

Business

Asset Management is a large-scale and diversified asset manager, with an onshore presence in 23 countries. We offer investment capabilities and investment styles across all major traditional and alternative asset classes, as well as platform solutions and advisory support, to institutions, wholesale intermediaries and wealth management clients around the world.

Strategy and clients

We aim to drive profitable and sustainable growth in key markets in Europe, Switzerland, the Americas and Asia Pacific, including China, where we continue to expand our long-standing presence. In 2017, Asset Management was granted a Private Fund Management license in China, allowing us to develop and offer onshore investment products for Chinese institutional and high net worth investors, through our wholly foreign-owned enterprise UBS Asset Management (Shanghai) Limited.

To achieve our goals, we seek to strengthen our institutional business and to accelerate the growth of our wholesale business. Collaboration with UBS's wealth management business to provide best-in-class products and services to meet private clients' needs continues to be a core component of our strategy.

We have defined our strategic growth and efficiency priorities with an overarching goal to deliver holistic investment and platform solutions to our clients, by leveraging our global reach and investment expertise.

To enable us to better leverage our best investment processes, tools and systems to generate alpha and offer holistic solutions for clients, we brought together our Equities, Fixed Income, Solutions and single-manager hedge fund capabilities in 2017 to create an integrated business area named Investments. We also combined our Global Real Estate, Infrastructure and Private Equity businesses to form a new business area named Real Estate & Private Markets.

We continue to develop our well-established passive capabilities, including indexed strategies and exchange-traded funds (ETFs), where we are building on our strong position in Asia Pacific, Europe and Switzerland.

We are committed to integrating sustainability into our active investment capabilities, as part of our ambition to become a leading provider of sustainable solutions for sophisticated clients. We continue to enhance our proprietary sustainability database and toolset and have built a dedicated sustainability research team to work with our investment teams across asset classes.

To capture opportunities presented by the evolving needs of wholesale clients, we are focused on building strategic partnerships and expanding our platforms and advisory support capabilities. With this in mind, in late 2017, we brought together our three Platform Services businesses – Fondcenter, Fund Management Services and UBS Partner – under unified leadership within Client Coverage to best capture the growth opportunities globally and to facilitate closer collaboration across these capabilities.

To support our efforts to increase our operational efficiency, we continue to invest in our operating platform and simplify our organization. Notable developments in this regard are the establishment of a dedicated middle-office services function and the sale of our fund administration servicing units in Luxembourg and Switzerland to Northern Trust in 2017.

We evaluate our performance against key performance indicators and our respective targets.

→ **Refer to the "Our strategy" section of this report for information on our performance targets**
→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**
→ **Refer to the "UBS and Society" section of this report for more information on sustainable investing products and services**

Products and services

We offer clients a wide range of investment products and services in different asset classes, which can be delivered, directly or through third-party banks and distributors, in the form of segregated, pooled or advisory mandates as well as registered investment funds in various jurisdictions.

Our traditional and alternative capabilities include:

- *Equities* – global, regional and thematic strategies, as well as high alpha, growth and quantitative styles.
- *Fixed Income* – global, regional and local market-based single-sector, multi-sector and extended-sector strategies, such as high-yield and emerging market debt, as well as unconstrained and currency strategies.
- *O'Connor* – a global, single-manager hedge fund platform, offering both multi-strategy and standalone capabilities.
- *Real Estate & Private Markets* – global and regional real estate equity and debt strategies; direct infrastructure investment in core infrastructure assets globally; and multi-manager real estate, infrastructure and private equity strategies in broadly diversified fund-of-funds portfolios.
- *Passive and Alternative Beta* – indexed, alternative beta and rules-based strategies across equities, fixed income, commodities, real estate and alternatives, with mainstream to highly customized benchmarks and various structures including ETFs, pooled funds, structured funds and mandates.

- *Sustainable & Impact Investing* – to meet investors' financial and sustainability goals, we offer a wide range of sustainable and impact investing strategies across asset classes, from environmental, social and corporate governance integration to impact investing including investment themes such as renewable energy, environmental stewardship, social integration, health care, resource efficiency and demographics.

In addition, our *Solutions* business offers:

- Global and regional asset allocation and currency investment strategies across the risk / return spectrum, including balanced, growth, income, risk-managed, and unconstrained strategies.
- Customized multi-asset solutions, advisory and fiduciary services, including risk-managed and structured strategies, pension risk management and outsourced Chief Investment Office services.
- Multi-manager hedge fund solutions and advisory services, and manager selection for traditional asset classes.

Our *Platform Services* business offers:

- Fondcenter: our leading fund platform in Europe and Switzerland connecting distribution partners with fund providers.
- Fund Management Services: offering fund management company, white-labeling and representative services.
- UBS Partner: our innovative modular platform providing banks with powerful tools and analytics to support their advisory offering and enable them to significantly enhance their end clients' experience.

Organizational structure

Our business is organized by the products and services we offer, our business areas being: Client Coverage, Investments, Real Estate & Private Markets, Products & Solutions and the Chief Operating Officer area. Our business is driven out of eight main hubs: Chicago, Hong Kong, London, New York, Singapore, Sydney, Tokyo and Zurich. We are governed by executive, risk and operating committees.

Competitors

Our main competitors include global firms with wide-ranging capabilities and distribution channels, such as Amundi, BlackRock, Deutsche Asset Management, Goldman Sachs Asset Management, Invesco, J.P. Morgan Asset Management, Morgan Stanley Investment Management and Schroders. Other competitors include firms with a specific market or asset class focus.

Investment Bank

Business

The Investment Bank provides investment advice, financial solutions and capital markets access in over 35 countries, with principal offices in all major financial centers. We serve corporate, institutional and wealth management clients across the globe and partner with our wealth management, personal and corporate banking and asset management businesses.

The business division is organized into Corporate Client Solutions and Investor Client Services, which also includes UBS Securities Research. Our specialist teams work closely together, complementing our global product offering with their regional expertise. This enables us to understand our clients and provide services tailored to their investment and financing needs.

Strategy and clients

We aspire to provide best-in-class services and solutions to our corporate, institutional and wealth management clients, through an integrated, solutions-led approach, driven by our intellectual capital and leveraging our award-winning electronic platforms. With our client-centric business model, we partner with our wealth management, personal and corporate banking and asset management businesses, and we believe we are well positioned to provide our clients with market insight, global coverage of markets and products, and execution services.

Our focus remains on our traditional strengths in our advisory, capital markets, equities and foreign exchange businesses, complemented by a rates and credit platform, to deliver attractive and sustainable risk-adjusted returns. Using our powerful research and technology capabilities, we develop integrated solutions to support our clients as they adapt to evolving market structures, driven by changes to the regulatory, technological, economic and competitive landscape.

We continue to invest in talent and technology and to strengthen our operational risk framework. We continue to develop and foster a shared culture across the Investment Bank. In 2017, implementation of our technology plan remained critical in making our platform for clients more effective and simplifying our processes.

We operate a tightly controlled balance sheet, risk-weighted assets and leverage ratio denominator allocation process to support our goal of earning attractive returns on allocated capital. We evaluate our performance against key performance indicators and our respective targets.

→ **Refer to the "Our strategy" section of this report for more information on our performance targets and expectations**
→ **Refer to the "Measurement of performance" section of this report for information on our key performance indicators**

Products and services

Corporate Client Solutions

In Corporate Client Solutions, we advise our clients on strategic business opportunities and help them raise capital to fund their activities. Together with Investor Client Services, we offer a full-service solution, which includes the distribution and risk management of capital markets products and financing solutions. The main business lines are:

- *Advisory* consults clients on matters such as mergers and acquisitions, spin-offs, exchange offers, leveraged buyouts, joint ventures, exclusive sales, restructurings, takeover defense and corporate broking.
- *Equity Capital Markets* offers comprehensive equity capital-raising services, as well as related derivative products. This includes managing initial public offerings and private placements, as well as equity-linked transactions and other strategic equities solutions.
- *Debt Capital Markets* provides financing advice and helps clients raise various types of debt capital, as well as hedge the resulting exposures.
- *Financing Solutions* provides customized solutions across asset classes via a wide range of financing capabilities, including structured, real estate and special situations financing.
- *Risk Management* includes corporate lending and associated hedging activities.

Investor Client Services

In Investor Client Services, we enable our clients to buy and sell securities on capital markets across the globe and to manage their risks and liquidity. The businesses are:

Equities

As one of the world's largest equities houses and leading equity market participants in the primary and secondary markets, we distribute, structure, execute, finance and clear equity cash and derivative products. The main business lines are:

- *Cash* offers trade execution and clearing for single stocks and portfolios through both traditional and electronic channels, along with investment advisory and consultancy services.
- *Derivatives* enables clients to manage risk and meet funding requirements through a wide range of listed and over-the-counter equity derivative instruments. We create and distribute structured products and notes, enabling our clients to optimize their investment returns.
- *Financing Services* provides our hedge fund and institutional clients with a fully integrated platform for financing transactions, which includes prime brokerage. In addition, we execute and clear exchange-traded equity derivatives in more than 45 markets globally.

Foreign Exchange, Rates and Credit

Foreign Exchange, Rates and Credit provides execution services and solutions with an emphasis on electronic trading and maintains high levels of balance sheet velocity. The main business lines are:

- *Foreign Exchange* helps our clients manage their currency exposures and is recognized as one of the leading foreign exchange market-makers as well as the market leader in precious metals.
- *Rates and Credit* encompasses sales, trading and market-making in a selected range of rates and credit products. In addition, we work closely with Corporate Client Solutions, providing support to our debt capital markets businesses and tailoring customized financing solutions for our clients.

UBS IB Research

In UBS IB Research, we offer clients key insights on securities in major financial markets around the globe. Together with UBS Evidence Lab, UBS research analysts refine investor questions into testable propositions and apply various primary research methods, such as quantitative market research, digital footprint analysis, geospatial analysis or data science. In 2017, UBS was named *Institutional Investor* magazine's Top Global Equity Research Firm of the Year. The recognition of this award positions us well under the new Markets in Financial Instruments Directive II (MiFID II) environment, where we continue to focus on our clients' needs with a differentiated approach to question-driven, evidence-based research.

Organizational structure

Our business is organized along the products and services described above and has a global reach.

We are governed by executive, risk and operating committees and operate through UBS AG branches and other subsidiaries of UBS Group. Securities activities in the US are conducted mainly through UBS Securities LLC, a registered broker-dealer. In the UK, Investment Bank activities are conducted mainly out of UBS AG London Branch and UBS Limited.

Competitors

Our main competitors are the major global investment banks, including Bank of America Merrill Lynch, Barclays, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan Chase and Morgan Stanley.

Corporate Center

Corporate Center provides services to the Group through the reporting units Corporate Center – Services and Group Asset and Liability Management (Group ALM). Corporate Center also includes the Non-core and Legacy Portfolio unit.

Priorities and initiatives

Our Corporate Center functions strive to provide best-in-class services to the Group based on commercially sound service management principles, including transparency on both qualitative and quantitative components of the services offered. Specifically in the areas of finance, risk management and control, and legal, we aim to provide high-quality advice and solutions, while optimizing resources and mitigating risk. In other areas such as compliance, human resources, information technology, operations and marketing and communications, we align services based on demand and delivery of defined strategies. Moreover, we continue to focus on achieving greater effectiveness and efficiency through the strategic levers of workforce and footprint, organization and process optimization and technology.

All Corporate Center functions are represented in onshore, nearshore and offshore locations that allow us to tap into larger talent pools and realize efficiencies by reducing our footprint in high-cost real estate locations. As of 31 December 2017, 36% of Corporate Center employees and contractors were in offshore or nearshore locations compared with 18% as of 31 December 2013.

We seek to increase value by leveraging common capabilities and creating centralized functions. In 2017, we successfully completed the transfer of substantially all shared services functions to our separate Group service companies, which, in addition to meeting regulatory requirements, allows us to further strengthen our approach to service management while remaining efficient in the way we operate. In our technology landscape, we continue to upgrade our infrastructure, simplify our portfolio of applications and deliver digital innovation, such as artificial intelligence.

→ **Refer to the "Our strategy" section of this report for more information**

→ **Refer to the "Our evolution" section of this report for more information**

Corporate Center – Services

Corporate Center – Services consists of the Group Chief Operating Officer area (Group Corporate Services, Group Human Resources, Group Operations, Group Sourcing and Group Technology), Group Finance (excluding Group ALM), Group Legal, Group Risk Control, Group Communications & Branding, Group Regulatory & Governance, and UBS and Society.

The functions within Corporate Center – Services partner with business divisions and other Corporate Center units through a service-based operating model, managing services from a quality, risk and cost perspective in order to achieve operational and financial efficiencies. Corporate Center – Services allocates the majority of its operating expenses to the business divisions and other Corporate Center units. As part of the annual business planning cycle, Corporate Center – Services agrees with the business divisions and other Corporate Center units on projected cost allocations for services provided, depending on expected capital and service consumption levels as well as the nature of the service performed. Since 2017, Corporate Center – Services allocates expenses based on actual costs incurred using service-based billing, providing cost transparency and enabling cost management. In 2015 and 2016, where costs incurred were different from those expected, Corporate Center – Services recognized over- and under-recoveries.

Operating expenses remaining in Corporate Center – Services after allocations relate mainly to Group governance and other corporate activities, certain strategic and regulatory projects and certain retained restructuring expenses.

Roles and responsibilities within Corporate Center – Services

Head of Group functions	Responsibilities
Group Chief Financial Officer[1]	– Is responsible for ensuring transparency in, and the assessment of, the financial performance of the Group and business divisions, and for the Group's financial accounting, controlling, forecasting, planning and reporting processes – Is responsible for treasury and capital management, including management and control of funding and liquidity risk with independent oversight from the Group Chief Risk Officer, and for UBS's regulatory capital ratios – Ensures asset and liability management by balancing consumption of the Group's financial resources through consolidation and management of the Group's structural risks, enabling sustainable earnings generation – Manages and controls the Group's tax affairs – Manages the divisional and Group financial control functions – Makes proposals to the Board of Directors (BoD) regarding the accounting standards adopted by the Group, and defines financial reporting and disclosure standards, after consultation with the Audit Committee of the BoD – Provides external certifications under sections 302 and 404 of the Sarbanes-Oxley Act of 2002, together with the Group Chief Executive Officer (CEO) – Coordinates the working relationship with external auditors under the supervision of the Audit Committee of the BoD – Supports the CEO in strategy development and key strategic topics – Provides advice on financial aspects of strategic projects and transactions – Manages relations with investors and analysts, in coordination with the CEO
Group Chief Operating Officer	– Provides quality, cost-effective and differentiating Group-wide IT services and tools in line with the needs of the business divisions and Corporate Center functions – Delivers a wide range of operational services across all business divisions and regions – Efficiently supplies real estate infrastructure and general administrative services, directs and controls all supply and demand management activities, supports the Group with its third-party sourcing strategies and takes responsibility for the Group's nearshore, offshore, outsourcing and supplier-related processes – Formulates and agrees Group-wide operating strategies, objectives, and financial and execution plans for the Group Chief Operating Officer function in support of each business division and the Group functions – Delivers cross-divisional operational initiatives to enhance the Group's operating platform – Defines and executes a human resources strategy aligned with UBS's objectives and positions the Group as an employer of choice – Ensures cost-efficient operational and advisory human resources services to employees as well as strategic advice to managers and executives, supporting them to attract, engage, develop and retain talent
Group Chief Risk Officer	– Manages the divisional, regional and firm-wide risk control functions and monitors and challenges the Group's risk-taking activities – Develops the Group's risk appetite framework and its risk principles – In accordance with the risk appetite framework approved by the BoD, is responsible for: (i) implementing appropriate independent control frameworks for the Group's credit, market, treasury, country, compliance and operational risks (ii) developing and implementing the frameworks for risk measurement, aggregation, portfolio controls and for risk reporting (iii) authorizing transactions, positions, exposures, portfolio limits, and credit risk provisions and allowances in accordance with the risk control authorities delegated to this role – Maintains a control framework to ensure that UBS meets relevant regulatory and professional standards in the conduct of its business
Group General Counsel	– Manages the Group's legal affairs and is responsible for ensuring effective and timely assessment of legal matters impacting the Group or its business and for providing the legal advice required by the Group – Manages and reports all litigation and other significant contentious matters, including all legal proceedings, that involve UBS – Manages and supervises the legal function of the Group
Group Head Communications & Branding	– Manages UBS's corporate and brand communication to its stakeholders in alignment with the Group's overall strategy – Develops UBS's communications strategy, content and positioning with the primary purpose to build and protect the Group's reputation and brand – Manages and coordinates Group-wide marketing communications activities, including partnership marketing and sponsorship measures – Provides shared service delivery of Group-wide communication channels
Group Head Regulatory & Governance	– Develops a coherent and effective governmental policy and regulatory strategy and coordinates key external relationships – Manages the Strategic Regulatory Initiatives portfolio and oversees the planning and execution of relevant initiatives – Establishes global and local recovery and resolution planning and develops key resolvability improvement measures – Designs the Group's legal entity structure and further develops coherent corporate governance standards – Governs the Group's investigation portfolio and performs important investigations
Head UBS and Society	– Is UBS's senior-level representative for sustainability issues – Manages UBS and Society, which covers all of UBS's activities related to sustainable investing, philanthropy, environmental and human rights policies governing client and supplier relationships, its environmental footprint, as well as community investment – Develops the UBS and Society strategy and ensures its execution across divisions and regions through chairmanship of the UBS and Society Operating Committee

1 Relates to responsibilities for both Corporate Center – Services and Corporate Center – Group ALM.

Corporate Center – Group ALM

Group ALM manages the structural risks of our balance sheet, including interest rate risk in the banking book, currency risk and collateral risk, as well as the risks associated with the Group's liquidity and funding portfolios. Group ALM also seeks to optimize the Group's financial performance by matching assets and liabilities within the context of the Group's liquidity, funding and capital targets and constraints. Group ALM serves all business divisions and other Corporate Center units through three main risk management areas, and its risk management is fully integrated into the Group's risk governance framework.

Business division-aligned risk management activities performed on behalf of business divisions and other Corporate Center units include managing the interest rate risk in the banking book on behalf of Global Wealth Management and Personal & Corporate Banking, high-quality liquid asset (HQLA) portfolios on behalf of specific business divisions as well as risk management of credit, debit and funding valuation adjustments for our over-the-counter derivatives portfolio. Net income generated by these activities is fully allocated to the associated business divisions and Corporate Center units.

Capital investment and issuance activities consist of managing the Group's equity and capital instruments as well as instruments that contribute to our total loss-absorbing capacity (TLAC). Revenues from investing the Group's equity and the incremental expenses of issuing capital and TLAC instruments at the UBS Group AG level relative to issuing senior debt out of operating subsidiaries are fully allocated to the business divisions and other Corporate Center units based on their attributed portion of the Group's equity.

Group structural risk management activities are performed to meet overall Group-wide risk management objectives. They include managing the Group's HQLA and long-term debt portfolios. The net positive or negative income generated through these activities is allocated to the business divisions and other Corporate Center units based on their consumption of the underlying risks. This consumption is determined by various liquidity and funding models and, to reduce volatility, is allocated using stable, internal benchmark rates rather than actual income earned by Group ALM. Net positive or negative income not arising as a result of business division consumption is retained by Group ALM.

As part of its risk management activities, Group ALM enters into derivative hedges to manage the economic and the interest rate risk of the different portfolios. The results of certain hedging activities, including any non-economic volatility caused by the applicable accounting treatment, are retained by Group ALM.

Corporate Center – Non-core and Legacy Portfolio

Non-core and Legacy Portfolio manages legacy positions from businesses exited by the Investment Bank, and is overseen by a committee chaired by the Group Chief Risk Officer.

Non-core and Legacy Portfolio pursues a primarily passive wind-down strategy, focusing on a disciplined reduction of risk-weighted assets, leverage ratio denominator and costs. Positions are managed and exited over time with the objective of maximizing shareholder value. Non-core and Legacy Portfolio also includes positions relating to legal matters arising from businesses that were transferred to it at the time of its formation.

→ **Refer to "Note 20 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information**

Risk factors

Certain risks, including those described below, may affect our ability to execute our strategy or our business activities, financial condition, results of operations and prospects. Because a broad-based international financial services firm such as UBS is inherently exposed to multiple risks, many of which become apparent only with the benefit of hindsight, risks of which we are not presently aware or which we currently do not consider to be material could also adversely affect us. The order of presentation of the risk factors below does not indicate the likelihood of their occurrence or the potential magnitude of their consequences.

Market conditions and fluctuations may have a detrimental effect on our profitability, capital strength, liquidity and funding position

Low and negative interest rates in Switzerland and the eurozone have negatively affected our net interest income: A continuing low or negative interest rate environment may further erode interest margins and adversely affect the net interest income generated by our Personal & Corporate Banking and Global Wealth Management businesses. Our performance is also affected by the cost of maintaining the high-quality liquid assets (HQLA) required to cover regulatory outflow assumptions embedded in the liquidity coverage ratio (LCR).

The Swiss National Bank permits Swiss banks to make deposits up to a threshold at zero interest. Any reduction in or limitations on the use of this exemption from the otherwise applicable negative interest rates could exacerbate the effect of negative interest rates in Switzerland. Low and negative interest rates may also affect customer behavior and hence our overall balance sheet structure. Mitigating actions that we have taken, or may take in the future, such as the introduction of selective deposit fees or minimum lending rates, have resulted and may further result in the loss of customer deposits, a key source of our funding, net new money outflows and / or a declining market share in our domestic lending business.

Our equity and capital are also affected by changes in interest rates. In particular, the calculation of our Swiss pension plan net defined benefit assets and liabilities is sensitive to the discount rate applied. Any further reduction in interest rates may lower the discount rates and result in pension plan deficits due to the long duration of corresponding liabilities. This would lead to a corresponding reduction in our equity and fully applied common equity tier 1 (CET1) capital.

We are subject to risk from currency fluctuations: We prepare our consolidated financial statements in Swiss francs. However, a substantial portion of our assets, liabilities, invested assets, revenues and expenses, equity of foreign operations and risk-weighted assets (RWA) are denominated in US dollars, euros, British pounds and in other foreign currencies. Accordingly, changes in foreign exchange rates may adversely affect our profits, balance sheet, including deferred tax assets, and capital, leverage and liquidity ratios. In particular, the portion of our operating income denominated in non-Swiss franc currencies is greater than the portion of operating expenses denominated in non-Swiss franc currencies. Therefore, the appreciation of the Swiss franc against other currencies generally has an adverse effect on our profits, in the absence of any mitigating actions.

In order to hedge our CET1 capital ratio, CET1 capital needs to have foreign currency exposure, leading to currency sensitivity of CET1 capital. As a consequence, it is not possible to simultaneously fully hedge both the amount of capital and the capital ratio. As the proportion of RWA denominated in non-Swiss franc currencies outweighs the capital in these currencies, a significant appreciation of the Swiss franc against these currencies could benefit our capital ratios, while a significant depreciation of the Swiss franc against these currencies could adversely affect our capital ratios.

→ **Refer to the "Current market climate and industry trends" section of this report for more information**

Substantial changes in the regulation of our businesses may adversely affect our business and our ability to execute our strategic plans

Fundamental changes in the laws and regulations affecting financial institutions can have a material and adverse effect on our business. Following the 2007–2009 financial crisis, regulators and legislators have adopted a wide range of changes to the laws, regulations and supervisory frameworks applicable to banks intended to address the perceived causes of the crisis and to limit the systemic risks posed by major financial institutions. These changes have caused us to make significant changes in our businesses and strategy and to move significant operations into subsidiaries to improve our resolvability or meet regulatory requirements, resulting in substantial implementation costs, increased our capital and funding costs and reduced operational flexibility. Although many of the regulatory changes have been completed, a number of these changes are being phased in over time or require further rulemaking or guidance for implementation. Certain changes are still under consideration. There remains significant uncertainty regarding a number of the measures referred to above.

Notwithstanding attempts by regulators to align their efforts, the measures adopted or proposed differ significantly across the major jurisdictions, making it increasingly difficult to manage a global institution like UBS. Swiss regulatory changes with regard to such matters as capital and liquidity have often proceeded more quickly than those in other major jurisdictions, and the requirements for Swiss major international banks are among the strictest of the major financial centers. This could put Swiss banks such as UBS at a disadvantage when they compete with peer financial institutions subject to more lenient regulation or with unregulated non-bank competitors.

Higher capital and total loss-absorbing capacity requirements increase our costs: As an internationally active Swiss systemically relevant bank (SRB), we are subject to capital and total loss-absorbing capacity (TLAC) requirements that are among the most stringent in the world. New Swiss SRB capital requirements impose significantly higher requirements based on RWA and a significantly higher leverage ratio requirement. In addition, we are required to maintain minimum levels of TLAC measured based on both our RWA and the leverage ratio denominator.

We expect increases in our RWA from changes in methodology, add-ons in the calculation of RWA and other changes in 2018 and 2019. Changes to international capital standards for banks recently adopted by the Basel Committee on Banking Supervision are expected to further increase our RWA when the standards are scheduled to become effective in 2022. We also expect that we will incur significant costs to implement the proposed changes.

Liquidity and funding: The requirements to maintain an LCR of HQLA to estimated stressed short-term net cash outflows, the proposed requirement to maintain a net stable funding ratio (NSFR), and other similar liquidity and funding requirements we are subject to, oblige us to maintain high levels of overall liquidity, limit our efforts to optimize interest income and expense, make certain lines of business less attractive and reduce our overall ability to generate profits. Both the LCR and NSFR requirements are intended to ensure that we are not overly reliant on short-term funding and that we have sufficient long-term funding for illiquid assets, and the relevant calculations make assumptions about the relative likelihood and amount of outflows of funding and available sources of additional funding in market- and firm-specific stress situations. There can be no assurance that in an actual stress situation our funding outflows would not exceed the assumed amounts. Moreover, many of our subsidiaries must comply with minimum capital, liquidity and similar requirements and as a result UBS Group AG and UBS AG have contributed a significant portion of their capital and provide substantial liquidity to them. These funds are available to meet funding and collateral needs in the relevant jurisdictions, but are generally not readily available for use by the Group as a whole.

Banking structure and activity limitations: We have made significant changes in our legal and operational structure to meet legal and regulatory requirements and expectations. For example, we have transferred all of our US subsidiaries under a US intermediate holding company to meet US regulatory requirements and substantially all the operations of Personal & Corporate Banking and Wealth Management booked in Switzerland to UBS Switzerland AG to improve our resolvability. These changes, particularly the transfer of operations to subsidiaries, such as our US intermediate holding company and UBS Switzerland AG, require significant time and resources to implement and create operational, capital, liquidity, funding and tax inefficiencies. In addition, they may increase our aggregate credit exposure to counterparties as they transact with multiple entities within the UBS Group. Our operations in subsidiaries are subject to local capital, liquidity, stable funding, capital planning and stress testing requirements. These requirements have resulted in increased capital and liquidity requirements in affected subsidiaries, which limit our operational flexibility and negatively affect our ability to benefit from synergies between business units and to distribute earnings to the Group.

In the US, we have incurred substantial costs for implementing our compliance and monitoring framework in connection with the Volcker Rule under the Dodd-Frank Act. We have also been required to modify our business activities both inside and outside the US to conform to the Volcker Rule's activity limitations. The Volcker Rule may also have a substantial impact on market liquidity and the economics of market-making activities. We may incur additional costs in the short term if aspects of the Volcker Rule are repealed or modified. We may become subject to other similar regulations substantively limiting the types of activities in which we may engage or the way we conduct our operations. If adopted as proposed, the rule on single counterparty risk proposed by the US Federal Reserve Board may affect how we conduct our operations in the US, including our use of other financial firms for payments and securities clearing services and as transactional counterparties.

Resolvability and resolution and recovery planning: Under the Swiss too big to fail (TBTF) framework, we are required to put in place viable emergency plans to preserve the operation of systemically important functions in the event of a failure. Moreover, under the Swiss TBTF framework and similar regulations in the US, the UK, the EU and other jurisdictions in which we operate, we are required to prepare credible recovery and resolution plans detailing the measures that would be taken to recover in the event of a significant adverse event or to wind down the Group or the operations in a host country through resolution or insolvency proceedings. We have made changes to the legal structure of the Group to improve the viability of our recovery and resolution plans and may be required in the future to make further changes to our legal structure, operations, or liquidity and funding plans to enable our recovery and resolution plans to meet regulatory expectations. If a recovery or resolution plan that we are required to produce in a jurisdiction is determined by the relevant authority to be inadequate or not credible, relevant regulation may permit the authority to place limitations on the scope or size of our business in that jurisdiction, oblige us to hold higher amounts of capital or liquidity, or to change our legal structure or business in order to remove the relevant impediments to resolution.

The Swiss Banking Act and implementing ordinances provide FINMA with significant powers to intervene in order to prevent a failure of, or to resolve, a failing financial institution. FINMA has considerable discretion in determining whether, when, or in what manner to exercise such powers. In case of a threatened insolvency, FINMA may impose more onerous requirements on us, including restrictions on the payment of dividends and interest. FINMA could also require us, directly or indirectly, for example, to alter our legal structure, including by separating lines of business into dedicated entities, with limitations on intra-Group funding and certain guarantees, or to further reduce business risk levels in some manner. FINMA also has the ability to write down or convert into common equity the capital instruments and other liabilities of UBS Group AG, UBS AG and UBS Switzerland AG in connection with a resolution. Refer to "*If we experience financial difficulties, FINMA has the power to open resolution or liquidation proceedings or impose protective measures in relation to UBS Group AG, UBS AG or UBS Switzerland AG, and such proceedings or measures may have a material adverse effect on our shareholders and creditors*" below.

Substantial changes in market regulation have affected and will continue to affect how we conduct our business: The revised Markets in Financial Instruments Directive and the associated Regulation (MiFID II / MiFIR) took effect on 3 January 2018. MiFID II, among other things, introduces substantial new regulation of exchanges and trading venues, including new pre-trade and post-trade transparency requirements, a ban on the practice of using commissions on transactions to compensate for research services and substantial new conduct requirements for financial services firms when dealing with clients. Implementation by the G20 countries of the commitment to require all standardized over-the-counter (OTC) derivative contracts to be traded on exchanges or trading facilities and cleared through central counterparties has had and will continue to have a significant effect on our OTC derivatives business, which is conducted primarily in the Investment Bank. These market changes are likely to reduce the revenue potential of certain lines of business for market participants generally, and we may be adversely affected. For example, we expect that, as a rule, the shift of OTC derivatives trading to a central clearing model will tend to reduce profit margins in these products and the changes introduced by MiFID II may result in a reduction in commission rates and trading margins. Also, these laws may have a material impact on the market infrastructure that we use, available platforms, collateral management and the way we interact with clients, and may cause us to incur material implementation costs. Margin requirements for non-cleared OTC derivatives have required significant changes to collateral agreements with counterparties and our clients' operational processes. In some jurisdictions implementation of these changes is ongoing, while rulemaking and implementation are delayed in others. This may result in market dislocation, disruption of cross-border trading, and concentration of counterparty trading. It also affects our ability to implement the required changes and may limit our ability to transact with clients.

Some of the regulations applicable to UBS AG as a registered swap dealer with the Commodity Futures Trading Commission (CFTC) in the US, and certain regulations that will be applicable when UBS AG registers as a security-based swap dealer with the SEC, apply to UBS AG globally, including those relating to swap data reporting, record-keeping, compliance and supervision. As a result, in some cases US rules will likely duplicate or conflict with legal requirements applicable to us elsewhere, including in Switzerland, and may place us at a competitive disadvantage to firms that are not required to register in the US with the SEC or CFTC.

In many instances, we provide services on a cross-border basis, and we are therefore sensitive to barriers restricting market access for third-country firms. In particular, efforts in the EU to harmonize the regime for third-country firms to access the European market may have the effect of creating new barriers that adversely affect our ability to conduct business in these jurisdictions from Switzerland. In addition, a number of jurisdictions are increasingly regulating cross-border activities based on determinations of equivalence of home country regulation, substituted compliance or similar principles of comity. A negative determination could limit our access to the market in those jurisdictions and may negatively influence our ability to act as a global firm. In addition, as such determinations are typically applied on a jurisdictional level rather than on an entity level, we will generally need to rely on jurisdictions' willingness to collaborate.

→ **Refer to the "Regulation and supervision" and "Regulatory and legal developments" sections of this report for more information**

If we are unable to maintain our capital strength, this may adversely affect our ability to execute our strategy, our client franchise and our competitive position

Maintaining our capital strength is a key component of our strategy. It enables us to support the growth of our businesses as well as to meet potential regulatory changes in capital requirements. It reassures our stakeholders, forms the basis for our capital return policy and contributes to our credit ratings. Our capital ratios are determined primarily by RWA, eligible capital and leverage ratio denominator (LRD), all of which may fluctuate based on a number of factors, some of which are outside our control.

Our eligible capital may be reduced by losses recognized within net profit or other comprehensive income. Eligible capital may also be reduced for other reasons, including certain reductions in the ratings of securitization exposures, acquisitions and divestments changing the level of goodwill, adverse currency movements affecting the value of equity, prudential adjustments that may be required due to the valuation uncertainty associated with certain types of positions, and changes in the value of certain pension fund assets and liabilities or in the interest rate and other assumptions used to calculate the changes in our net defined benefit obligation recognized in other comprehensive income.

RWA are driven by our business activities, by changes in the risk profile of our exposures, by changes in our foreign currency exposures and foreign exchange rates and by regulation. For instance, substantial market volatility, a widening of credit spreads, which is a major driver of our value-at-risk, adverse currency movements, increased counterparty risk, deterioration in the economic environment or increased operational risk could result in a rise in RWA. We have significantly reduced our market risk and credit risk RWA in recent years. However, increases in operational risk RWA, particularly those arising from litigation, regulatory and similar matters, and regulatory changes in the calculation of RWA and regulatory add-ons to RWA have offset a substantial portion of this reduction. Changes in the calculation of RWA or, as discussed above, the imposition of additional supplemental RWA charges or multipliers applied to certain exposures and other methodology changes, as well as the implementation of the recently adopted changes to international capital standards for banks, could substantially increase our RWA. In addition, we may not be successful in our plans to further reduce RWA, either because we are unable to carry out fully the actions we have planned or because other business or regulatory developments or actions counteract the effects of our actions.

The leverage ratio is a balance sheet-driven measure and therefore limits balance sheet-intensive activities, such as lending, more than activities that are less balance sheet intensive, and it may constrain our business activities even if we satisfy other risk-based capital requirements. Our LRD is driven by, among other things, the level of client activity, including deposits and loans, foreign exchange rates, interest rates and other market factors. Many of these factors are wholly or partially outside our control.

→ **Refer to the "Regulatory and legal developments" section of this report for more information**

We may not be successful in the ongoing execution of our strategic plans

Over the last six years, we have transformed our business to focus on our wealth management businesses and our universal bank in Switzerland, complemented by Asset Management and a significantly smaller Investment Bank; substantially reduced the RWA and LRD usage in our Corporate Center – Non-core and Legacy Portfolio; and made significant cost reductions. We have recently provided an update on the execution of our strategy and updated our performance targets and provided guidance on capital and resources. Risk remains that we may not succeed in executing our strategy or achieve our performance targets, or may be delayed in doing so. Market events or other factors may adversely affect our ability to achieve our objectives. Macroeconomic conditions, geopolitical uncertainty, changes to regulatory requirements and the continuing costs of meeting these requirements have prompted us to adapt our targets in the past and we may need to do so again in the future.

As part of our strategic plans, we expect to continue to make significant expenditures on technology and infrastructure to improve our client experience, improve and further enable digital offerings and increase efficiency. There is a risk that our investments in new technology will not fully achieve our objectives or improve our ability to attract and retain customers. In addition, we may face competition in providing digitally enabled offerings from both existing competitors and new financial service providers in various portions of the value chain. Our ability to develop and implement competitive digitally enabled offerings and processes will be an important factor in our ability to compete.

Moreover, the continued illiquidity and complexity of many of our legacy risk positions remaining in Corporate Center – Non-core and Legacy Portfolio could make it difficult to sell or otherwise exit these positions and there remains a risk that we could incur significant losses in doing so.

As part of our strategy, we also have programs under way that seek to improve our operating efficiency, in part by controlling our costs. A number of factors could negatively affect our plans. We may not be able to identify feasible cost reduction opportunities that are also consistent with our business goals, and cost reductions may be realized later or may be less than we anticipate. Higher temporary and permanent regulatory costs and higher business demand than we had originally anticipated have partly offset our cost reductions and delayed the achievement of our cost reduction targets in the past, and we could continue to be challenged in the execution of our ongoing plans.

Changes in our workforce as a result of outsourcing, nearshoring or offshoring or staff reductions may introduce new operational risks that, if not effectively addressed, could affect our ability to recognize the desired cost and other benefits from such changes or could result in operational losses. Such changes can also lead to expenses recognized in the income statement well in advance of the cost savings intended to be achieved through such workforce strategy, for example, if provisions for real estate lease contracts need to be recognized or when, in connection with the closure or disposal of non-profitable operations, foreign currency translation losses previously recorded in other comprehensive income are reclassified to the income statement.

As we implement our effectiveness and efficiency programs, we may also experience unintended consequences, such as the loss or degradation of capabilities that we need in order to maintain our competitive position, achieve our targeted returns or meet existing or new regulatory requirements and expectations.

→ **Refer to the "Our strategy" section of this report for more information**

Material legal and regulatory risks arise in the conduct of our business

As a global financial services firm operating in more than 50 countries, we are subject to many different legal, tax and regulatory regimes, and we are subject to extensive regulatory oversight and exposed to significant liability risk. We are subject to a large number of claims, disputes, legal proceedings and government investigations, and we expect that our ongoing business activities will continue to give rise to such matters in the future. The extent of our financial exposure to these and other matters is material and could substantially exceed the level of provisions that we have established. We are not able to predict the financial and non-financial consequences these matters may have when resolved. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in them. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for us.

Our settlements with governmental authorities in connection with foreign exchange, LIBOR and benchmark interest rates starkly illustrate the significantly increased level of financial and reputational risk now associated with regulatory matters in major jurisdictions. In connection with investigations related to LIBOR and other benchmark rates and to foreign exchange and precious metals, very large fines and disgorgement amounts were assessed against us, and we were required to enter guilty pleas, despite our full cooperation with the authorities in the investigations, and despite our receipt of conditional leniency or conditional immunity from antitrust authorities in a number of jurisdictions, including the US and Switzerland.

Ever since our material losses arising from the 2007–2009 financial crisis, we have been subject to a very high level of regulatory scrutiny and to certain regulatory measures that constrain our strategic flexibility. While we believe that we have remediated the deficiencies that led to those losses as well as to the unauthorized trading incident announced in September 2011, the effects on our reputation and relationships with regulatory authorities of the LIBOR-related settlements of 2012 and settlements with some regulators of matters related to our foreign exchange and precious metals business have resulted in continued scrutiny. We are also subject to significant new regulatory requirements, including recovery and resolution planning, US enhanced prudential standards and Comprehensive Capital Analysis and Review (CCAR). Our implementation of additional regulatory requirements and changes in supervisory standards will likely receive heightened scrutiny from supervisors. If we do not meet supervisory expectations in relation to these or other matters, or have additional supervisory or regulatory issues, we would likely be subject to continued regulatory scrutiny as well as measures that might further constrain our strategic flexibility. We are in active dialog with our regulators concerning the actions that we are taking to improve our operational risk management, control, anti-money laundering, data management and other frameworks and otherwise seek to meet supervisory expectations, but there can be no assurance that our efforts will have the desired effects. As a result of this history, our level of risk with respect to regulatory enforcement may be greater than that of some of our peers.

→ **Refer to "Note 20 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information**

Operational risks affect our business

Our businesses depend on our ability to process a large number of transactions, many of which are complex, across multiple and diverse markets in different currencies, to comply with requirements of many different legal and regulatory regimes to which we are subject and to prevent, or promptly detect and stop, unauthorized, fictitious or fraudulent transactions. We also rely on access to, and on the functioning of, systems maintained by third parties, including clearing systems, exchanges, information processors and central counterparties. Any failure of our or third-party systems could have an adverse effect on us. Our operational risk management and control systems and processes are designed to help ensure that the risks associated with our activities, including those arising from process error, failed execution, misconduct, unauthorized trading, fraud, system failures, financial crime, cyberattacks, breaches of information security, inadequate or ineffective access controls and failure of security and physical protection, are appropriately controlled. If our internal controls fail or prove ineffective in identifying and remedying these risks, we could suffer operational failures that might result in material losses, such as the loss from the unauthorized trading incident announced in September 2011.

We and other financial services firms have been subject to breaches of security and to cyber- and other forms of attack, some of which are sophisticated and targeted attacks intended to gain access to confidential information or systems, disrupt service or destroy data, including through the introduction of viruses or malware, social engineering, distributed denial of service attacks and other means. These attempts may occur directly, or using equipment or security passwords of our employees, third party service providers or other users. We may not be able to anticipate, detect or recognize threats to our systems or data or that our preventative measures may not be effective to prevent an attack or a security breach. In the event a security breach occurs notwithstanding our preventative measures, we may not immediately detect a particular breach or attack. Once a particular attack is detected time may be required to investigate and assess the nature and extent of the attack. A successful breach or circumvention of security of our systems or data could have significant negative consequences for us, including disruption of our operations, misappropriation of confidential information concerning us or our customers, damage to our systems, financial losses for us or our customers, violations of data privacy and similar laws, litigation exposure and damage to our reputation.

A major focus of US and other countries' governmental policies relating to financial institutions in recent years has been fighting money laundering and terrorist financing. We are required to maintain effective policies, procedures and controls to detect, prevent and report money laundering and terrorist financing, and to verify the identity of our clients. We are also subject to laws and regulations related to corrupt and illegal payments to government officials by others, such as the US Foreign Corrupt Practices Act and the UK Bribery Act. We have implemented policies, procedures and internal controls that are designed to comply with such laws and regulations. Failure to maintain and implement adequate programs to combat money laundering, terrorist financing or corruption, or any failure of our programs in these areas, could have serious consequences both from legal enforcement action and from damage to our reputation.

As a result of new and changed regulatory requirements and the changes we have made in our legal structure to meet regulatory requirements and improve our resolvability, the volume, frequency and complexity of our regulatory and other reporting have significantly increased. Regulators have also significantly increased expectations for our internal reporting and data aggregation. We have incurred and continue to incur significant costs to implement infrastructure to meet these requirements. Failure to timely and accurately meet external reporting requirements or to meet regulatory expectations for internal reporting could result in enforcement action or other adverse consequences for us.

Certain types of operational control weaknesses and failures could also adversely affect our ability to prepare and publish accurate and timely financial reports.

In addition, despite the contingency plans we have in place, our ability to conduct business may be adversely affected by a disruption in the infrastructure that supports our businesses and the communities in which we are located. This may include a disruption due to natural disasters, pandemics, civil unrest, war or terrorism and involve electrical, communications, transportation or other services used by us or third parties with whom we conduct business.

Our reputation is critical to the success of our business

Our reputation is critical to the success of our strategic plans, business and prospects. Reputational damage is difficult to reverse, and improvements tend to be slow and difficult to measure. Our reputation has been adversely affected by our losses during the financial crisis, investigations into our cross-border private banking services, criminal resolutions of LIBOR-related and foreign exchange matters, as well as other matters. We believe that reputational damage as a result of these events was an important factor in our loss of clients and client assets across our asset-gathering businesses, and contributed to our loss of and difficulty in attracting staff in the past. Any further reputational damage could have a material adverse effect on our operational results and financial condition and on our ability to achieve our strategic goals and financial targets.

Performance in the financial services industry is affected by market conditions and the macroeconomic climate

Our businesses are materially affected by market and economic conditions. Adverse changes in interest rates, credit spreads, securities prices, market volatility and liquidity, foreign exchange rates, commodity prices, and other market fluctuations, as well as changes in investor sentiment, can affect our earnings and ultimately our financial and capital positions.

A market downturn and weak macroeconomic conditions can be precipitated by a number of factors, including geopolitical events, changes in monetary or fiscal policy, trade imbalances, natural disasters, pandemics, civil unrest, acts of violence, war or terrorism. Macroeconomic and political developments can have unpredictable and destabilizing effects and, because financial markets are global and highly interconnected, even local and regional events can have widespread impact well beyond the countries in which they occur. Moreover, if individual countries impose restrictions on cross-border payments or other exchange or capital controls, or change their currency (for example, if one or more countries should leave the eurozone), we could suffer losses from enforced default by counterparties, be unable to access our own assets, and / or be impeded in, or prevented from, managing our risks.

We could be materially affected if a crisis develops, regionally or globally, as a result of disruptions in emerging markets or developed markets that are susceptible to macroeconomic and political developments, or as a result of the failure of a major market participant. Over time, our strategic plans have become more heavily dependent on our ability to generate growth and revenue in emerging markets, including China, causing us to be more exposed to the risks associated with such markets. The binding scenario we use in our combined stress test framework reflects these aspects, and assumes a hard landing in China, leading to severe contagion of Asian and emerging markets economies and at the same time multiple debt restructurings in Europe, related direct losses for European banks and fear of a eurozone breakup severely affecting developed markets such as Switzerland, the UK and the US.

→ **Refer to "Risk measurement" in the "Risk management and control" section of this report for more information on our stress testing framework**

We have material exposures to a number of markets, and the regional balance of our business mix also exposes us to risk. Our Investment Bank's Equities business, for example, is more heavily weighted to Europe and Asia, and within this business our derivatives business is more heavily weighted to structured products for wealth management clients, in particular with European and Asian underlyings. Turbulence in these markets can therefore affect us more than other financial service providers.

A decrease in business and client activity and market volumes, for example, as a result of significant market volatility, adversely affects transaction fees, commissions and margins, particularly in our wealth management businesses and in the Investment Bank, as we experienced in 2016. A market downturn is likely to reduce the volume and valuations of assets that we manage on behalf of clients, reducing our asset and performance-based fees, and could also cause a decline in the value of assets that we own and account for as investments or trading positions. On the other hand, reduced market liquidity or volatility limits trading opportunities and impedes our ability to manage risks, impacting trading income, and may reduce institutional client activity and therefore transaction and performance-based fees.

Credit risk is an integral part of many of our activities, including lending, underwriting and derivatives activities. Worsening economic conditions and adverse market developments could lead to impairments and defaults on credit exposures and on our trading and investment positions. Losses may be exacerbated by declines in the value of collateral we hold. We are exposed to credit risk in activities such as our prime brokerage, reverse repurchase and Lombard lending, as the value or liquidity of the assets against which we provide financing may decline rapidly. Macroeconomic developments, such as the strength of the Swiss franc and its effect on Swiss exports, the adoption of negative interest rates by the Swiss National Bank or other central banks or any return of crisis conditions within the eurozone or the EU, and the potential implications of the decision in Switzerland to reinstate immigration quotas for EU and European Economic Area citizens, could also adversely affect the Swiss economy, our business in Switzerland in general and, in particular, our Swiss mortgage and corporate loan portfolios.

The aforementioned developments have in the past affected, and could materially affect, the financial performance of business divisions and of UBS as a whole, including through impairment of goodwill and the adjustment of deferred tax asset levels. Refer to "*Our financial results may be negatively affected by changes to assumptions and valuations, as well as changes to accounting standards*" and "*The effect of taxes on our financial results is significantly influenced by tax law changes and reassessments of our deferred tax assets*" below.

→ **Refer to the "Current market climate and industry trends" section of this report for more information**

UK withdrawal from the EU

In December 2017, the UK and the remaining EU member states reached an agreement on the separation issues under Phase I of the negotiations for the UK's withdrawal from the EU. As a result, the European Council agreed that "sufficient progress" had been made to allow the negotiations to move to Phase II on transitional arrangements and the future EU-UK relationship. The UK is still expected to leave the EU in March 2019, subject to a possible transition period.

The nature of the UK's future relationship with the EU remains unclear. Any future limitations on providing financial services into the EU from our UK operations could require us to make potentially significant changes to our operations in the UK and the EU, and to our legal structure. In the absence of adequate transition relief being agreed and passed into law by the United Kingdom and the European Union, we currently expect to merge UBS Limited into UBS Europe SE, our German headquartered European bank, prior to the United Kingdom leaving the European Union on 29 March 2019. Clients and other counterparties of UBS Limited would become counterparties of UBS Europe SE through the planned merger of the two entities. However, we anticipate that clients of UBS Limited who can be serviced by UBS AG, London Branch would generally be migrated to UBS AG, London Branch prior to this merger. We further anticipate that some staff would be relocated as a result; the exact number of staff and roles would be determined in due course. The timing and extent of the actions we take may vary considerably depending on regulatory requirements and the nature of any transition or successor agreements with the EU.

We may not be successful in implementing changes in our wealth management businesses to meet changing market, regulatory and other conditions

Our wealth and asset management businesses operate in an environment of increasing regulatory scrutiny and changing standards with respect to fiduciary and other standards of care and the focus on mitigating or eliminating conflicts of interest between a manager or advisor and the client, which require effective implementation across the global systems and processes of investment managers and other industry participants. For example, the US Department of Labor has adopted a rule expanding the definition of "fiduciary" under the Employee Retirement Income Security Act (ERISA), which requires us to comply with fiduciary standards under ERISA when dealing with certain retirement plans. We will likely be required to materially change business processes, policies and the terms on which we interact with these clients in order to comply with these rules when they become fully effective. In addition, MiFID II imposes new requirements on us when providing advisory services to clients in the EU, including new requirements for agreements with clients.

We have experienced cross-border outflows over a number of years as a result of heightened focus by fiscal authorities on cross-border investment and fiscal amnesty programs, in anticipation of the implementation in Switzerland of the global automatic exchange of tax information, and as a result of the measures we have implemented in response to these changes. Further changes in local tax laws or regulations and their enforcement, the implementation of cross-border tax information exchange regimes, national tax amnesty or enforcement programs or similar actions may affect our clients' ability or willingness to do business with us and result in additional cross-border outflows.

In recent years, our Wealth Management net new money inflows have come predominantly from clients in Asia Pacific and in the ultra high net worth segment globally. Over time, inflows from these lower-margin segments and markets have been replacing outflows from higher-margin segments and markets, in particular cross-border clients. This dynamic, combined with changes in client product preferences as a result of which low-margin products account for a larger share of our revenues than in the past, has put downward pressure on our Wealth Management's margins.

As the discussion above indicates, we are exposed to possible outflows of client assets in our asset-gathering businesses and to changes affecting the profitability of our wealth management businesses. Initiatives that we may implement to overcome the effects of changes in the business environment on our profitability, balance sheet and capital positions may not succeed in counteracting those effects and may cause net new money outflows and reductions in client deposits, as happened with our balance sheet and capital optimization program in 2015. There is no assurance that we will be successful in our efforts to offset the adverse effect of these or similar trends and developments.

We may be unable to identify or capture revenue or competitive opportunities, or retain and attract qualified employees

The financial services industry is characterized by intense competition, continuous innovation, restrictive, detailed, and sometimes fragmented regulation and ongoing consolidation. We face competition at the level of local markets and individual business lines, and from global financial institutions that are comparable to us in their size and breadth. Barriers to entry in individual markets and pricing levels are being eroded by new technology. We expect these trends to continue and competition to increase. Our competitive strength and market position could be eroded if we are unable to identify market trends and developments, do not respond to them by devising and implementing adequate business strategies, adequately developing or updating our technology, particularly in trading businesses, and our digital channels and tools, or are unable to attract or retain the qualified people needed to carry them out.

The amount and structure of our employee compensation is affected not only by our business results but also by competitive factors and regulatory considerations.

In recent years, in response to the demands of various stakeholders, including regulatory authorities and shareholders, and in order to better align the interests of our staff with those of other stakeholders, we have made changes to the terms of compensation awards. Among other things, we have introduced individual caps on the proportion of fixed to variable pay for the GEB members, as well as certain other employees. We have increased average deferral periods for stock awards, expanded forfeiture provisions and, to a more limited extent, introduced clawback provisions for certain awards linked to business performance.

Constraints on the amount or structure of employee compensation, higher levels of deferral, performance conditions and other circumstances triggering the forfeiture of unvested awards may adversely affect our ability to retain and attract key employees. The loss of key staff and the inability to attract qualified replacements, depending on which and how many roles are affected, could seriously compromise our ability to execute our strategy and to successfully improve our operating and control environment and may affect our business performance.

Swiss law requires that shareholders approve the compensation of the Board of Directors (BoD) and the Group Executive Board (GEB) each year. If our shareholders fail to approve the compensation for the GEB or the BoD, this could have an adverse effect on our ability to retain experienced directors and our senior management.

We depend on our risk management and control processes to avoid or limit potential losses in our businesses

Controlled risk-taking is a major part of the business of a financial services firm. Some losses from risk-taking activities are inevitable, but to be successful over time, we must balance the risks we take against the returns we generate. We must, therefore, diligently identify, assess, manage and control our risks, not only in normal market conditions but also as they might develop under more extreme, stressed conditions, when concentrations of exposures can lead to severe losses.

As seen during the financial crisis of 2007–2009, we are not always able to prevent serious losses arising from extreme or sudden market events that are not anticipated by our risk measures and systems. The deterioration of financial markets since the beginning of the crisis was extremely severe by historical standards. Value-at-risk, a statistical measure for market risk, is derived from historical market data, and thus by definition could not have anticipated the losses suffered in the stressed conditions of the crisis. Moreover, stress loss and concentration controls and the dimensions in which we aggregated risk to identify potentially highly correlated exposures proved to be inadequate. As a result, we recorded substantial losses on fixed income trading positions, particularly in 2008 and 2009. Notwithstanding the steps we have taken to strengthen our risk management and control framework, we could suffer further losses in the future if, for example:

- we do not fully identify the risks in our portfolio, in particular risk concentrations and correlated risks;
- our assessment of the risks identified or our response to negative trends proves to be untimely, inadequate, insufficient or incorrect;
- markets move in ways that we do not expect – in terms of their speed, direction, severity or correlation – and our ability to manage risks in the resulting environment is, therefore, affected;
- third parties to whom we have credit exposure or whose securities we hold for our own account are severely affected by events not anticipated by our models, and accordingly we suffer defaults and impairments beyond the level implied by our risk assessment; or
- collateral or other security provided by our counterparties proves inadequate to cover their obligations at the time of their default.

We hold positions related to real estate in various countries, and could suffer losses on these positions. These positions include a substantial Swiss mortgage portfolio. Although management believes that this portfolio is prudently managed, we could nevertheless be exposed to losses if the concerns expressed by the Swiss National Bank and others about unsustainable price escalation in the Swiss real estate market come to fruition. In addition, we continue to hold substantial legacy risk positions, primarily in Corporate Center – Non-core and Legacy Portfolio. They remain illiquid in many cases, and we continue to be exposed to the risk that they may again deteriorate in value.

We also manage risk on behalf of our clients in our asset and wealth management businesses. The performance of assets we hold for our clients in these activities could be adversely affected by the same factors mentioned above. If clients suffer losses or the performance of their assets held with us is not in line with relevant benchmarks against which clients assess investment performance, we may suffer reduced fee income and a decline in assets under management, or withdrawal of mandates.

Investment positions, such as equity investments made as part of strategic initiatives and seed investments made at the inception of funds that we manage, may also be affected by market risk factors. These investments are often not liquid and generally are intended or required to be held beyond a normal trading horizon. They are subject to a distinct control framework. Deteriorations in the fair value of these positions would have a negative effect on our earnings.

Liquidity and funding management are critical to our ongoing performance

The viability of our business depends on the availability of funding sources, and our success depends on our ability to obtain funding at times, in amounts, for tenors and at rates that enable us to efficiently support our asset base in all market conditions. The volume of our funding sources has generally been stable, but could change in the future due to, among other things, general market disruptions or widening credit spreads, which could also influence the cost of funding. A substantial part of our liquidity and funding requirements are met using short-term unsecured funding sources, including retail and wholesale deposits and the regular issuance of money market securities. A change in the availability of short-term funding could occur quickly.

Moreover, more stringent capital and liquidity and funding requirements will likely lead to increased competition for both secured funding and deposits as a stable source of funding, and to higher funding costs. The addition of loss-absorbing debt as a component of capital requirements, the regulatory requirements to maintain minimum TLAC at holding company level and / or at subsidiaries level, as well as the power of resolution authorities to bail in TLAC and other debt obligations, and uncertainty as to how such powers will be exercised, will increase our cost of funding and could potentially increase the total amount of funding required absent other changes in our business.

Reductions in our credit ratings may adversely affect the market value of the securities and other obligations and increase our funding costs, in particular with regard to funding from wholesale unsecured sources, and can affect the availability of certain kinds of funding. In addition, as we experienced in connection with Moody's downgrade of our long-term rating in June 2012, rating downgrades can require us to post additional collateral or make additional cash payments under master trading agreements relating to our derivatives businesses. Our credit ratings, together with our capital strength and reputation, also contribute to maintaining client and counterparty confidence and it is possible that rating changes could influence the performance of some of our businesses.

Our financial results may be negatively affected by changes to assumptions and valuations, as well as changes to accounting standards

We prepare our consolidated financial statements in accordance with IFRS. The application of these accounting standards requires the use of judgment based on estimates and assumptions that may involve significant uncertainty at the time they are made. This is the case, for example, with respect to the measurement of fair value of financial instruments, the recognition of deferred tax assets, or the assessment of the impairment of goodwill. Such judgments, including the underlying estimates and assumptions, which encompass historical experience, expectations of the future and other factors, are regularly evaluated to determine their continuing relevance based on current conditions. Using different assumptions could cause the reported results to differ. Changes in assumptions, or failure to make the changes necessary to reflect evolving market conditions, may have a significant effect on the financial statements in the periods when changes occur. Moreover, if the estimates and assumptions in future periods deviate from the current outlook, our financial results may also be negatively affected.

Changes to IFRS or interpretations thereof may cause our future reported results and financial position to differ from current expectations, or historical results to differ from those previously reported due to the adoption of accounting standards on a retrospective basis. Such changes may also affect our regulatory capital and ratios. For example, we adopted IFRS 9 effective on 1 January 2018, which required us to change the accounting treatment of certain instruments, requires us to record loans at inception net of expected credit losses instead of recording credit losses on an incurred loss basis and is generally expected to result in an increase in recognized credit loss allowances. In addition, the expected credit loss (ECL) provisions of IFRS 9 may result in greater volatility in credit loss expense as ECL changes in response to developments in the credit cycle and composition of our loan portfolio. The effect may be more pronounced in a deteriorating economic environment.

→ **Refer to the "Critical accounting estimates and judgments" section and "Note 1 Summary of significant accounting policies" in the "Consolidated financial statements" section of this report for more information**

The effect of taxes on our financial results is significantly influenced by tax law changes and reassessments of our deferred tax assets

Our effective tax rate is highly sensitive to our performance, our expectation of future profitability and statutory tax rates. Based on prior years' tax losses, we have recognized deferred tax assets (DTAs) reflecting the probable recoverable level based on future taxable profit as informed by our business plans. If our performance is expected to produce diminished taxable profit in future years, particularly in the US, we may be required to write down all or a portion of the currently recognized DTAs through the income statement. This would have the effect of increasing our effective tax rate in the year in which any write-downs are taken. Conversely, if our performance is expected to improve, particularly in the US or the UK, we could potentially recognize additional DTAs as a result of that assessment. The effect of doing so would be to significantly reduce our effective tax rate in years in which additional DTAs are recognized and to increase our effective tax rate in future years. Our effective tax rate is also sensitive to any future reductions in statutory tax rates, particularly in the US and Switzerland, which would cause the expected future tax benefit from items such as tax loss carry-forwards in the affected locations to diminish in value. This in turn would cause a write-down of the associated DTAs. For example, the reduction in the US federal corporate tax rate to 21% from 35% introduced by the US Tax Cuts and Jobs Act (TCJA) resulted in a CHF 2.9 billion net write-down in the Group's DTAs in the fourth quarter of 2017. Changes in tax law may materially affect our effective tax rate and in some cases may substantially affect the profitability of certain activities. For example, the TCJA introduced a new minimum tax regime referred to as the base erosion and anti-abuse tax (BEAT) that potentially subjects otherwise deductible payments made from our US businesses to non-US affiliated parties to a minimum tax. We currently expect that BEAT could increase our current tax expense by up to CHF 60 million in 2018. The actual effects could be materially higher as the amount of payments subject to BEAT will increase with higher interest rates and business activity and as a result of interpretative uncertainty relating to BEAT. It may also be lower if we are able to successfully mitigate our payments subject to BEAT.

We generally revalue our DTAs in the second half of the financial year based on a reassessment of future profitability taking into account updated business plan forecasts. We consider the performance of our businesses and the accuracy of historical forecasts tax rates and other factors in evaluating the recoverability of our DTAs, including the remaining tax loss carry-forward period and our assessment of expected future taxable profits in the forecast period used for recognizing DTAs. Estimating future profitability is inherently subjective and is particularly sensitive to future economic, market and other conditions, which are difficult to predict. Our results in recent periods have demonstrated that changes in the recognition of DTAs can have a very significant effect on our reported results. The enactment of the TCJA, and the narrowing of the window between the end of the forecast period and the expiry of our US net operating losses, may also lead us to review our approach to periodically remeasuring our US DTAs and the timing for recognizing deferred tax in our income statement. Any change in the manner in which we remeasure DTAs could impact the effective tax rate, particularly in the year in which the change is made.

Our full-year effective tax rate could also change if aggregate tax expenses in respect of profits from branches and subsidiaries without loss coverage differ from what is expected, or in case of changes to the forecast period used for DTA recognition purposes as part of the aforementioned reassessment of future profitability. Moreover, tax laws or the tax authorities in countries where we have undertaken legal structure changes may prevent the transfer of tax losses incurred in one legal entity to newly organized or reorganized subsidiaries or affiliates or may impose limitations on the utilization of tax losses that relate to businesses formerly conducted by the transferor. Were this to occur in situations where there were also limited planning opportunities to utilize the tax losses in the originating entity, the DTAs associated with such tax losses could be written down through the income statement.

In addition, statutory and regulatory changes, as well as changes to the way in which courts and tax authorities interpret tax laws, could cause the amount of taxes ultimately paid by us to materially differ from the amount accrued.

Our stated capital returns objective is based, in part, on capital ratios that are subject to regulatory change and may fluctuate significantly

We plan to operate with a fully applied CET1 capital ratio of around 13% and a fully applied CET1 leverage ratio of around 3.7%. Our ability to maintain these ratios is subject to numerous risks, including the financial results of our businesses, the effect of changes to capital standards, methodologies and interpretation that may adversely affect the calculation of our fully applied CET1 capital ratio, the imposition of risk add-ons or capital buffers, and the application of additional capital, liquidity and similar requirements to subsidiaries. These risks could prevent or delay our ability to achieve our capital returns policy of a progressive cash dividend coupled with a share repurchase program.

As UBS Group AG is a holding company, its operating results, financial condition and ability to pay dividends and other distributions and / or to pay its obligations in the future depend on funding, dividends and other distributions received directly or indirectly from its subsidiaries, which may be subject to restrictions

UBS Group AG's ability to pay dividends and other distributions and to pay its obligations in the future will depend on the level of funding, dividends and other distributions, if any, received from UBS AG and other subsidiaries. The ability of such subsidiaries to make loans or distributions, directly or indirectly, to UBS Group AG may be restricted as a result of several factors, including restrictions in financing agreements and the requirements of applicable law and regulatory, fiscal or other restrictions. In particular, UBS Group AG's direct and indirect subsidiaries, including UBS AG, UBS Switzerland AG, UBS Limited and UBS Americas Holding LLC, are subject to laws and regulations that restrict dividend payments, authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to UBS Group AG, or could impact their ability to repay any loans made to, or other investments in, such subsidiary by UBS Group AG or another member of the Group. For example, the US CCAR process requires that our US intermediate holding company demonstrate that it can continue to meet minimum capital standards over a nine-quarter hypothetical severely adverse economic scenario. If it fails to meet the quantitative capital requirements, or the Federal Reserve Board's qualitative assessment of the capital planning process is adverse, our US intermediate holding company will be prohibited from paying dividends or making distributions. Restrictions and regulatory actions of this kind could impede access to funds that UBS Group AG may need to meet its obligations or to pay dividends to shareholders. In addition, UBS Group AG's right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to all prior claims of the subsidiary's creditors.

Our capital instruments may contractually prevent UBS Group AG from proposing the distribution of dividends to shareholders, other than in the form of shares, if we do not pay interest on these instruments.

Furthermore, UBS Group AG may guarantee some of the payment obligations of certain of the Group's subsidiaries from time to time. These guarantees may require UBS Group AG to provide substantial funds or assets to subsidiaries or their creditors or counterparties at a time when UBS Group AG is in need of liquidity to fund its own obligations.

The credit ratings of UBS Group AG or its subsidiaries used for funding purposes could be lower than the ratings of the Group's operating subsidiaries, which may adversely affect the market value of the securities and other obligations of UBS Group AG or those subsidiaries on a standalone basis.

If we experience financial difficulties, FINMA has the power to open restructuring or liquidation proceedings or impose protective measures in relation to UBS Group AG, UBS AG or UBS Switzerland AG, and such proceedings or measures may have a material adverse effect on our shareholders and creditors

Under the Swiss Banking Act, FINMA is able to exercise broad statutory powers with respect to Swiss banks and Swiss parent companies of financial groups, such as UBS AG, UBS Group AG and UBS Switzerland AG, if there is justified concern that the entity is overindebted, has serious liquidity problems or, after the expiration of any relevant deadline, no longer fulfills capital adequacy requirements. Such powers include ordering protective measures, instituting restructuring proceedings (and exercising any Swiss resolution powers in connection therewith), and instituting liquidation proceedings, all of which may have a material adverse effect on our shareholders and creditors or may prevent UBS Group AG, UBS AG or UBS Switzerland AG from paying dividends or making payments on debt obligations.

Protective measures may include, but are not limited to, certain measures that could require or result in a moratorium on, or the deferment of, payments. We would have limited ability to challenge any such protective measures, and creditors would have no right under Swiss law or in Swiss courts to reject them, seek their suspension, or challenge their imposition, including measures that require or result in the deferment of payments.

If restructuring proceedings are opened with respect to UBS Group AG, UBS AG or UBS Switzerland AG, the resolution powers that FINMA may exercise include the power to (i) transfer all or some of the assets, debt and other liabilities, and contracts of the entity subject to proceedings to another entity, (ii) stay for a maximum of two business days the termination of, or the exercise of rights to terminate, netting rights, rights to enforce or dispose of certain types of collateral or rights to transfer claims, liabilities or certain collateral, under contracts to which the entity subject to proceedings is a party, and / or (iii) partially or fully write down the equity capital and, if such equity capital is fully written down, convert into equity or write down the capital and other debt instruments of the entity subject to proceedings. Shareholders and creditors would have no right to reject, or to seek the suspension of, any restructuring plan pursuant to which such resolution powers are exercised. They would have only limited rights to challenge any decision to exercise resolution powers or to have that decision reviewed by a judicial or administrative process or otherwise.

Upon full or partial write-down of the equity and of the debt of the entity subject to restructuring proceedings, the relevant shareholders and creditors would receive no payment in respect of the equity and debt that is written down, the write-down would be permanent, and the investors would not, at such time or at any time thereafter, receive any shares or other participation rights, or be entitled to any write-up or any other compensation in the event of a potential recovery of the debtor. If FINMA orders the conversion of debt of the entity subject to restructuring proceedings into equity, the securities received by the investors may be worth significantly less than the original debt and may have a significantly different risk profile, and such conversion would also dilute the ownership of existing shareholders. In addition, creditors receiving equity would be effectively subordinated to all creditors in the event of a subsequent winding up, liquidation or dissolution of the entity subject to restructuring proceedings, which would increase the risk that investors would lose all or some of their investment.

FINMA has broad powers and significant discretion in the exercise of its powers in connection with restructuring proceedings. Furthermore, certain categories of debt obligations, such as certain types of deposits, are subject to preferential treatment. As a result, holders of obligations of an entity subject to a Swiss restructuring proceeding may have their obligations written down or converted into equity even though obligations ranking on par with or junior to such obligations are not written down or converted.

Moreover, FINMA has expressed its preference for a "single-point-of-entry" resolution strategy for global systemically important financial groups, led by the bank's home supervisory and resolution authorities and focused on the top-level group company. This would mean that, if UBS AG or one of UBS Group AG's other subsidiaries faces substantial losses, FINMA could open restructuring proceedings with respect to UBS Group AG only and order a bail-in of its liabilities if there is a justified concern that in the near future such losses could impact UBS Group AG. In that case, it is possible that the obligations of UBS AG or any other subsidiary of UBS Group AG would remain unaffected and outstanding, while the equity capital and the capital and other debt instruments of UBS Group AG would be written down and / or converted into equity of UBS Group AG in order to recapitalize UBS AG or such other subsidiary.

Risk management and control

Overview of risks arising from our business activities

The scale of our business activities is dependent on the capital we have available to cover the risks in our business, the size of our on- and off-balance sheet assets through their contribution to our capital, leverage and liquidity ratios, and our risk appetite.

Our overall credit risk profile remained stable over the year and we continued to manage market risks at generally low levels. Operational risk remains a focus.

The table on the next page shows risk-weighted assets (RWA), the leverage ratio denominator (LRD) and risk-based capital (RBC), as well as attributed tangible equity, total assets and operating profit before tax on both a reported and adjusted basis, for our business divisions and Corporate Center units. This illustrates how the activities in our business divisions and Corporate Center units are captured in the risk measures mentioned above the table, and it illustrates their financial performance in the context of these measures.

→ **Refer to the "Capital management" section of this report for more information on risk-weighted assets, leverage ratio denominator and our equity attribution framework**

→ **Refer to "Statistical measures" in this section for more information on risk-based capital**

→ **Refer to the "Performance by business division and Corporate Center unit – reported and adjusted" table in the "Group performance" section of this report for more information**

Key risks, risk measures and performance by business division and Corporate Center unit

Business divisions and Corporate Center units	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio
Key risks arising from business activities	**Credit risk** from lending against securities collateral and mortgages, and a small amount of derivatives trading activity. Minimal contribution to market risk	**Credit risk** from lending against securities collateral and mortgages **Market risk** from municipal securities and taxable fixed income securities	**Credit risk** from retail business, mortgages, secured and unsecured corporate lending, and a small amount of derivatives trading activity. Minimal contribution to market risk	Small amounts of credit and market risk	**Credit risk** from lending (including temporary loan underwriting activities), derivatives trading and securities financing **Market risk** from primary under-writing activities and secondary trading is materially hedged	No material risk exposures	**Credit** and **market risk** arising from management of the Group's balance sheet, capital, profit or loss and liquidity portfolios. Market risk is materially hedged Central management of **liquidity, funding, counterparty credit** and **structural FX risk**	**Credit risk** from remaining lending and derivative exposures **Market risk** is materially hedged
Operational risk is an inevitable consequence of being in business, as losses can result from inadequate or failed internal processes, people and systems, or from external events. It can arise as a result of our past and current business activities across all business divisions and Corporate Center units.								

Risk measures and performance

	31.12.17								
CHF billion, as of or for the year ended	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Group
Risk-weighted assets (fully applied)[1]	29.0	25.5	48.0	3.9	74.5	29.2	11.2	16.1	237.5
of which: credit and counterparty credit risk	*15.4*	*10.4*	*44.0*	*1.5*	*42.9*	*1.8*	*8.0*	*4.5*	*128.4*
of which: market risk	*0.0*	*1.6*	*0.0*	*0.0*	*11.7*	*(3.1)*[2]	*0.7*	*1.3*	*12.3*
of which: operational risk	*13.5*	*13.5*	*4.0*	*2.4*	*19.8*	*13.3*	*2.5*	*10.3*	*79.4*
Leverage ratio denominator (fully applied)[1]	128.0	71.8	148.0	2.7	264.1	6.7	249.9	14.9	886.1
Risk-based capital[3]	3.0	1.8	3.2	0.4	6.8	11.0	5.7	2.0	33.9
Average attributed tangible equity[4]	4.8	3.0	6.1	0.3	9.3	18.9	2.7	1.3	46.4
Total assets	123.0	67.1	135.6	14.3	262.9	20.9	245.7	46.2	915.6
Operating profit / (loss) before tax (as reported)	2.3	1.2	1.6	0.6	1.2	(0.9)	(0.3)	(0.4)	5.3
Operating profit / (loss) before tax (adjusted)[5]	2.8	1.3	1.7	0.5	1.5	(0.9)	(0.3)	(0.4)	6.2

	31.12.16								
CHF billion, as of or for the year ended	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Group
Risk-weighted assets (fully applied)[1]	25.8	23.8	41.6	3.9	70.4	27.6	10.6	18.9	222.7
of which: credit and counterparty credit risk	*12.5*	*9.1*	*37.7*	*1.6*	*37.0*	*1.4*	*7.3*	*6.2*	*112.8*
of which: market risk	*0.0*	*1.4*	*0.0*	*0.0*	*14.0*	*(3.2)*[2]	*0.7*	*2.6*	*15.5*
of which: operational risk	*13.2*	*13.2*	*3.9*	*2.3*	*19.5*	*13.1*	*2.5*	*10.1*	*77.8*
Leverage ratio denominator (fully applied)[1]	115.5	68.1	152.2	2.7	231.2	5.8	272.4	22.4	870.5
Risk-based capital[3]	1.5	1.3	2.7	0.3	7.8	12.7	5.2	2.4	33.9
Average attributed tangible equity[4]	2.8	1.9	4.1	0.2	7.6	19.2	4.3	2.1	42.2
Total assets	115.5	65.9	139.9	12.0	242.3	23.7	267.2	68.5	935.0
Operating profit / (loss) before tax (as reported)	1.9	1.1	1.8	0.5	1.0	(0.8)	(0.2)	(1.1)	4.1
Operating profit / (loss) before tax (adjusted)[5]	2.4	1.2	1.8	0.6	1.5	(0.9)	(0.1)	(1.1)	5.3

1 Represents RWA and LRD prior to allocation of RWA and LRD held by Corporate Center – Group ALM that is directly associated with activity managed centrally on behalf of the business divisions and other Corporate Center units. Calculated in accordance with Swiss systemically relevant banks rules. Refer to the "Capital management" section of this report for more information. 2 Corporate Center – Services market risk RWA were negative, as they included the effect of portfolio diversification across businesses. 3 Refer to "Statistical measures" in this section for more information on risk-based capital. 4 Refer to the "Capital management" section of this report for more information on our equity attribution framework. 5 Adjusted results are non-GAAP financial measures as defined by SEC regulations. Refer to the "Performance by business division and Corporate Center unit – reported and adjusted" table in the "Group performance" section of this report for more information.

Risk categories

We categorize the risk exposures of our business divisions and Corporate Center units as outlined in the table below.

Risk definitions

	Risk managed by	Independent oversight by	Captured in our risk appetite framework
Primary risks: the risks that our businesses may take to generate a return			
Audited | ***Credit risk:*** the risk of loss resulting from the failure of a client or counterparty to meet its contractual obligations toward UBS. This includes settlement risk and loan underwriting risk: *Settlement risk:* the risk of loss resulting from transactions that involve exchange of value (e.g., security versus cash) where we must deliver without first being able to determine with certainty that we will receive the countervalue *Loan underwriting risk:* the risk of loss arising during the holding period of financing transactions that are intended for further distribution ▲	Business management	Risk Control	●
Audited | ***Market risk (traded and non-traded):*** the risk of loss resulting from adverse movements in market variables. Market variables include observable variables, such as interest rates, foreign exchange rates, equity prices, credit spreads and commodity (including precious metal) prices, and variables that may be unobservable or only indirectly observable, such as volatilities and correlations. Market risk includes issuer risk and investment risk: *Issuer risk:* the risk of loss from changes in fair value resulting from credit-related events affecting an issuer to which we are exposed through tradable securities or derivatives referencing the issuer *Investment risk:* issuer risk associated with positions held as financial investments ▲	Business management CC – Group ALM	Risk Control	●
Country risk: the risk of losses resulting from country-specific events. It includes transfer risk, whereby a country's authorities prevent or restrict the payment of an obligation, as well as systemic risk events arising from country-specific political or macroeconomic developments	Business management	Risk Control	●
Consequential risks: the risks to which our businesses are exposed as a consequence of being in business			
Audited | ***Liquidity risk:*** the risk of being unable to generate sufficient funds from assets to meet payment obligations when they fall due, including in times of stress ▲	Group Treasury	Risk Control	●
Audited | ***Funding risk:*** the risk of higher-than-expected funding costs due to wider-than-expected UBS credit spreads when existing funding positions mature and need to be rolled over or replaced by other, more expensive funding sources. If a shortage of available funding sources is expected in a stress event, funding risk also covers potential additional losses from forced asset sales ▲			
Structural foreign exchange risk: the risk of decreases in our capital due to changes in foreign exchange rates with an adverse translation effect on capital held in currencies other than Swiss francs	CC – Group ALM	Risk Control	●
Operational risk: the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events, including cyber risk. Operational risk includes, among other things, legal risk, conduct risk and compliance risk: *Legal risk:* (i) the financial risk resulting from the non-enforceability of a contract or the failure to assert non-contractual rights, or (ii) the financial or reputational risk resulting from UBS being held liable for a contractual or legal claim, or otherwise being subject to a penalty or liability in a legal action, based on a contractual or other legal claim, violation of law, or regulation, or infringement of intellectual property rights, or failing to manage litigation or other actions appropriately or effectively *Conduct risk:* the risk that the conduct of the firm or its individuals unfairly impacts clients or counterparties, undermines the integrity of the financial system or impairs effective competition to the detriment of consumers *Compliance risk:* the financial or reputational risk incurred by us by not adhering to the applicable laws, rules and regulations, local and international best practice (including ethical standards) and our own internal standards *Cyber risk:* the risk of a material impact from an external or internal attack on our information systems with the purpose of data theft, fraud or denial of service. Cyberattacks are manifestations of a cyber threat into an act of aggression or criminal activity causing financial, regulatory or reputational harm or loss *Money laundering risk:* the risk that UBS fails to detect money laundering activities to prevent the financing of illegal activities (including terrorism) and fails to report suspicious activities or respond to anti-money laundering requests from relevant authorities	Business management	Risk Control Legal Risk Control	●
Pension risk: the risk of a negative impact on our capital as a result of deteriorating funded status from decreases in the fair value of assets held in the defined benefit pension funds and/or changes in the value of defined benefit pension obligations due to changes in actuarial assumptions (e.g., discount rate, life expectancy, rate of pension increase) and/or changes to plan designs	Human Resources	Risk Control and Finance	●
Environmental and social risk: the possibility of us suffering reputational or financial harm from transactions, products, services or activities that involve a party associated with environmentally or socially sensitive activities **→ Refer to the "UBS and Society" section of this report for more information**	Business management	Risk Control	
Business risks: the risks arising from the commercial, strategic and economic environment in which our businesses operate			
Business risks: the potential negative impact on earnings from lower-than-expected business volumes and/or margins, to the extent they are not offset by a decrease in expenses	Business management	Finance	●
Reputational risks			
Reputational risk: the risk of damage to our reputation from the point of view of our stakeholders, such as clients, shareholders, staff and the general public	All businesses and functions	All control functions	

Top and emerging risks

The top and emerging risks disclosed below reflect those that we currently think have the potential to materialize within one year and that could significantly affect the Group. Investors should also carefully consider all information set out in the "Risk factors" section of this report, where we discuss these and other material risks we currently consider could impact our ability to execute our strategy and may affect our business activities, financial condition, results of operations and prospects.

- We are exposed to a number of macroeconomic issues as well as general market conditions. As noted in "Market conditions and fluctuations may have a detrimental effect on our profitability, capital strength, liquidity and funding position" and "Performance in the financial services industry is affected by market conditions and the macroeconomic climate" in the "Risk factors" section of this report, these external pressures may have a significant adverse effect on our business activities and related financial results, primarily through reduced margins and revenues, asset impairments and other valuation adjustments. Accordingly, these macroeconomic factors are considered in the development of stress testing scenarios for our ongoing risk management activities.
- We are exposed to substantial changes in the regulation of our businesses that could have a material adverse effect on our business, as discussed in the "Regulatory and legal developments" section of this report and in "Substantial changes in the regulation of our businesses may adversely affect our business and our ability to execute our strategic plans" in the "Risk factors" section of this report.
- As a global financial services firm we are subject to many different legal, tax and regulatory regimes and extensive regulatory oversight. We are exposed to significant liability risk and we are subject to various claims, disputes, legal proceedings and government investigations, as noted in "Material legal and regulatory risks arise in the conduct of our business" in the "Risk factors" section of this report. Information on litigation, regulatory and similar matters we currently consider significant is disclosed in "Note 20 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report.
- One of the most critical risks facing the broader industry is the threat of cyberattacks, which continue to evolve and become more powerful. Along with the rest of the industry, we face ongoing threats, such as data theft, disruption of service and cyber fraud, all of which have the potential to significantly impact our business. Additionally, due to the operational complexity of all our businesses, we are continually exposed to operational risks such as process error, failed execution, system failures and fraud. Conduct risks are inherent in our businesses. Moreover, financial crime, including money laundering, terrorist financing, sanctions violation, fraud, bribery and corruption, continues to present risks, as emerging technologies and changing geopolitical risks increase complexity, and continued heightened regulatory attention and expectations result in increased overall risk. Refer to "Operational risk" in this section and "Operational risks affect our business" in the "Risk factors" section of this report for more information.
- Our reputation is critical to achieving our strategic goals and performance targets, and damage to it can have fundamental negative effects on our business and prospects, as described in "Our reputation is critical to the success of our business" in the "Risk factors" section of this report.

Risk governance

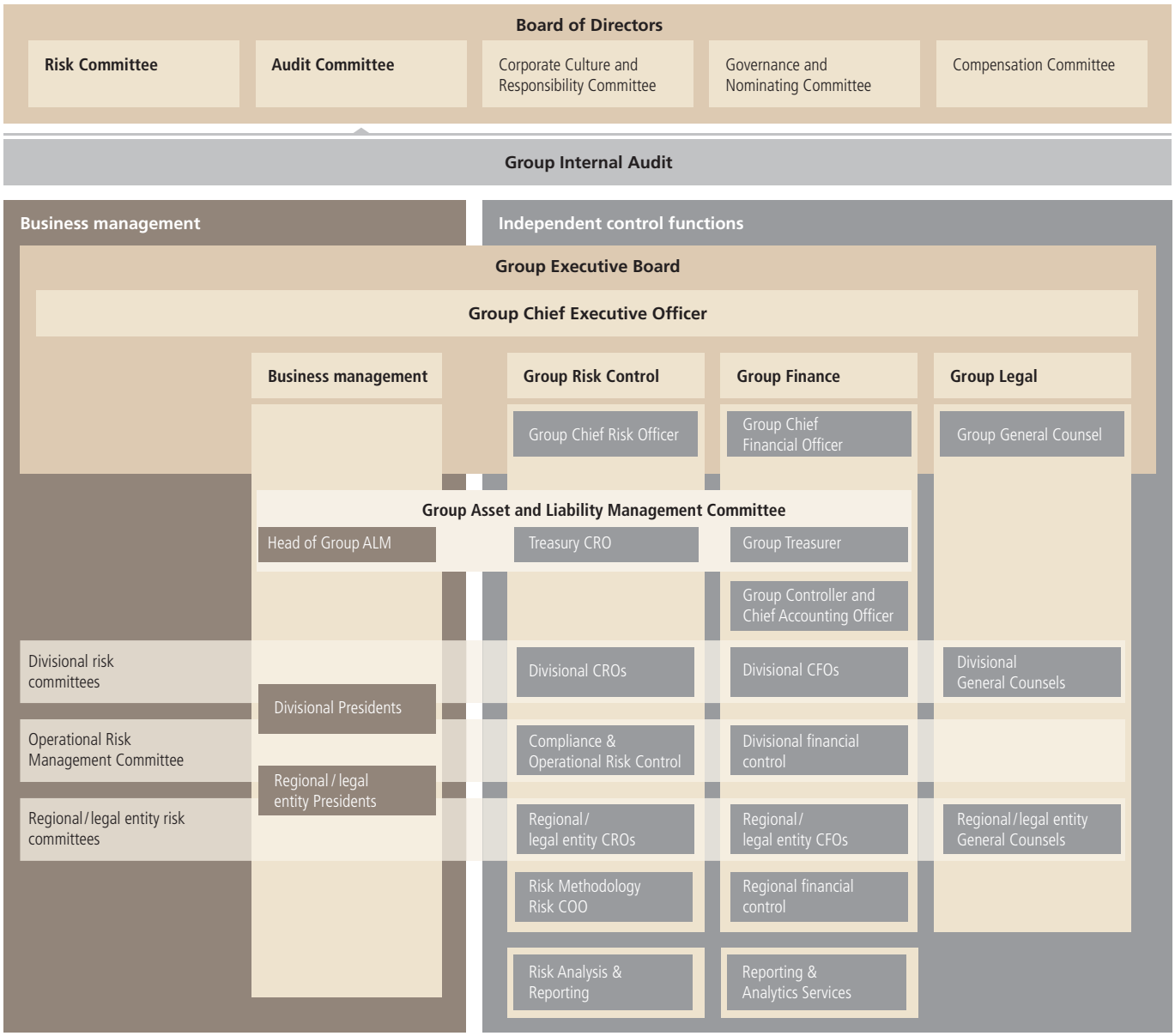
Our risk governance framework operates along three lines of defense. Our first line of defense, business management, owns its risk exposures and is required to maintain effective processes and systems to manage its risks, including robust and comprehensive internal controls and documented procedures. Business management has appropriate supervisory controls and review processes in place designed to identify control weaknesses and inadequate processes.

Our second line of defense is formed by the control functions, which are independent from the business and report directly to the Group CEO. Control functions provide independent oversight of risks, including setting risk limits and protecting against non-compliance with applicable laws and regulations.

Our third line of defense, Group Internal Audit (GIA), reports to the Audit Committee of the Board of Directors and evaluates the overall effectiveness of governance, risk management and the control environment, including the assessment of how the first and second lines of defense meet their objectives.

The key roles and responsibilities for risk management and control are illustrated in the following chart and described on the next pages.

Audited | **Risk governance**



Audited | *The Board of Directors* (BoD) is responsible for determining the risk principles, risk appetite and major portfolio limits of the Group, including their allocation to the business divisions and Corporate Center units. The BoD is supported by the BoD Risk Committee, which monitors and oversees the Group's risk profile and the implementation of the risk framework as approved by the BoD, as well as assesses the Group's key risk measurement methodologies. The Corporate Culture and Responsibility Committee supports the BoD in fulfilling its duty to safeguard and advance the Group's reputation for responsible and sustainable conduct. It reviews and assesses stakeholder concerns and expectations pertaining to UBS's societal performance and corporate culture and recommends appropriate actions to the BoD.

The *Group Executive Board* (GEB) implements the risk framework, controls the Group's risk profile and approves key risk policies.

The *Group Chief Executive Officer* (Group CEO) is responsible for the Group's results, has risk authority over transactions, positions and exposures, and allocates portfolio limits approved by the BoD within the business divisions and Corporate Center units.

The *business division Presidents* are accountable for the results of their business divisions. This includes actively managing their risk exposures, and balancing profit potential, risk, balance sheet and capital usage. The *regional Presidents* facilitate the implementation of UBS's strategy in their region, and have the mandate to escalate activities and issues that may give rise to actual or potentially material regulatory or reputational concerns.

The *Group Chief Risk Officer* (Group CRO) is responsible for Risk Control. Risk Control independently oversees all primary risks and most consequential risks as outlined in "Risk categories" above. This includes establishing methodologies to measure and assess risk, setting risk limits, and developing and operating an appropriate risk control infrastructure. Risk Control is also the central function for model risk management, which includes the validation of models used in the firm. The risk control process is supported by a framework of policies and authorities. *Business division* and *regional Chief Risk Officers* have delegated authority for their respective divisions and regions. Moreover, authorities are delegated to risk officers according to their expertise, experience and responsibilities.

The *Group Chief Financial Officer* (Group CFO) is responsible for assessing and facilitating transparency in the financial performance of the Group and business divisions, and for monitoring whether disclosure of our financial performance meets regulatory requirements and corporate governance standards. The Group CFO manages the Group's and divisional financial control functions, including financial accounting, controlling, forecasting, planning and reporting processes. Further responsibilities include managing UBS's tax affairs, as well as treasury and capital management, including the management of funding and liquidity risk and UBS's regulatory capital ratios.

The *Group General Counsel* (Group GC) manages the Group's legal affairs and is responsible for supporting the Group with effective and timely assessment of legal matters impacting the Group or its businesses and for providing the legal advice required by the Group. The Group GC is further responsible for the management and reporting of all litigation and other significant contentious matters, including all legal proceedings, that involve UBS.

Group Internal Audit (GIA) independently assesses the adherence to our strategy, the effectiveness of governance, risk management and control processes at Group, business division and regional levels, including compliance with legal, regulatory and statutory requirements, as well as with internal policies and contracts. The Head GIA reports to the Chairman of the BoD and, in addition, GIA has a functional reporting line to the Audit Committee.

The above roles and responsibilities are replicated for certain significant legal entities of the Group through the appointment of entity level Presidents, Chief Risk Officers, Chief Financial Officers and General Counsels. ▲

Risk appetite framework

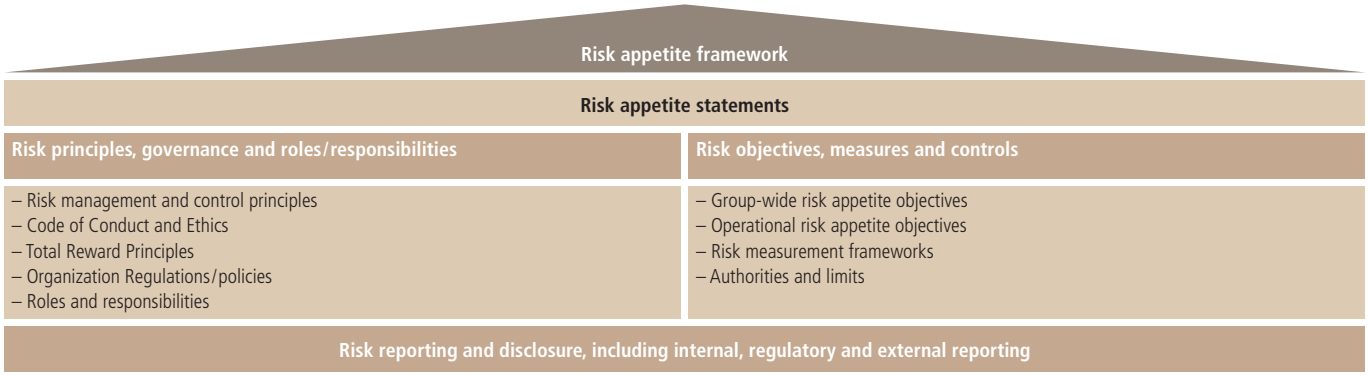
Our risk appetite is defined at the aggregate level and reflects the types of risk that we are willing to accept or intend to avoid. It is established via a complementary set of qualitative and quantitative risk appetite statements defined on a Group-wide level and is embedded throughout our business divisions and legal entities through Group, business division and legal entity policies, limits and authorities. These statements are a critical foundation to maintaining a robust risk culture throughout our organization. The "Risk appetite framework" chart below shows the key elements of this framework, which are described in more detail further below.

Qualitative statements aim to ensure we maintain the desired risk culture. Quantitative risk appetite objectives are designed to enhance the Group's resilience against the impact of potential severe adverse economic or geopolitical events. These risk appetite objectives cover the Group's minimum capital and leverage ratios, solvency, earnings, liquidity and funding, and are subject to periodic review, including as part of the annual business planning process.

These objectives are complemented by operational risk appetite objectives, which are established for each of our operational risk categories, such as market conduct, theft, fraud, data confidentiality and technology risks. Operational risk events that exceed predetermined risk tolerances, expressed as percentages of the Group's operating income, must be escalated to the respective business division President or higher, as appropriate.

The quantitative risk appetite objectives are supported by a comprehensive suite of risk limits set at the portfolio level. These may apply across the Group, within a business division or business unit, at legal entity level, or to an asset class. These additional quantitative controls are typically bottom-up and are designed to monitor specific portfolios and to identify potential risk concentrations.

Risk appetite framework



Risk reports aggregating measures of risk across products and businesses provide insight into the amounts, types, and sensitivities of the various risks in our portfolios and are intended to ensure compliance with defined limits. Risk officers, senior management and the BoD use this information to understand our risk profile and the performance of the portfolios.

The status of risk appetite objectives is evaluated each month and reported to the BoD and the GEB. Our risk appetite may change over time. Therefore, portfolio limits and associated approval authorities are subject to periodic reviews and changes, particularly in the context of our annual business planning process.

Our risk appetite framework is encompassed in a single overarching policy and conforms to the Financial Stability Board's Principles for an Effective Risk Appetite Framework published in 2013.

Risk principles and risk culture

A strong risk culture is a prerequisite for success in today's highly complex operating environment. We are focused on maintaining a strong culture as a source of sustainable competitive advantage. By placing prudent and disciplined risk-taking at the center of every decision, we want to achieve our goals of delivering unrivaled client satisfaction, creating long-term value for stakeholders, and making UBS one of the most attractive companies to work for in the world.

Our risk appetite framework combines all the important elements of our risk culture, expressed in our Pillars, Principles and Behaviors, our risk management and control principles, our Code of Conduct and Ethics and our Total Reward Principles. Together, these aim to align the decisions we make with the Group's strategy, principles and risk appetite. They help provide a solid foundation for promoting risk awareness, leading to appropriate risk-taking and the establishment of robust risk management and control processes. These principles are supported by a range of initiatives covering employees at all levels. This includes the UBS House View on Leadership, which is a set of explicit expectations for leaders that establishes consistent leadership standards across UBS. These initiatives also include our principles of good supervision, which establish clear expectations of managers and employees with respect to supervisory responsibilities, specifically: to take responsibility, to organize their business, to know their employees and what they do, to know their business, to create a good compliance culture and to respond to and resolve issues.

→ **Refer to the "Our employees" section of this report for more information on our Pillars, Principles and Behaviors**

→ **Refer to "Key principles and policies" in the "UBS and Society" section of this report and to the UBS Code of Conduct and Ethics at *www.ubs.com/code* for more information**

Risk management and control principles

Protection of financial strength	Protection of reputation	Business management accountability	Independent controls	Risk disclosure
Protecting UBS's financial strength by controlling our risk exposure and avoiding potential risk concentrations at individual exposure levels, at specific portfolio levels and at an aggregate firm-wide level across all risk types	Protecting our reputation through a sound risk culture characterized by a holistic and integrated view of risk, performance and reward, and through full compliance with our standards and principles, particularly our Code of Conduct and Ethics	Maintaining management accountability, whereby business management, as opposed to Risk Control, owns all risks assumed throughout the Group and is responsible for the continuous and active management of all risk exposures to provide for balanced risk and return	Independent control functions that monitor the effectiveness of the businesses' risk management and oversee risk-taking activities	Disclosure of risks to senior management, the BoD, investors, regulators, credit rating agencies and other stakeholders with an appropriate level of comprehensiveness and transparency

To maintain an environment where staff are comfortable raising concerns, we have whistleblowing policies and procedures in place. These offer multiple channels through which individuals may, either openly or anonymously, escalate suspected breaches of laws, regulations, rules and other legal requirements, our Code of Conduct and Ethics, policies, or relevant professional standards. Our program is designed to ensure that whistleblowing concerns are investigated and that appropriate and consistent action is taken. We are committed to ongoing awareness training and communication to all staff.

We also have a mandatory training program in place for all employees. The program covers a range of compliance and risk-related topics, including anti-money laundering and operational risk. In addition, specialized training is provided for employees depending on their specific roles and responsibilities, such as credit risk and market risk training for those working in trading areas. Failure to satisfactorily complete mandatory training sessions within the given deadline results in consequences, including disciplinary action. Our operational risk framework, incorporating the conduct risk framework, aims to identify and manage financial, regulatory, and reputational risks, together with risks to clients and to markets.

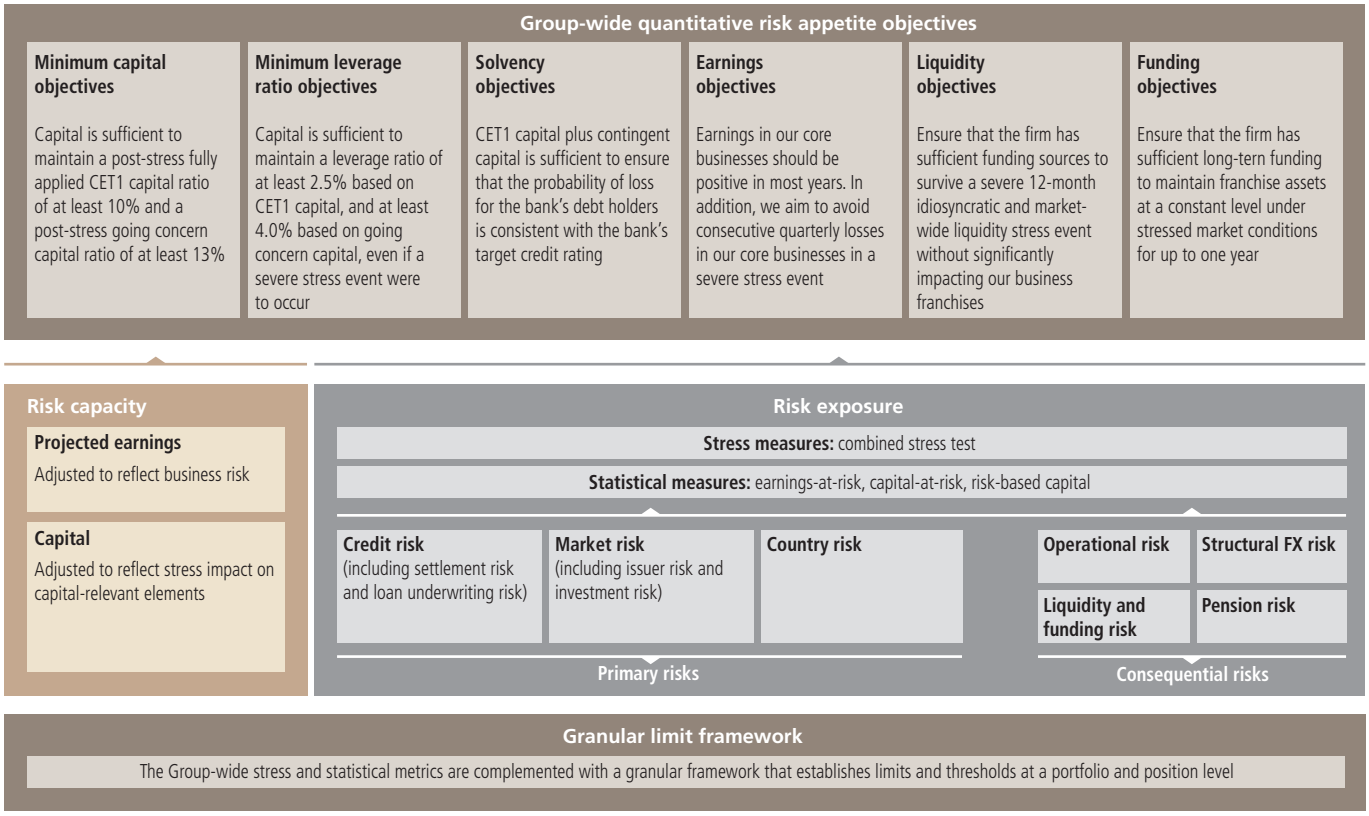
Quantitative risk appetite objectives

Through a set of quantitative risk appetite objectives, we aim to ensure that our aggregate risk exposure remains within our desired risk capacity, based on our capital and business plans. The specific definition of risk capacity for each objective seeks to ensure that we have sufficient capital, earnings, funding and liquidity to protect our business franchises and exceed minimum regulatory requirements under a severe stress event. The risk appetite objectives are evaluated as part of the annual business planning process, and are approved by the BoD. The comparison of risk exposure with risk capacity is a key consideration in management decisions on potential adjustments to the business strategy and the risk profile of the Group.

We make use of both scenario-based stress tests and statistical risk measurement techniques to assess the impact of a severe stress event at a Group-wide level. These complementary frameworks capture exposures to all material primary and consequential risks as well as business risks across our business divisions and Corporate Center units.

→ **Refer to "Risk measurement" in this section for more information on our stress testing and statistical frameworks**

2017 quantitative risk appetite objectives



In determining our risk capacity, we adjust projected earnings from the strategic plan for business risk to reflect lower expected earnings and lower expenses, such as the reversal of variable compensation accruals, in a severe stress event. We also adjust our capital to take into account the impact of stress on deferred tax assets, pension plan assets and liabilities, and accruals for capital returns to shareholders.

The chart on this page provides an overview of our quantitative risk appetite objectives during 2017. For 2018, we have decided to remove the going concern minimum capital and leverage ratio objectives as they would be satisfied when the corresponding CET1 objective is met, given the amount of additional tier 1 (AT1) instruments that have been issued. Our earnings objectives will consider the entire Group instead of only the core businesses going forward, and potential losses under a stress event are compared with historical earnings.

Risk appetite statements at the business division level are derived from the Group-wide objectives. They may also comprise objectives specific to the division, related to the specific activities and risks in that division. Risk appetite objectives are also set for certain legal entities. These must be consistent with the Group-wide risk appetite framework and approved in accordance with the regulations of the legal entity and the Group's regulations. Differences may exist that reflect the specific nature, size, complexity and regulations applicable to the relevant legal entity.

Internal risk reporting

Comprehensive and transparent reporting of risks is central to the control and oversight responsibilities set out in our risk governance framework and is a requirement of our risk management and control principles. Accordingly, risks are reported at a frequency and to a level of detail commensurate with the extent and variability of the risk and the needs of the various governance bodies, regulators and risk authority holders.

On a monthly basis, the Group Risk Report provides a detailed qualitative and quantitative overview of developments in primary and consequential risks for the business divisions and Corporate Center units, along with aggregate views of risks at the Group-wide level, including the status of our risk appetite objectives and results of Group-wide stress testing. The Group Risk Report is distributed internally to the BoD Risk Committee and GEB, and to senior members of Group Risk Control, Group Internal Audit, Finance and Legal. Key extracts from the Group Risk Report, along with extracts from the monthly Group Finance Report and Group Treasury Report, are included in the monthly performance update provided to the GEB and BoD. Granular divisional risk reports are provided to the respective business division Chief Risk Officers and the business division Presidents. This monthly reporting is supplemented with a suite of daily and weekly reports at various levels of granularity, covering market and credit risks for the business divisions and Corporate Center units, to enable risk officers and senior management to monitor and control the Group's risk profile.

Our internal risk reporting, which covers primary and consequential risks, is supported by risk data and measurement systems, which are also used for external disclosure and regulatory reporting. Dedicated units within Risk Control assume responsibility for measurement, analysis and reporting of risk and for overseeing the quality and integrity of risk-related data. Our risk data and measurement systems are subject to periodic review by Group Internal Audit following a risk-based audit approach.

Risk measurement

Audited | We apply a variety of methodologies and measurements to quantify the risks of our portfolios and potential risk concentrations. Risks that are not fully reflected within standard measures are subject to additional controls, which may include preapproval of specific transactions and the application of specific restrictions. Models to quantify risk are generally developed by dedicated units within control functions and are subject to independent verification. ▲

Models and methodologies must be approved and are regularly reviewed in accordance with regulatory requirements as well as internal policies to test that models perform as expected, produce results comparable with actual events and values, and reflect best-in-practice approaches and recent academic developments. Our reviews assess whether models are performing satisfactorily, whether additional analysis is required and whether models need to be recalibrated or redeveloped. Results and conclusions are presented to the relevant governance body and, as required, to regulators.

The ongoing process of assessing model quality and performance in the production environment comprises two components: model verification, in which Model Risk Management & Control (MRMC) independently assesses a model's conceptual soundness, and model confirmation, the regular process of confirming the accuracy and appropriateness of the model output and its application, carried out by the model developers and reviewed by MRMC.

→ **Refer to "Credit risk," "Market risk" and "Operational risk" in this section for more information on model confirmation procedures**

Stress testing

We perform stress testing to estimate the loss that could result from extreme, yet plausible macroeconomic and geopolitical stress events. This enables us to identify, better understand and manage our potential vulnerabilities and risk concentrations. Stress testing plays a key role in our limits framework at Group-wide, business division, legal entity and portfolio levels. Stress test results are regularly reported to the BoD, the Risk Committee and the GEB. We also provide detailed stress loss analyses to FINMA and the regulators of our legal entities in accordance with their requirements. As described in "Risk appetite framework" above, stress testing, along with statistical loss measures, plays a central role in our risk appetite and business planning processes.

Our stress testing framework incorporates three pillars: (i) combined stress tests, (ii) a comprehensive range of portfolio- and risk type-specific stress tests and (iii) reverse stress testing.

Our *combined stress test (CST)* framework is scenario based and aims to quantify overall Group-wide losses that could result from a number of potential global systemic events. The framework captures all material primary and consequential risks, as well as business risks, as indicated in "Risk categories" above. Scenarios are forward looking and encompass macroeconomic and geopolitical stress events calibrated to different levels of potential severity. We implement each scenario through the expected evolution of market indicators and economic variables under that scenario. We then assess the resulting effect on our primary, consequential and business risks to estimate the overall loss and capital implications were the scenario to occur. At least once a year, the Risk Committee approves the most relevant scenario, known as the binding scenario, to be used as the main scenario for regular CST reporting and for monitoring risk exposure against our minimum capital, earnings and leverage ratio objectives in our risk appetite framework. Results are reported to the Risk Committee, BoD, GEB and FINMA on a monthly basis.

The Enterprise-wide Stress Committee (ESC) is responsible for ensuring the consistency and adequacy of the assumptions and scenarios used for our Group-wide stress measures. As part of these responsibilities, the ESC seeks to ensure that the suite of stress scenarios adequately reflects current and potential developments in the macroeconomic and geopolitical environment, our current and planned business activities, and actual or potential risk concentrations and vulnerabilities in our portfolios. The ESC meets at least quarterly and is comprised of Group, business division and legal entity representatives of Risk Control. In executing its responsibilities, the ESC considers input from the Think Tank, a panel of senior representatives from the business divisions, Risk Control and economic research, which meets quarterly to review the current and possible future market environment in order to identify potential stress scenarios that could materially affect the Group's profitability. This results in a range of internal stress scenarios that are developed and evolve over time, separate from the scenarios mandated by FINMA.

Each scenario captures a wide range of macroeconomic variables. These include gross domestic product (GDP), equity prices, interest rates, foreign exchange rates, commodity prices, property prices and unemployment. We use assumed changes in these macroeconomic and market variables in each scenario to stress the key risk drivers of our portfolios. For example, lower GDP growth and rising interest rates may reduce the income of clients to whom we have lent money, which leads to changes in the credit risk parameters for probability of default, loss given default and exposure at default, and results in higher predicted credit losses within the stress scenario. We also capture the business risk resulting from lower fee, interest and trading income and lower expenses. These effects are measured across all material risk types and all businesses to calculate the aggregate estimated effect of the scenario on profit or loss, other comprehensive income, RWA, LRD and, ultimately, our capital and leverage ratios. The assumed changes in macroeconomic variables are updated periodically to take account of changes in the current and possible future market environment.

Through 2017, the binding scenario for CST was the internal *Global Deflation scenario*, which is characterized by: a crisis in the eurozone, with sovereign defaults in peripheral economies and the abandonment of the monetary union by Greece; a China hard landing, triggered by excessive policy tightening in light of market turbulence, including high real interest rates, insufficient fiscal stimulus, and stringent anti-corruption campaigns; an ineffective direct support of the equity market by governments; and a global recession, with central banks in major developed economies such as the eurozone, US and UK attempting to stimulate growth and restore market confidence by reducing policy rates further into negative territory.

The CST risk exposure was broadly stable over the year with most of the month-on-month variability arising primarily from temporary loan underwriting exposure in the Investment Bank.

As part of the CST framework, we routinely monitored four additional stress scenarios throughout 2017.

- *Failure of a Major Financial Institution scenario* represents renewed financial market turmoil due to the failure of a major global financial institution, leading to prolonged financial deleveraging and dramatically plunging activity around the globe.
- *US Monetary Crisis scenario* represents a loss of confidence in the US, which leads to international portfolio repositioning out of US dollar-denominated assets, sparking an abrupt and substantial US dollar sell-off. The US is pushed back into recession, other industrialized countries replicate this pattern and inflationary concerns lead to an overall higher interest rate level.
- *Global Depression scenario* represents a severe and prolonged eurozone crisis in which several peripheral countries default and exit the eurozone, and advanced economies are pulled into a prolonged period of economic stagnation.
- *Global Interest Rate Steepening scenario* represents a sudden shift in market sentiment causing a disorderly sell-off in long-dated bonds and a rapid steepening of the yield curve, exacerbated by a lack of liquidity in financial markets. This in turn triggers a sovereign crisis in Japan and a global recession.

We have developed a new *Severe Eurozone Crisis scenario* to be used as the binding stress scenario in our combined stress test framework for 2018. In line with the *Global Deflation scenario*, this retains a eurozone crisis at its core, but with greater severity through the inclusion of an additional sovereign debt restructuring as a consequence of the ensuing crisis. A China hard landing remains a feature of the scenario, while the assumption of more severe negative rates in major developed countries has been removed.

Portfolio-specific stress tests are measures that are tailored to the risks of specific portfolios. Our portfolio stress loss measures are derived from data on past events, but also include forward-looking elements. For example, we derive the expected market movements within our liquidity-adjusted stress metric using a combination of historical market behavior, based on an analysis of historical events, and forward-looking analysis including consideration of defined scenarios that have never occurred. Results of portfolio-specific stress tests may be subject to limits to explicitly control risk-taking, or may be monitored without limits to identify vulnerabilities.

Reverse stress testing starts from a defined stress outcome (e.g., a specified loss amount, reputational damage, a liquidity shortfall or a breach of regulatory capital ratios) and works backward to identify the economic or financial scenarios that could result in such an outcome. As such, reverse stress testing is intended to complement scenario-based stress tests by assuming "what if" outcomes that could extend beyond the range normally considered, and thereby potentially challenge assumptions regarding severity and plausibility. The results of reverse stress testing are reported to relevant governance bodies according to the materiality and scope of the exercise.

Additionally, we routinely analyze the effect of increases or decreases in interest rates and changes in the structure of yield curves.

Moreover, Group Treasury performs stress testing to determine the optimum asset and liability structure that allows us to maintain an appropriately balanced liquidity and funding position under various scenarios. These scenarios differ from those outlined above, because they are focused on specific situations that could generate liquidity and funding stress, as opposed to the scenarios used in the CST framework, which focus on the impact on profit or loss and capital.

→ **Refer to "Credit risk" and "Market risk" in this section for more information on stress loss measures**
→ **Refer to the "Treasury management" section of this report for more information on stress testing**
→ **Refer to "Our stated capital returns objective is based, in part, on capital ratios that are subject to regulatory change and may fluctuate significantly" in the "Risk factors" section of this report for more information**

Statistical measures

In addition to our scenario-based CST measure, we employ a statistical stress framework that allows us to calculate and aggregate risks using statistical techniques to derive stress events at chosen confidence levels.

We use this framework to derive a distribution of potential earnings based on historically observed market changes in combination with the firm's actual risk exposures, considering effects on both income and expenses. From this, we determine earnings-at-risk (EaR), which measures the potential shortfall in earnings (i.e., the deviation from forecast earnings) at a 95% confidence level and is evaluated over a one-year horizon. EaR is used for the assessment of the earnings objectives in our risk appetite framework.

We extend the EaR measure by incorporating the effects of gains and losses recognized through other comprehensive income, to derive a distribution of potential effects of stress events on CET1 capital. From this distribution, we derive our capital-at-risk (CaR) buffer measure at a 95% confidence level for the assessment of our capital and leverage ratio risk appetite objectives, and we derive our CaR solvency measure at a 99.9% confidence level for the assessment of our solvency risk appetite objective.

We also use the CaR solvency measure as the basis to derive the contributions of business divisions and Corporate Center units to risk-based capital (RBC), which is a component of our equity attribution framework. RBC measures the potential capital impairment from an extreme stress event at a 99.9% confidence level to estimate the capital required to absorb unexpected loss while remaining able to fully repay creditors.

→ **Refer to the "Capital management" section of this report for more information on the equity attribution framework**

Portfolio and position limits

The Group-wide stress and statistical metrics are complemented by more granular portfolio and position limits, triggers and targets. The combination of these measures provides a comprehensive, granular control framework that is applied to our business divisions and Corporate Center units, as well as the significant legal entities, as relevant to the key risks arising from their business models.

We apply limits to a variety of exposures at the portfolio level, using statistical and stress-based measures, such as value-at-risk, liquidity-adjusted stress, notional loan underwriting limits, economic value sensitivity and portfolio default simulations for our loan books. These are complemented with a set of controls for net interest income sensitivity, mark-to-market losses on available-for-sale portfolios, and the effect of foreign exchange movements on capital and capital ratios.

Portfolio measures are supplemented with position-level controls. Risk measures for position controls are based on market risk sensitivities and counterparty-level credit risk exposures. Market risk sensitivities include sensitivities to changes in general market risk factors, such as equity indices, foreign exchange rates and interest rates, and sensitivities to issuer-specific factors, such as changes in an issuer's credit spread or default risk. We monitor a significant number of market risk controls for the Investment Bank and Corporate Center – Group Asset and Liability Management and Corporate Center – Non-core and Legacy Portfolio on a daily basis. Counterparty measures capture the current and potential future exposure to an individual counterparty, taking into account collateral and legally enforceable netting agreements.

→ **Refer to "Credit risk" in this section for more information on counterparty limits**

Risk concentrations

Audited | A risk concentration exists where (i) a position is affected by changes in a group of correlated factors, or a group of positions are affected by changes in the same risk factor or a group of correlated factors, and (ii) the exposure could, in the event of large but plausible adverse developments, result in significant losses. The categories in which risk concentrations may occur include counterparties, industries, legal entities, countries or geographical regions, products and businesses.

The identification of risk concentrations requires judgment, as potential future developments cannot be accurately predicted and may vary from period to period. In determining whether we have a risk concentration, we consider a number of elements, both individually and collectively. These elements include the shared characteristics of the positions and our counterparties, the size of the position or group of positions, the sensitivity of the position or group of positions to changes in risk factors and the volatility and correlations of those factors. Also important in our assessment is the liquidity of the markets where the positions are traded, and the availability and effectiveness of hedges or other potential risk-mitigating factors. The value of a hedging instrument may not always move in line with the position being hedged, and this mismatch is referred to as basis risk.

Risk concentrations are subject to increased oversight by Risk Control and are assessed to determine whether they should be reduced or mitigated, depending on the available means to do so. It is possible that material losses could occur on asset classes, positions and hedges, particularly if the correlations that emerge in a stressed environment differ markedly from those envisaged by our risk models. ▲

→ **Refer to "Credit risk" and "Market risk" in this section for more information on the compositions of our portfolios**

→ **Refer to the "Risk factors" section of this report for more information**

Credit risk

Key developments

Overall, our gross credit risk exposures decreased by CHF 30 billion to CHF 518 billion during 2017. The increase in our gross loan portfolio of CHF 13 billion to CHF 319 billion, mainly driven by an increase in Wealth Management, was more than offset by exposure reductions in balances with central banks, loan commitments and over-the-counter derivatives.

Total net credit loss expense was CHF 128 million compared with CHF 37 million, mainly reflecting CHF 79 million higher expenses in the Investment Bank in the fourth quarter of 2017, primarily related to a margin loan to a single client following a significant decrease in the value of the collateral.

Our Swiss lending portfolios, which account for approximately half of our loan exposure, continued to perform well, although we remain watchful for any signs of deterioration in the Swiss economy that could impact our counterparties and lead to an increase in credit loss expenses from the low levels recently observed.

Volatility was remarkably low in 2017, amid a broad-based acceleration in global growth, strong corporate profits, predictable and still largely supportive monetary policy and expectations of US tax cuts. Tensions around Syria and North Korea, the fallout from natural disasters and political turmoil in the US contributed to intermittent periods of market volatility during the year, although overall the market reaction to geopolitical and other risk events has been largely muted.

In 2017, many counterparties in the energy segments adapted to operating in a lower oil price environment, hence price volatility during the year had very little impact on our portfolio.

Within the loan underwriting business, we continued to see a steady flow of transactions as leveraged loan markets remained relatively strong.

Audited | Main sources of credit risk

- A substantial portion of our lending exposure arises from our Swiss domestic business, which offers corporate loans and mortgage loans mainly secured against residential properties and income-producing real estate, and therefore depends on the performance of the Swiss economy.
- Within the Investment Bank, our credit exposure mainly arises from lending, derivatives trading and securities financing and is predominantly investment grade. Loan underwriting activity can be lower rated and gives rise to concentrated exposure of a temporary nature.
- Our wealth management businesses predominately conduct securities-based lending and mortgage lending.
- Credit risk within Non-core and Legacy Portfolio relates to derivative transactions, predominantly carried out on a cash-collateralized basis, and securitized positions. ▲

Audited | Overview of measurement, monitoring and management techniques

- Credit risk arising from transactions with individual counterparties is measured according to our estimates of probability of default, exposure at default and loss given default. Limits are established for individual counterparties and groups of related counterparties covering banking and traded products as well as settlement amounts. Risk control authorities are approved by the Board of Directors and are delegated to the Group Chief Executive Officer, Group Chief Risk Officer and divisional Chief Risk Officers based on risk exposure amounts and internal credit rating.
- Limits apply not only to the current outstanding amount, but also to contingent commitments and the potential future exposure of traded products.
- For the Investment Bank, our monitoring, measurement and limit framework distinguishes between exposures intended to be held to maturity (take-and-hold exposures) and those that are intended to be held for a short term, pending distribution or risk transfer (temporary exposures).
- We also use models to derive portfolio credit risk measures of expected loss, statistical loss and stress loss at the Group-wide and business division levels and establish portfolio limits at these levels.
- Credit risk concentrations can arise if clients are engaged in similar activities, are located in the same geographical region or have comparable economic characteristics, for example, if their ability to meet contractual obligations would be similarly affected by changes in economic, political or other conditions. To avoid credit risk concentrations, we establish limits and / or operational controls that constrain risk concentrations at portfolio and sub-portfolio levels with regard to sector exposure, country risk and specific product exposures. ▲

Credit risk profile of the Group

The exposures detailed in this section are based on our internal management view of credit risk, which differs in certain respects from the measurement requirements of IFRS.

Internally, we categorize credit risk exposures into two broad categories: banking products and traded products. Banking products comprise drawn loans, undrawn guarantees and loan commitments, amounts due from banks and balances with central banks. Traded products comprise over-the-counter (OTC) derivatives, exchange-traded derivatives (ETD) and securities financing transactions (SFTs), comprised of securities borrowing and lending and repurchase and reverse repurchase agreements.

Banking products

The breakdowns of our banking products exposures are shown before and after allowances and provisions for credit losses and related single-name credit hedges. The effect of portfolio hedges, such as index credit default swaps (CDS), is not reflected. Guarantees and loan commitments are shown on a notional basis, without applying credit conversion factors.

Total gross banking products exposure decreased to CHF 474 billion as of 31 December 2017 compared with CHF 497 billion at the end of 2016, mainly due to decreases in balances with central banks in Corporate Center – Group Asset and Liability Management (Group ALM) and in loan commitments in the Investment Bank, partly offset by higher loan balances in Wealth Management.

Banking and traded products exposure by business division and Corporate Center unit

	31.12.17								
CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Group
Balances with central banks	427	0	0	0	32	0	86,618	0	87,078
Due from banks	1,356	3,357	1,485	570	8,725	356	2,740	0	18,589
Loans[1]	115,180	53,014	131,380	1	12,094	34	7,226	88	319,016
Guarantees	1,982	460	9,551	0	5,040	105	2	2	17,142
Loan commitments	1,861	347	9,160	0	20,619	0	0	0	31,988
Banking products exposure[2]	120,806	57,178	151,576	570	46,510	496	96,585	90	473,813[3]
Banking products exposure, net[4]	120,701	57,153	151,105	570	44,693	496	96,585	61	471,364
Over-the-counter derivatives[5]	5,547	26	1,234	0		11,444			18,250
Securities financing transactions[5]	0	222	0	0		17,842			18,064
Exchange-traded derivatives[5]	963	1,730	76	0		5,444			8,213
Traded products exposure[5]	6,510	1,978	1,310	0		34,729			44,527
Traded products exposure, net[5]	6,510	1,978	1,310	0		33,996			43,794
Credit exposure[5]	127,316	59,156	152,886	570		178,411			518,339
Credit exposure, net[5]	127,211	59,131	152,414	570		175,832			515,158

	31.12.16								
CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Group
Balances with central banks	901	0	0	0	37	0	106,162	0	107,100
Due from banks	915	2,635	2,156	544	9,662	455	2,176	0	18,543
Loans[1]	101,876	52,486	133,861	1	12,022	43	5,962	129	306,379
Guarantees	2,187	558	9,023	0	5,336	111	1	4	17,220
Loan commitments	1,730	375	8,861	0	36,496	0	0	481	47,943
Banking products exposure[2]	107,608	56,054	153,900	545	63,553	610	114,301	614	497,186[3]
Banking products exposure, net[4]	107,546	56,025	153,414	545	57,682	610	114,301	418	490,541
Over-the-counter derivatives[5]	5,359	35	1,420	0		17,540			24,353
Securities financing transactions[5]	0	255	0	0		17,414			17,669
Exchange-traded derivatives[5]	926	1,371	125	0		7,031			9,454
Traded products exposure[5]	6,285	1,661	1,544	0		41,985			51,476
Traded products exposure, net[5]	6,285	1,661	1,544	0		40,833			50,324
Credit exposure[5]	113,894	57,716	155,445	545		221,063			548,662
Credit exposure, net[5]	113,832	57,686	154,958	545		213,843			540,865

1 Does not include reclassified securities and similar acquired securities in our CC – Non-core and Legacy Portfolio. 2 Does not include loans designated at fair value. 3 As of 31 December 2017, total banking products exposure of UBS AG consolidated was CHF 2.1 billion higher than the exposure of UBS Group AG consolidated, related to receivables of UBS AG and UBS Switzerland AG against UBS Group AG (31 December 2016: CHF 0.6 billion). 4 Net of allowances, provisions and hedges. 5 As counterparty risk for traded products is managed at counterparty level, no further split between exposures in the Investment Bank, CC – Non-core and Legacy Portfolio and CC – Group ALM is provided.

Wealth Management

Gross banking products exposure within Wealth Management increased to CHF 121 billion from CHF 108 billion, mainly driven by loan growth in Asia Pacific. Our Wealth Management loan portfolio is mainly secured by securities (Lombard loans) and by residential property. Most of the Lombard loans were of high quality, with 96% rated investment grade based on our internal ratings, and are typically short term in nature with an average duration of three to six months. Moreover, Lombard loans can be canceled immediately if the collateral quality deteriorates or margin calls are not met.

The portfolio of mortgage loans secured by properties outside Switzerland increased to CHF 6.2 billion from CHF 5.5 billion, driven mainly by the UK and Monaco. The overall quality of this portfolio remained high over the year.

Wealth Management Americas

Gross banking products exposure within Wealth Management Americas increased to CHF 57 billion from CHF 56 billion, driven mainly by increased loan origination. This exposure largely relates to loans secured by securities and by residential property. Out of the loans secured by securities, 99% were rated investment grade based on our internal ratings, compared with 96% in 2016, with the increase driven by a model change.

The portfolio of loans secured by residential property consists primarily of residential mortgage loans offered in the US. Gross exposure increased to CHF 11.4 billion from CHF 10.2 billion. The overall quality of this portfolio remained high with an average loan-to-value ratio (LTV) of 58%, unchanged from 2016, and we have experienced negligible credit losses since the inception of the mortgage program in 2009. Natural disasters that occurred in the US during 2017 had a very limited impact on properties within the mortgage loan portfolio. The five largest geographic concentrations in the portfolio were in California (30%), New York (16%), Florida (10%), Texas (4%) and New Jersey (4%).

Wealth Management, Wealth Management Americas and Personal & Corporate Banking loan portfolios, gross[1]

	Wealth Management		Wealth Management Americas		Personal & Corporate Banking	
CHF million	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Secured by residential property	34,644	32,208	11,367	10,239	95,381	95,966
Secured by commercial / industrial property	2,071	1,974	0	0	16,619	17,819
Secured by cash	10,271	14,436	4,276	1,042	1,458	1,884
Secured by securities	59,946	46,194	36,231	40,182	1,868	1,990
Secured by guarantees and other collateral	7,869	6,697	800	716	6,442	6,707
Unsecured loans	379	366	341	307	9,611	9,496
Total loans, gross	115,180	101,876	53,014	52,486	131,380	133,861
Total loans, net of allowances	115,076	101,814	52,989	52,455	130,939	133,419

1 Collateral arrangements generally incorporate a range of collateral, including cash, securities, property and other collateral. In 2017, we further aligned our collateral allocation processes within Wealth Management Americas to prioritize collateral mainly according to its liquidity profile. This change resulted in increases in loans secured by cash and decreases in loans secured by securities of CHF 4.5 billion.

Personal & Corporate Banking

Gross banking products exposure within Personal & Corporate Banking decreased to CHF 152 billion from CHF 154 billion. Net banking products exposure was CHF 151 billion compared with CHF 153 billion, of which approximately 60% was classified as investment grade compared with 61% in the prior year. Around 53% of the exposure is categorized in the lowest loss given default (LGD) bucket of 0% to 25%, compared with 81% in 2016. This significant decrease is due to the introduction of a new LGD framework, leading to higher LGDs mainly for the mortgage business. The size of Personal & Corporate Banking's gross loan portfolio decreased by CHF 2 billion to CHF 131 billion. As of 31 December 2017, 93% of this portfolio was secured by collateral, mainly residential and commercial property. Of the total unsecured amount, 77% related to cash flow-based lending to corporate counterparties and 9% related to lending to public authorities. Based on our internal ratings, 51% of the unsecured loan portfolio was rated investment grade compared with 50% in 2016.

Credit loss expense for this portfolio remained low in 2017. Given the reliance of the Swiss economy on exports, the slight weakening of the Swiss franc may have provided some support to the financials of export-oriented counterparties.

Our Swiss corporate banking products portfolio, which totaled CHF 26.2 billion compared with CHF 25.5 billion, consists of loans, guarantees and loan commitments to multinational and domestic counterparties. The small and medium-sized enterprises portfolio, especially, is well diversified across industries. However, such companies are reliant on the domestic economy and the economies to which they export, in particular the EU and the US. In addition, the development of the EUR / CHF exchange rate is an important risk factor for Swiss corporates.

The delinquency ratio, being the ratio of past due but not impaired loans to total loans, was 0.6% for the corporate loan portfolio compared with 0.7% at the end of 2016.

→ **Refer to "Credit risk models" in this section for more information on loss given default, rating grades and rating agency mappings**

Swiss mortgage loan portfolio

Our Swiss mortgage loan portfolio secured by residential and commercial real estate in Switzerland continues to be our largest loan portfolio. These mortgage loans totaling CHF 136 billion mainly originate from Personal & Corporate Banking, but also from Wealth Management. CHF 124 billion of these mortgage loans related to residential properties that the borrower was either occupying or renting out, with full recourse to the borrower. Of this CHF 124 billion, CHF 90 billion related to properties occupied by the borrower, with an average LTV ratio of 56% compared with 53% as of 31 December 2016. The average LTV for newly originated loans for this portion was 65%, compared with 62% in 2016. The remaining CHF 34 billion of the Swiss residential mortgage loan portfolio relates to properties rented out by the borrower and the average LTV of this portfolio was 57%, compared with 56% as of 31 December 2016. The average LTV for newly originated Swiss residential mortgage loans for properties rented out by the borrower was 60% compared with 54% in 2016.

As illustrated in the "Swiss mortgages: distribution of net exposure at default (EAD) across exposure segments and loan-to-value (LTV) buckets" table on the next page, over 99% of the aggregate amount of Swiss residential mortgage loans would continue to be covered by the real estate collateral even if the value assigned to that collateral were to decrease by 20%, and 98% would remain covered by the real estate collateral even if the value assigned to that collateral were to decrease by 30%. In this table, the amount of each mortgage loan is allocated across the LTV buckets to indicate the portion at risk at the various value levels shown. For example, a loan of 75 with an LTV ratio of 75% (collateral value of 100) would result in allocations of 30 in the less-than-30% LTV bucket, 20 in the 31–50% bucket, 10 in the 51–60% bucket, 10 in the 61–70% bucket and 5 in the 71–80% bucket.

Personal & Corporate Banking: distribution of banking products exposure across internal UBS ratings and loss given default (LGD) buckets

CHF million, except where indicated	31.12.17						31.12.16	
		LGD buckets						
Internal UBS rating[1]	Exposure	0–25%	26–50%	51–75%	76–100%	Weighted average LGD (%)	Exposure	Weighted average LGD (%)
Investment grade	89,975	53,566	27,950	6,508	1,951	26	94,083	17
Sub-investment grade	61,602	27,210	21,878	10,193	2,321	32	59,817	18
of which: 6–9	*55,730*	*25,234*	*19,036*	*9,358*	*2,101*	*32*	*52,878*	*18*
of which: 10–12	*4,040*	*1,894*	*1,266*	*662*	*217*	*32*	*5,053*	*14*
of which: 13 and defaulted	*1,832*	*82*	*1,575*	*172*	*3*	*39*	*1,886*	*38*
Total exposure before deduction of allowances and provisions	151,576	80,776	49,827	16,701	4,272	28	153,900	17
Less: allowances and provisions	(472)						(486)	
Net banking products exposure	151,105						153,414	

1 The ratings of the major credit rating agencies, and their mapping to our internal rating scale, are shown in the "Internal UBS rating scale and mapping of external ratings" table in this section.

Personal & Corporate Banking: unsecured loans by industry sector

CHF million	31.12.17		31.12.16	
	CHF million	%	CHF million	%
Construction	127	1.3	140	1.5
Financial institutions	1,162	12.1	1,675	17.6
Hotels and restaurants	83	0.9	96	1.0
Manufacturing	1,779	18.5	1,188	12.5
Private households	1,367	14.2	1,334	14.0
Public authorities	877	9.1	1,221	12.9
Real estate and rentals	181	1.9	143	1.5
Retail and wholesale	1,978	20.6	1,694	17.8
Services	1,821	18.9	1,748	18.4
Other	236	2.5	258	2.7
Net exposure	9,611	100.0	9,496	100.0

Swiss mortgages: distribution of net exposure at default (EAD) across exposure segments and loan-to-value (LTV) buckets

CHF billion, except where indicated		31.12.17								31.12.16
		LTV buckets								
Exposure segment		≤30%	31–50%	51–60%	61–70%	71–80%	81–100%	>100%	Total	Total
Residential mortgages	Net EAD	67.3	31.5	9.3	5.0	1.9	0.3	0.0	115.4	114.6
	as a % of row total	58	27	8	4	2	0	0	100	
Income-producing real estate (IPRE)	Net EAD	10.7	4.8	1.4	0.7	0.2	0.0	0.0	17.9	19.1
	as a % of row total	60	27	8	4	1	0	0	100	
Corporates	Net EAD	5.4	2.2	0.6	0.3	0.2	0.1	0.1	8.9	8.7
	as a % of row total	61	25	7	4	2	1	1	100	
Other segments	Net EAD	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.9	1.0
	as a % of row total	65	21	7	5	2	0	0	100	
Mortgage-covered exposure	Net EAD	84.0	38.7	11.3	6.1	2.3	0.5	0.1	143.0	143.5
	as a % of total	59	27	8	4	2	0	0	100	
Mortgage-covered exposure 31.12.16	Net EAD	86.7	38.8	10.7	5.3	1.7	0.3	0.1	143.5	
	as a % of total	60	27	7	4	1	0	0	100	

Asset Management

Gross banking products exposure within Asset Management was less than CHF 1 billion as of 31 December 2017 and 31 December 2016.

Investment Bank

The Investment Bank's lending activities are largely associated with corporate and non-bank financial institutions. The business is broadly diversified across industry sectors, but concentrated in North America.

During 2017, the gross banking products exposure of the Investment Bank decreased to CHF 47 billion from CHF 64 billion. The decrease was due to lower corporate lending exposure, which also includes temporary loan underwriting activity.

Within the loan underwriting business, we continued to see a steady flow of transactions as leveraged loan markets remained relatively strong. Total temporary underwriting exposure ended 2017 significantly lower than the previous year as our ability to distribute was robust, while a large investment grade merger and acquisition financing commitment, which had exceeded our targeted distribution date, expired unused during the second quarter of 2017. Loan underwriting exposures are classified as held for trading, with fair values reflecting market conditions at the end of 2017.

The Investment Bank actively manages the credit risk of this portfolio and, as of 31 December 2017, held CHF 1.8 billion of single-name CDS hedges against its exposures to corporates and other non-banks, a decrease of CHF 4.1 billion year on year.

Net banking products exposure, excluding balances with central banks and the vast majority of amounts due from banks, and after allowances, provisions and hedges, decreased to CHF 36.6 billion from CHF 49.9 billion, driven by the aforementioned lower level of corporate lending at the end of 2017. Based on our internal ratings, 57% of the Investment Bank's net banking products exposure was classified as investment grade compared with 63% at the end of the prior year. The majority of the Investment Bank's net banking products exposure had an estimated LGD of between 0% and 50%.

Many counterparties in the energy segments adapted in 2017 to operating in a lower oil price environment, hence price volatility during the year had very little impact on our portfolio. Overall, while our exposures remain relatively stable, we continue to actively monitor exposures to this sector.

→ **Refer to "Credit risk models" in this section for more information on loss given default, rating grades and rating agency mappings**

Investment Bank: banking products[1]

CHF million	31.12.17	31.12.16
Total exposure, before deduction of allowances, provisions and hedges	38,439	55,709
Less: allowances, provisions	(42)	(41)
Less: credit protection bought (credit default swaps, notional)[2]	(1,755)	(5,810)
Net exposure after allowances, provisions and hedges	36,643	49,859

1 Internal risk view, excludes balances with central banks, internal risk adjustments and the vast majority of due from banks exposures. 2 The effects of portfolio hedges, such as index credit default swaps (CDSs), and of loss protection from the subordinated tranches of structured credit protection are not reflected in this table.

Investment Bank: distribution of net banking products exposure across internal UBS ratings and loss given default (LGD) buckets

CHF million, except where indicated	31.12.17						31.12.16	
		LGD buckets						
Internal UBS rating[1]	Exposure	0–25%	26–50%	51–75%	76–100%	Weighted average LGD (%)	Exposure	Weighted average LGD (%)
Investment grade	20,704	5,738	9,708	1,516	3,742	49	31,398	50
Sub-investment grade	15,939	10,435	4,378	669	456	22	18,461	23
of which: 6–9	*10,376*	*8,266*	*1,456*	*653*	*0*	*17*	*12,444*	*21*
of which: 10–12	*5,282*	*1,989*	*2,821*	*15*	*456*	*33*	*5,391*	*29*
of which: 13 and defaulted	*281*	*180*	*101*	*0*	*0*	*19*	*625*	*11*
Net banking products exposure, after application of credit hedges	36,643	16,174	14,087	2,185	4,198	37	49,859	40

1 The ratings of the major credit rating agencies, and their mapping to our internal rating scale, are shown in the "Internal UBS rating scale and mapping of external ratings" table in this section.

Investment Bank: net banking products exposure by geographical region

	31.12.17		31.12.16	
	CHF million	%	CHF million	%
Asia Pacific	1,424	3.9	1,978	4.0
Latin America	164	0.4	212	0.4
Middle East and Africa	73	0.2	32	0.1
North America	27,087	73.9	37,691	75.6
Switzerland	135	0.4	3,128	6.3
Rest of Europe	7,761	21.2	6,818	13.7
Net exposure	36,643	100.0	49,859	100.0

Investment Bank: net banking products exposure by industry sector

	31.12.17		31.12.16	
	CHF million	%	CHF million	%
Banks	1,399	3.8	3,101	6.2
Chemicals	843	2.3	4,112	8.2
Electricity, gas, water supply	2,425	6.6	2,515	5.0
Financial institutions, excluding banks	13,207	36.0	19,990	40.1
Manufacturing[1]	4,123	11.3	4,195	8.4
Mining[1]	2,755	7.5	2,838	5.7
Public authorities	963	2.6	1,573	3.2
Real estate and construction	3,340	9.1	3,588	7.2
Retail and wholesale	971	2.6	870	1.7
Technology and communications	2,687	7.3	3,153	6.3
Transport and storage[1]	2,798	7.6	3,166	6.3
Other	1,131	3.1	756	1.5
Net exposure[1]	36,643	100.0	49,859	100.0
of which: oil and gas[1]	*4,290*	*11.7*	*5,069*	*10.2*

1 As of 31 December 2017, the CHF 4.3 billion Investment Bank net banking products exposure to the oil and gas sector comprised CHF 2.3 billion related to mining, CHF 1.5 billion related to transport and storage and CHF 0.4 billion related to manufacturing. As of 31 December 2016, the CHF 5.1 billion Investment Bank net banking products exposure to the oil and gas sector comprised CHF 2.2 billion related to mining, CHF 2.0 billion related to transport and storage and CHF 0.9 billion related to manufacturing.

Corporate Center – Group Asset and Liability Management

Gross banking products exposure within Corporate Center – Group Asset and Liability Management (Group ALM), which arises primarily in connection with treasury activities, decreased by CHF 18 billion to CHF 97 billion. This was driven by a decrease in balances with central banks of CHF 20 billion, mainly due to higher consumption by the business divisions, partly offset by net issuances of short-term and long-term debt.

→ **Refer to "Balance sheet assets – Group ALM" in the "Treasury management" section of this report**

Corporate Center – Non-core and Legacy Portfolio

→ **Refer to the "Corporate Center – Non-core and Legacy Portfolio" section under "Financial and operating performance" of this report for more information**

Traded products

Traded products include over-the-counter (OTC) derivatives exposures, as well as securities financing transactions (SFTs) and exchange-traded derivatives (ETD) exposures. Credit risk arising from traded products, after the effects of master netting agreements but excluding credit valuation adjustments and hedges, decreased by CHF 7 billion to CHF 45 billion as of 31 December 2017. OTC derivatives accounted for CHF 18 billion, exposures from SFTs were CHF 18 billion, and ETD exposures amounted to CHF 8 billion. OTC derivatives exposures are generally measured as net positive replacement values after the application of legally enforceable netting agreements and the deduction of cash and marketable securities held as collateral. SFT exposures are reported taking into account collateral received, and ETD exposures take into account collateral margin calls.

The majority of the traded products exposures were within the Investment Bank, Non-core and Legacy Portfolio and Group ALM, totaling CHF 35 billion compared with CHF 42 billion as of 31 December 2016. As counterparty risk for traded products is managed at counterparty level, no further split between exposures in the Investment Bank and those in Non-core and Legacy Portfolio and Group ALM is provided. The traded products exposure includes OTC derivatives exposures of CHF 11 billion in the Investment Bank and Non-core and Legacy Portfolio, a decrease of CHF 6 billion from the prior year. During 2017, SFT exposures increased slightly to CHF 18 billion and ETD exposures decreased by CHF 2 billion to CHF 5 billion. The tables below and on the following pages provide more information on the OTC derivatives, SFT and ETD exposures of the Investment Bank, Non-core and Legacy Portfolio and Group ALM.

Investment Bank, Non-core and Legacy Portfolio and Group ALM: traded products exposure

CHF million	OTC derivatives	SFTs	ETD	Total	Total
		31.12.17			31.12.16
Total exposure, before deduction of credit valuation adjustments and hedges	11,442	17,810	5,444	34,696	41,941
Less: credit valuation adjustments and allowances	(297)			(297)	(376)
Less: credit protection bought (credit default swaps, notional)	(436)			(436)	(757)
Net exposure after credit valuation adjustments, allowances and hedges	10,710	17,810	5,444	33,964	40,808

Investment Bank, Non-core and Legacy Portfolio and Group ALM: distribution of net OTC derivatives and SFT exposure across internal UBS ratings and loss given default (LGD) buckets

CHF million, except where indicated	31.12.17						31.12.16	
		LGD buckets						
Internal UBS rating[1]	Exposure	0–25%	26–50%	51–75%	76–100%	Weighted average LGD (%)	Exposure	Weighted average LGD (%)
Net OTC derivatives exposure								
Investment grade	10,076	304	8,604	1,016	152	45	15,672	30
Sub-investment grade	633	56	437	73	67	41	723	34
of which: 6–9	*226*	*43*	*52*	*69*	*62*	*62*	*294*	*46*
of which: 10–12	*59*	*0*	*50*	*4*	*5*	*41*	*85*	*34*
of which: 13 and defaulted	*349*	*13*	*335*	*0*	*0*	*27*	*344*	*24*
Total net OTC derivatives exposure, after credit valuation adjustments and hedges	10,710	361	9,041	1,088	220	45	16,395	30
Net SFT exposure								
Investment grade	17,302	14	14,530	2,303	455	44	16,877	28
Sub-investment grade	508	1	156	53	297	72	504	58
Total net SFT exposure	17,810	14	14,686	2,357	752	44	17,381	28

1 The ratings of the major credit rating agencies, and their mapping to our internal rating scale, are shown in the "Internal UBS rating scale and mapping of external ratings" table in this section.

Investment Bank, Non-core and Legacy Portfolio and Group ALM: net OTC derivatives and SFT exposure by geographical region

	Net OTC derivatives				Net SFTs			
	31.12.17		31.12.16		31.12.17		31.12.16	
	CHF million	%	CHF million	%	CHF million	%	CHF million	%
Asia Pacific	1,154	10.8	2,904	17.7	3,624	20.3	3,410	19.6
Latin America	59	0.5	83	0.5	144	0.8	114	0.7
Middle East and Africa	143	1.3	149	0.9	622	3.5	1,126	6.5
North America	3,420	31.9	4,931	30.1	4,241	23.8	4,548	26.2
Switzerland	292	2.7	453	2.8	771	4.3	825	4.7
Rest of Europe	5,642	52.7	7,876	48.0	8,407	47.2	7,358	42.3
Net exposure	10,710	100.0	16,395	100.0	17,810	100.0	17,381	100.0

Investment Bank, Non-core and Legacy Portfolio and Group ALM: net OTC derivatives and SFT exposure by industry

	Net OTC derivatives				Net SFTs			
	31.12.17		31.12.16		31.12.17		31.12.16	
	CHF million	%	CHF million	%	CHF million	%	CHF million	%
Banks	4,559	42.6	6,242	38.1	5,288	29.7	4,095	23.6
Chemicals	11	0.1	17	0.1				
Electricity, gas, water supply	166	1.5	231	1.4				
Financial institutions, excluding banks	3,600	33.6	6,778	41.3	10,983	61.7	11,932	68.6
Manufacturing	139	1.3	428	2.6				
Mining	7	0.1	108	0.7				
Public authorities	1,513	14.1	1,834	11.2	1,500	8.4	1,350	7.8
Retail and wholesale	9	0.1	19	0.1	3	0.0	2	0.0
Transport, storage and communication	289	2.7	265	1.6				
Other	417	3.9	473	2.9	35	0.2	2	0.0
Net exposure	10,710	100.0	16,395	100.0	17,810	100.0	17,381	100.0

Credit risk mitigation

Audited I We actively manage the credit risk in our portfolios by taking collateral against exposures and by utilizing credit hedging. ▲

Lending secured by real estate

Audited I We use a scoring model as part of a standardized front-to-back process to support credit decisions for the origination or modification of Swiss mortgage loans. The two key factors within this model are an affordability calculation relative to gross income and the loan-to-value (LTV) ratio. ▲

The calculation of affordability takes into account interest payments, minimum amortization requirements, potential property maintenance costs and, in the case of properties expected to be rented out, the level of rental income. Interest payments are estimated using a predefined framework, which takes into account the potential for significant increases in interest rates during the lifetime of the loan. The interest rate is floored at 5% per annum.

For residential properties occupied by the borrower, the maximum LTV allowed within the standard approval process is 80%. This is reduced to 60% in the case of vacation properties and luxury real estate. For other properties, the maximum LTV allowed within the standard approval process ranges from 30% to 80%, depending on the type of property, the age of the property and the amount of renovation work required.

Audited I The value assigned by UBS to each property is based on the lowest value determined from internally calculated valuations, the purchase price and, in some cases, an additional external valuation. ▲

We use two separate models provided by a market-leading external vendor to derive property valuations for owner-occupied residential properties (ORP) and income-producing real estate. For ORP, we estimate the current value of properties by using a regression model (hedonic model) to compare detailed characteristics for each property against a database of property transactions. In addition to the model-derived values, valuations for ORP are updated quarterly throughout the lifetime of the loan by using region-specific real estate price indices. The price indices are sourced from an external vendor and are subject to internal validation and benchmarking against two other external vendors. On a quarterly basis, we use these valuations to compute indexed LTV for all ORP and consider these together with other risk measures (e.g., rating migration and behavioral information) to identify higher-risk loans, which are then reviewed individually by client advisors and credit officers, with actions taken where they are considered necessary.

For income-producing real estate, the capitalization model is used to determine the property valuation by discounting estimated sustainable future income using a capitalization rate based on various attributes. These attributes consider regional as well as specific property characteristics, such as market and location data (e.g., vacancy rates), benchmarks (e.g., for running costs) and certain other standardized input parameters (e.g., property condition). Rental income from properties is reviewed at a minimum once every three years, but indications of significant changes in the amount of rental income or in the vacancy rate can trigger an interim reappraisal.

To take market developments into account for these models, the external vendor regularly updates the parameters and / or refines the architecture for each model. Model changes and parameter updates are subject to the same validation procedures as for our internally developed models.

Audited | We similarly apply underwriting guidelines for our Wealth Management Americas mortgage loan portfolio taking into account affordability of the loans and sufficiency of collateral. The maximum LTV within the standard approval process for any type of mortgage is 80%. A stratification of LTVs exists for the various mortgage types, such as residential mortgage or investment property, based on associated risk factors, such as property types, loan size and loan purpose. Maximum LTVs go as low as 45%. Additionally, other credit risk metrics are applied, based upon property and borrower characteristics, such as debt-to-income ratios, FICO credit scores and required client reserves.

A risk limit framework is applied to the Wealth Management Americas mortgage portfolio. Limits have been established to govern exposures within LTV categories, geographic concentrations, portfolio growth and high-risk mortgage segments such as interest-only loans. These limits are monitored by a specialized credit risk monitoring team and reported to senior management. Supplementing this limit framework is a real estate lending policy and procedures framework, established to govern the real estate lending activities. Quality assurance and quality control programs are in place to monitor compliance with mortgage underwriting and documentation requirements. ▲

→ **Refer to "Swiss mortgage loan portfolio" in this section for more information on loan-to-value in our Swiss mortgage portfolio**

→ **Refer to "Wealth Management Americas" in this section for more information on loan-to-value in our Wealth Management Americas mortgage portfolio**

Lombard lending

Audited | Lombard loans are secured by a pledge of marketable securities, guarantees and other forms of collateral. Eligible financial securities primarily include transferable securities (such as bonds and equities), that are liquid and actively traded, and other transferable securities such as approved structured products for which regular prices are available and for which the issuer of the security provides a market. To a lesser degree, less liquid collateral is also financed.

We apply discounts (haircuts) to reflect the collateral's risk and to derive the lending value. Haircuts for marketable securities are calculated to cover the possible change in the market value over a given close-out period and confidence level; the haircut applied will vary depending on the view of the counterparty's creditworthiness. Less liquid or more volatile collateral will typically attract larger haircuts. For less liquid instruments, such as structured products, some bonds, and products with long redemption periods, the assumed close-out period may be much longer than that for highly liquid instruments, or an assessment is made as to the expected recovery on the asset in the event of the counterparty's default, resulting in a larger haircut. For cash, life insurance policies, guarantees and letters of credit, haircuts are determined on a product- or client-specific basis.

We also consider concentration and correlation risks across collateral posted on a counterparty level as well as at a divisional level across counterparties. Additionally, we perform targeted Group-wide reviews of concentrations. A concentration of collateral in single securities, issuers or issuer groups, industry sectors, countries, regions or currencies may result in higher risk and reduced liquidity. In such cases, the lending value of the collateral, margin call and close-out levels are adjusted accordingly. ▲

Exposures and collateral values are monitored on a daily basis with the intention of ensuring that the credit exposure continues to be within the established risk appetite. A shortfall occurs when the lending value drops below the exposure. If a shortfall exceeds a defined trigger level, a margin call is initiated, requiring the client to provide additional collateral, reduce the exposure or take other action to bring the exposure in line with the agreed lending value of the collateral. If the shortfall increases, or is not corrected within the required period, a close-out is initiated, through which collateral is liquidated, open derivative positions are closed and guarantees are called.

We also conduct stress testing of collateralized exposures to simulate market events that increase the risk of collateral shortfalls and unsecured exposures by significantly reducing the value of the collateral, increasing the exposure of traded products, or both. For certain classes of counterparties, limits on such calculated stress exposures are applied and controlled on a counterparty level. In addition, there are portfolio limits applied across certain businesses or collateral types.

→ **Refer to "Stress loss" in this section for more information on our stress testing**

Counterparty credit risk

Audited | Counterparty credit risk arising from traded products, which include OTC derivatives, ETD exposures and SFTs originating in the Investment Bank, Non-core and Legacy Portfolio and Corporate Center – Group ALM, is generally managed on a close-out basis. This takes into account the effect of market movements on the exposure and any associated collateral over the potential time it would take to close out our positions. In the Investment Bank, limits are applied to the potential future exposure per counterparty, with the size of the limit driven by the view of the creditworthiness of the counterparty as determined by Credit Risk Control. Limit frameworks are also applied to control overall exposure to specific classes or categories of collateral on a portfolio level. Such portfolio limits are monitored and reported to senior management.

Trading in OTC derivatives is conducted through central counterparties (CCPs) where practicable. Where CCPs are not used, we have clearly defined policies and processes for trading on a bilateral basis. Trading is typically conducted under bilateral International Swaps and Derivatives Association (ISDA) or similar master netting agreements, which generally allow for the close-out and netting of transactions in the event of default subject to applicable law. For most major market participant counterparties, we employ two-way collateral agreements under which either party can be required to provide collateral in the form of cash or marketable securities when the exposure exceeds specified levels. This collateral typically consists of well-rated government debt or other collateral permitted by applicable regulations. For certain counterparties, initial margin is taken to cover some or all of the calculated close-out exposure. This is in addition to the variation margin taken to settle changes in the market value of transactions. Regulations governing the margining of uncleared OTC derivatives continue to evolve. These generally expand the scope of bilateral derivatives activity subject to margining. In addition, they will result in greater amounts of initial margin received from, and posted to, certain bilateral trading counterparties than had been required in the past. These changes should result in lower close-out risk over time. ▲

→ **Refer to "Note 12 Derivative instruments and hedge accounting" in the "Consolidated financial statements" section of this report for more information on our over-the-counter derivatives settled through central counterparties**

→ **Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of this report for more information on the effect of netting and collateral arrangements on our derivative exposures**

Credit hedging

Audited | We utilize single-name CDSs, credit index CDSs, bespoke protection, and other instruments to actively manage credit risk in the Investment Bank and Non-core and Legacy Portfolio. This is aimed at reducing concentrations of risk from specific counterparties, sectors or portfolios and, in the case of counterparty credit risk, the profit or loss impact arising from changes in credit valuation adjustments (CVA).

We maintain strict guidelines for taking credit hedges into account for credit risk mitigation purposes. For example, when monitoring exposures against counterparty limits, we do not usually recognize credit risk mitigants such as proxy hedges (credit protection on a correlated but different name) or credit index CDSs. Buying credit protection also creates credit exposure against the protection provider. We monitor and limit our exposures to credit protection providers and the effectiveness of credit hedges as part of our overall credit exposures to the relevant counterparties. Trading with such counterparties is typically collateralized. For credit protection purchased to hedge the lending portfolio, this includes monitoring mismatches between the maturity of the credit protection purchased and the maturity of the associated loan. Such mismatches result in basis risk and may reduce the effectiveness of the credit protection. Mismatches are routinely reported to credit officers and mitigating actions are taken when deemed necessary. ▲

→ **Refer to "Note 12 Derivative instruments and hedge accounting" in the "Consolidated financial statements" section of this report for more information**

Mitigation of settlement risk

To mitigate settlement risk, we reduce our actual settlement volumes through the use of multilateral and bilateral agreements with counterparties, including payment netting.

Our most significant source of settlement risk is foreign exchange transactions. We are a member of Continuous Linked Settlement (CLS), an industry utility that provides a multilateral framework to settle transactions on a delivery-versus-payment basis, thereby significantly reducing foreign exchange-related settlement risk relative to the volume of business. However, the mitigation of settlement risk through CLS and other means does not fully eliminate our credit risk in foreign exchange transactions resulting from changes in exchange rates prior to settlement, which is managed as part of our overall credit risk management of OTC derivatives.

Credit risk models

Audited | We have developed tools and models in order to estimate future credit losses that may be implicit in our current portfolio.

Exposures to individual counterparties are measured on the basis of three generally accepted parameters: probability of default (PD), loss given default (LGD) and exposure at default (EAD). For a given credit facility, the product of these three parameters results in the expected loss. These parameters are the basis for the majority of our internal measures of credit risk, and are key inputs for the regulatory capital calculation under the advanced internal ratings-based approach of the Basel III framework governing international convergence of capital. We also use models to derive the portfolio credit risk measures of expected loss, statistical loss and stress loss. ▲

The "Key features of our main credit risk models" table on the next page shows the number and key features of the models that we use to derive PD, LGD and EAD for our main portfolios and asset classes, and is followed by more detailed explanations of these models and parameters.

→ **Refer to the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the regulatory capital calculation under the advanced internal ratings-based approach**

Key features of our main credit risk models

	Portfolio in scope	Asset class	Model approach	Number of main models	Main drivers	Number of years loss data[1]
Probability of default	Sovereigns and central banks	Central governments and central banks	Score card	1	Political, institutional and economic indicators	10
	Owner-occupied mortgages in Switzerland and the US	Retail: residential mortgages	Score card	2	Behavioral data, affordability relative to income, property type, loan-to-value. Separate models for mortgages in Switzerland and the US	23
	Income-producing real estate mortgages	Retail: residential mortgages, Corporates: specialized lending	Score card	1	Loan-to-value, debt service coverage, financial data (for large corporates only), behavioral data; weights of risk drivers differ between corporate and private clients	23
	Lombard lending	Retail: other	Merton type	1	Loan-to-value, historical asset returns, behavioral data	5–10
	Small and medium-sized enterprises	Corporates: other lending	Score card	1	Financial data including balance sheet ratios and profit and loss, behavioral data. Weights of risk drivers differ depending on the corporate client sub-segment	23
	Banks	Banks and securities dealers	Score card	4	Financial data including balance sheet ratios and profit and loss. Separate models for banks – developed markets, banks – emerging markets, broker-dealers and investment banks, private banks	10
	Commodity traders	Corporates: specialized lending	Rating template	1	Financial data including balance sheet ratios and profit and loss, as well as non-financial criteria	19
	Aircraft financing	Corporates: other lending	Rating template	1	Financial structure of the transaction	7
	Large corporates	Corporates: other lending	Score card / market data	4	Financial data including balance sheet ratios and profit and loss, and market data. Separate models for corporates with publicly traded and highly liquid stocks (Market Intelligence Tool), private corporates, leveraged corporates and corporates in construction and real estate business	10
	Other portfolios	Corporates: other lending, Public sector entities and multilateral development banks	Score card / pooled rating approach / rating template	13	Financial data and / or historical portfolio performance for pooled ratings. Separate models for hedge funds, managed funds, insurance companies, retail aggregators, commercial real estate loans, mortgage originators, Australian protected lending clients, ETD-only clients and sub-sovereigns / public-sector entities	10
Loss given default	Owner-occupied mortgages in Switzerland and the US	Retail: residential mortgages	Statistical model	2	Loan-to-value, time since last valuation. Separate models for mortgages in Switzerland and the US	11
	Income-producing real estate mortgages	Retail: residential mortgages, Corporates: specialized lending	Statistical model	1	Loan-to-value, time since last valuation, property type, location indicator	11
	Lombard lending	Retail: other	Statistical model, simulation	1	Historical observed loss rates	10–15
	Small and medium-sized enterprises	Corporates: other lending	Statistical model	2	Separate models for mortgage and non-mortgage LGDs. Mortgage models: loan-to-value, time since last valuation, property type, location indicator. Non-mortgage models: historical observed loss rates	11–17
	Investment Bank – all counterparties	Across the asset classes	Statistical model	1	Counterparty- and facility-specific drivers, including industry segment, collateral, seniority, legal environment and bankruptcy procedures	5–10
Exposure at default	Banking products	Across the asset classes	Statistical model	3	Separate models based on exposure type (committed credit lines, revocable credit lines, contingent products)	>10
	Traded products	Across the asset classes	Statistical model	2	Product-specific market drivers, e.g., interest rates. Separate models for OTC Derivatives, ETDs and SFTs that generate the simulation of risk factors used for the credit exposure measure	n/a

1 For sovereign and Investment Bank PD models, the length of internal portfolio history is shown in "Number of years loss data."

Audited I

Internal UBS rating scale and mapping of external ratings

Internal UBS rating	*1-year PD range in %*	*Description*	*Moody's Investors Service mapping*	*Standard & Poor's mapping*	*Fitch mapping*
0 and 1	*0.00–0.02*	*Investment grade*	Aaa	AAA	AAA
2	*0.02–0.05*		Aa1 to Aa3	AA+ to AA–	AA+ to AA–
3	*0.05–0.12*		A1 to A3	A+ to A–	A+ to A–
4	*0.12–0.25*		Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB
5	*0.25–0.50*		Baa3	BBB–	BBB–
6	*0.50–0.80*	*Sub-investment grade*	Ba1	BB+	BB+
7	*0.80–1.30*		Ba2	BB	BB
8	*1.30–2.10*		Ba3	BB–	BB–
9	*2.10–3.50*		B1	B+	B+
10	*3.50–6.00*		B2	B	B
11	*6.00–10.00*		B3	B–	B–
12	*10.00–17.00*		Caa	CCC	CCC
13	*>17*		Ca to C	CC to C	CC to C
Counterparty is in default	*Default*	*Defaulted*		D	D

Probability of default

The probability of default (PD) is an estimate of the likelihood of a counterparty defaulting on its contractual obligations over the next 12 months. PD ratings are used for credit risk measurement and are an important input for determining credit risk approval authorities. For the calculation of RWA, a 3-basis-points PD floor is applied to Banks, Corporates and Retail exposures as required under the Basel III framework. Additionally, for the Swiss owner-occupied mortgages we apply an 8-basis-point PD floor and for the Lombard loans a 4-basis-point PD floor.

PD is assessed using rating tools tailored to the various categories of counterparties. Statistically developed score cards, based on key attributes of the obligor, are used to determine PD for many of our corporate clients and for loans secured by real estate. Where available, market data may also be used to derive the PD for large corporate counterparties. For low default portfolios, where available, we take into account relevant external default data in the rating tool development. For Lombard loans, Merton-type historical return-based model simulations taking into account potential changes in the value of securities collateral are used in our rating approach. These categories are also calibrated to our internal credit rating scale (masterscale), which is designed to ensure a consistent assessment of default probabilities across counterparties. Our masterscale expresses one-year default probabilities that we determine through our various rating tools by means of distinct classes, whereby each class incorporates a range of default probabilities. Counterparties migrate between rating classes as our assessment of their PD changes.

The ratings of the major credit rating agencies, and their mapping to our internal rating masterscale and internal PD bands, are shown in the "Internal UBS rating scale and mapping of external ratings" table above. The mapping is based on the long-term average of one-year default rates available from the rating agencies. For each external rating category, the average default rate is compared with our internal PD bands to derive a mapping to our internal rating scale. Our internal rating of a counterparty may therefore diverge from one or more of the correlated external ratings shown in the table. Observed defaults by rating agencies may vary through economic cycles, and we do not necessarily expect the actual number of defaults in our equivalent rating band to equal the rating agencies' average in any given period. We periodically assess the long-term average default rates of credit rating agencies' grades, and we adjust their mapping to our masterscale as necessary to reflect any material changes.

Loss given default

Loss given default (LGD) is the magnitude of the likely loss if there is a default. Our LGD estimates, which consider downturn conditions, include loss of principal, interest and other amounts (such as workout costs, including the cost of carrying an impaired position during the workout process) less recovered amounts. We determine LGD based on the likely recovery rate of claims against defaulted counterparties, which depends on the type of counterparty and any credit mitigation by way of collateral or guarantees. Our estimates are supported by our internal loss data and external information where available. Where we hold collateral, such as marketable securities or a mortgage on a property, loan-to-value ratios typically are a key parameter in determining LGD. For low default portfolios, where available, we take into account relevant external default data in the rating tool development. In the RWA calculation, the regulatory LGD floor of 10% is applied for exposures secured by residential properties. Additionally, we applied a 30% LGD floor for Lombard loans in Wealth Management and a 25% LGD floor for Lombard loans in Wealth Management Americas. All other LGDs are subject to a 5% floor.

Exposure at default

Exposure at default (EAD) represents the amount we expect to be owed by a counterparty at the time of a possible default. We derive EAD from our current exposure to the counterparty and the possible future development of that exposure.

The EAD of a loan is the drawn or face value of the loan. For loan commitments and guarantees, the EAD includes the amount drawn as well as potential future amounts that may be drawn, which are estimated using credit conversion factors (CCFs) based on historical observations. To comply with regulatory guidance, we floor individual observed CCF values at zero in the CCF model, i.e., we assume that the drawn exposure at default will be no less than the drawn amount one year prior to default.

For traded products, we derive the EAD by modeling the range of possible exposure outcomes at various points in time using scenario and statistical techniques. We assess the net amount that may be owed to us or that we may owe to others, taking into account the effect of market moves over the potential time it would take to close out our positions. For exchange-traded derivatives, our calculation of EAD takes into account collateral margin calls. When measuring individual counterparty exposure against credit limits, we consider the maximum likely exposure measured to a high level of confidence. However, when aggregating exposures to different counterparties for portfolio risk measurement purposes, we use the expected exposure to each counterparty at a given time period (usually one year) generated by the same model.

We assess our exposures where there is a material correlation between the factors driving the credit quality of the counterparty and those driving the potential future value of our traded products exposure (wrong-way risk), and we have established specific controls to mitigate these risks.

Expected loss

Credit losses are an inherent cost of doing business and the occurrence and amount of credit losses can be erratic. In order to quantify future credit losses that may be implicit in our current portfolio, we use the concept of expected loss.

Expected loss is a statistical measure used to estimate the average annual costs we expect to experience from positions that become impaired. The expected loss for a given credit facility is a product of the three components described above: PD, EAD and LGD. We aggregate the expected loss for individual counterparties to derive our expected portfolio credit losses.

Expected loss is the basis for quantifying credit risk in all our portfolios. It is also the starting point for the measurement of our portfolio statistical loss and stress loss.

We use a statistical modeling approach to estimate the loss profile of each of our credit portfolios over a one-year period to a specified level of confidence. The mean value of this loss distribution is the expected loss. The loss estimates deviate from the mean value due to statistical uncertainty on the defaulting counterparties and to systematic default relationships among counterparties within and between segments. The statistical measure is sensitive to concentration risks on individual counterparties and groups of counterparties. The outcome provides an indication of the level of risk in our portfolio and the way it may develop over time.

→ **Refer to "IFRS 9, *Financial Instruments*" in the "Significant accounting and financial reporting changes in 2018" section of this report for more information on future requirements of the expected credit loss methodology under IFRS 9**

Stress loss

We complement our statistical modeling approach with scenario-based stress loss measures. Stress tests are run on a regular basis to monitor the potential impact of extreme, but nevertheless plausible, events on our portfolios, under which key credit risk parameters are assumed to deteriorate substantially. Where we consider it appropriate, we apply limits on this basis.

Stress scenarios and methodologies are tailored to the nature of the portfolios, ranging from regionally focused to global systemic events, and varying in time horizon. For example, for our loan underwriting portfolio, we apply a global market event under which, simultaneously, the market for loan syndication freezes, market conditions significantly worsen, and credit quality deteriorates. Similarly, for Lombard lending, we apply a range of scenarios representing instantaneous market shocks to all collateral and exposure positions, taking into consideration their liquidity and potential concentrations. The portfolio-specific stress test for our mortgage lending business in Switzerland reflects a multi-year event, and the overarching stress test for global wholesale and counterparty credit risk to corporates uses a one-year global stress event and takes into account exposure concentrations to single counterparties.

→ **Refer to "Stress testing" in this section for more information on our stress testing framework**

Credit risk model confirmation

Our approach to model confirmation involves both quantitative methods, including monitoring compositional changes in the portfolios and the results of backtesting, and qualitative assessments, including feedback from users on the model output as a practical indicator of the performance and reliability of the model.

Material changes in a portfolio composition may invalidate the conceptual soundness of the model. We therefore perform regular analysis of the evolution of portfolios to identify such changes in the structure and credit quality of portfolios. This includes analysis of changes in key attributes, changes in portfolio concentration measures, as well as changes in RWA.

→ **Refer to "Risk measurement" in this section for more information on our approach to model confirmation procedures**

Main credit models backtesting by regulatory asset class

	Length of time series used for the calibration (in years)	Actual rates in %			Estimated average rates at the start of 2017 in %
		Average of last 5 years[1]	Min. of last 5 years[2]	Max. of last 5 years[2]	
Probability of default[3]					
Central governments and central banks	> 10[4]	0.00	0.00	0.00	0.35
Banks and securities dealers	> 10	0.17	0.00	0.53	0.71
Public sector entities, multilateral development banks	> 10	0.06	0.00	0.19	0.20
Corporates: specialized lending	> 10	0.25	0.15	0.39	0.98
Corporates: other lending	> 10	0.23	0.21	0.26	0.49
Retail: residential mortgages	> 20	0.17	0.12	0.28	0.57
Retail: other	> 10	0.01	0.00	0.02	0.15
Loss given default					
Central governments and central banks	> 10				40.42
Banks and securities dealers	> 10	0.00			42.09
Public sector entities, multilateral development banks	> 10				21.44
Corporates: specialized lending	> 10	8.02	0.00	20.48	15.72
Corporates: other lending	> 10	24.65	14.41	28.86	22.61
Retail: residential mortgages	> 20	1.48	0.26	2.63	7.28
Retail: other	> 10	13.43	8.48	65.26	20.00
Credit conversion factors					
Corporates	>10	24.09	6.87	44.32	37.97

1 Average of all observations over the last five years. 2 Minimum / maximum annual average of observations in any single year from the last five years. Yearly averages are only calculated where five or more observations occurred during that year. 3 Average PD estimation is based on all rated clients in the portfolio. 4 Sovereign PD model is calibrated to UBS masterscale, length of time series shows span of internal history for this portfolio.

Backtesting

We monitor the performance of our models by backtesting and benchmarking them, whereby model outcomes are compared with actual results, based on our internal experience as well as externally observed results. To assess the predictive power of our credit exposure models for traded products such as OTC derivatives and ETD products, we statistically compare the predicted future exposure distributions at different forecast horizons with the realized values.

For PD, we use statistical modeling to derive a predicted distribution of the number of defaults. The observed number of defaults is then compared with this distribution, allowing us to derive a statistical level of confidence in the model conservativeness. In addition, we derive a lower and upper bound for the average default rate. If the portfolio average PD lies outside the derived interval, the rating tool is, as a general rule, recalibrated.

For LGD, the backtesting statistically tests whether the mean difference between the observed and predicted LGD is zero. If the test fails, then there is evidence that our predicted LGD is too low. In such cases, models are recalibrated where these differences are outside expectations.

Credit conversion factors (CCFs), used for the calculation of EAD for undrawn facilities with corporate counterparties, are dependent on several contractual dimensions of the credit facility. We compare the predicted amount drawn with observed historical utilization of such facilities for defaulted counterparties. If any statistically significant deviation is observed, the relevant CCFs are redefined.

The "Main credit models backtesting by regulatory asset class" table on the previous page compares the current model calibration for PD, LGD and CCFs with historical observed values over the last five years.

Changes to models and model parameters during the period

As part of our continuous efforts to enhance models to reflect market developments and newly available data, we updated several models in the course of 2017.

Within Personal & Corporate Banking and Wealth Management, we updated the PD model for income-producing real estate mortgages from a transaction rating approach to a counterparty-based rating approach where financial and behavioral data of the client is now taken into account. Additionally, we enhanced the PD model for Swiss owner-occupied mortgages to include behavioral information via a vendor credit score. New LGD models were implemented for most of the portfolios in Personal & Corporate Banking and the mortgage portfolios in Wealth Management. The RWA impact of the new LGD model and the new PD model for the Swiss owner-occupied mortgages will be phased in over the years 2018 and 2019.

→ **Refer to "Risk-weighted assets" in the "Capital management" section of this report for more information on the impact of the changes to models and model parameters on credit risk RWA**

For the Lombard portfolio, we globally implemented redeveloped PD and LGD models. These models reflect a Monte Carlo-based historical simulation approach, taking into account the individual client's loan-to-value and historical securities return data including the financial crisis of 2007-2009.

Within the Investment Bank, we have recalibrated the rating tool for residential real estate mortgage finance originators, bringing resulting PDs to a more conservative level.

With respect to the LGD model used for sovereigns, multinationals and financial institutions (mainly counterparties of the Investment Bank and Corporate Center – Group ALM), the model was recalibrated, which impacted mainly banks and non-leveraged managed funds. Other corporates and sovereigns were impacted to a lesser extent.

With regard to the EAD, we implemented revised credit conversion factors for contingent products and construction loans in Personal & Corporate Banking and for unutilized Lombard loan facilities in our wealth management businesses.

As part of a review of our internal rating models, we transferred our unsecured lending portfolio of private clients and account overdrafts from the internal ratings-based approach to the standardized approach for the RWA calculation.

Where required, changes to models and model parameters were approved by the Swiss Financial Market Supervisory Authority (FINMA) prior to implementation.

Future credit risk-related regulatory capital developments

In December 2017, the Basel Committee on Banking Supervision published the final Basel III framework to be implemented until 1 January 2022. The updated framework has made a number of revisions to the internal ratings-based (IRB) approaches, namely: (i) removing the possibility to use the advanced IRB (A-IRB) approach for certain asset classes (including large and medium-sized corporates, banks and other financial institutions); (ii) placing floors on certain model inputs under the IRB approach, such as for PD and LGD; and (iii) introducing various requirements to reduce RWA variability, for example, for LGD.

The published framework has a number of requirements that are subject to national discretion. In addition, revisions to the credit valuation adjustment (CVA) framework were published, including the removal of the advanced CVA (A-CVA) approach. UBS maintains a close dialog with FINMA to discuss in more detail the implementation objectives and to ensure a smooth transition of the capital regime for credit risk.

→ **Refer to "Capital management objectives, planning and activities" in the "Capital management" section of this report for more information on the development of RWA**

→ **Refer to "Risk measurement" in this section for more information on our approach to model confirmation procedures**

→ **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Policies for past due, non-performing and impaired claims

The diagram "Exposure categorization" on the next page illustrates how we categorize banking products and SFTs as performing, non-performing and / or impaired.

Audited | For products accounted for on a fair value basis, such as OTC derivatives, credit deterioration is recognized through a credit valuation adjustment (CVA), and these products are therefore not subject to the impairment framework.

We consider a claim held at amortized cost (loans and SFTs) and certain off-balance sheet commitments to be past due when a contractual payment has not been received by its contractual due date, or in case of account overdrafts, i.e., where the credit limit is exceeded. Past due claims are not considered impaired where we otherwise expect to collect all amounts due under the contractual terms of the claims.

A past due claim is considered non-performing when (i) the payment of interest, principal or fees is past due by more than 90 days, or more than 180 days for certain specified retail portfolios. Claims are also classified as non-performing when (ii) the counterparty is subject to bankruptcy, or insolvency proceedings or enforced liquidation have commenced or (iii) obligations have been restructured on preferential terms, such as preferential interest rates, extension of maturity, modifying the schedule of repayments or subordination.

Claims are classified as impaired if, following an individual impairment assessment, an allowance or provision for credit losses is established. Accordingly, both performing and non-performing loans may be classified as impaired.

When a financial asset has become non-performing, individually impaired or otherwise has defaulted, the counterparty is rated as in default according to our UBS internal rating scale. ▲

Restructured claims

Audited | Under imminent payment default or where default has already occurred, we sometimes restructure claims by providing concessions that we would otherwise not consider and that are outside our normal risk appetite, such as preferential interest rates, extension of maturity, modifying the schedule of repayments, debt/equity swap and subordination. When a credit restructuring takes place, each case is considered individually and the exposure is classified as defaulted and assessed for impairment. It will remain so, until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions or until the counterparty has recovered and the preferential conditions no longer exceed our risk appetite.

Contractual adjustments when there is no evidence of imminent payment default, or where changes to terms and conditions are within our usual risk appetite, are not considered to be a credit restructuring. ▲

Individual and collective impairment assessments

Audited | Claims are assessed individually for impairment where there are indicators that an impairment may exist. Otherwise, portfolios of claims with similar credit risk characteristics are included in a collective impairment assessment. ▲

Individual impairment assessment

Audited | Non-performing status is considered an indicator that a loan may be impaired and therefore non-performing claims are assessed individually for impairment. However, an impairment analysis would be carried out irrespective of non-performing status if other objective evidence indicates that a loan may be impaired. Any event that impacts current and future cash flows may be an indication of impairment and trigger an assessment by the risk officer. Such events may be (i) significant collateral shortfalls due to a fall in lending values (securities and real estate), (ii) increase in loan exposure, (iii) significant financial difficulties of a client and (iv) high probability of the client's bankruptcy, debt moratorium or financial reorganization.

Individual claims are assessed for impairment based on the borrower's overall financial condition, resources and payment record, the prospects of support from contractual guarantors and, where applicable, the realizable value of any collateral. The recoverable amount is determined from all relevant cash flows, and where this is lower than the carrying amount of the claim, the claim is considered impaired.

We have established processes to determine the carrying values of impaired claims in compliance with IFRS requirements. Our credit controls applied to valuation processes and workout agreements are the same for credit products measured at amortized cost and fair value. Our workout strategy and estimation of recoverable amounts are independently approved in accordance with our credit authorities. ▲

Collective impairment assessment

Audited | We assess our portfolios of claims carried at amortized cost with similar credit risk characteristics for collective impairment in order to consider if these portfolios contain impaired claims that cannot yet be individually identified. To cover the time lag between the occurrence of an impairment event and its identification based on the policies above, we establish collective loan loss allowances based on the estimated loss for the portfolio over the average period between trigger events and the identification of any individual impairment. These portfolios are not considered impaired loans in the tables shown in this section.

Additionally, for all of our portfolios we assess whether there have been any developments that might result in event-driven impairments that are not immediately observable. These events could be stress situations, such as a natural disaster or a country crisis, or they could result from significant changes in the legal or regulatory environment. To determine whether a collective impairment exists, we regularly use a set of global economic drivers to assess the most vulnerable countries and review the impact of any potential impairment event. ▲

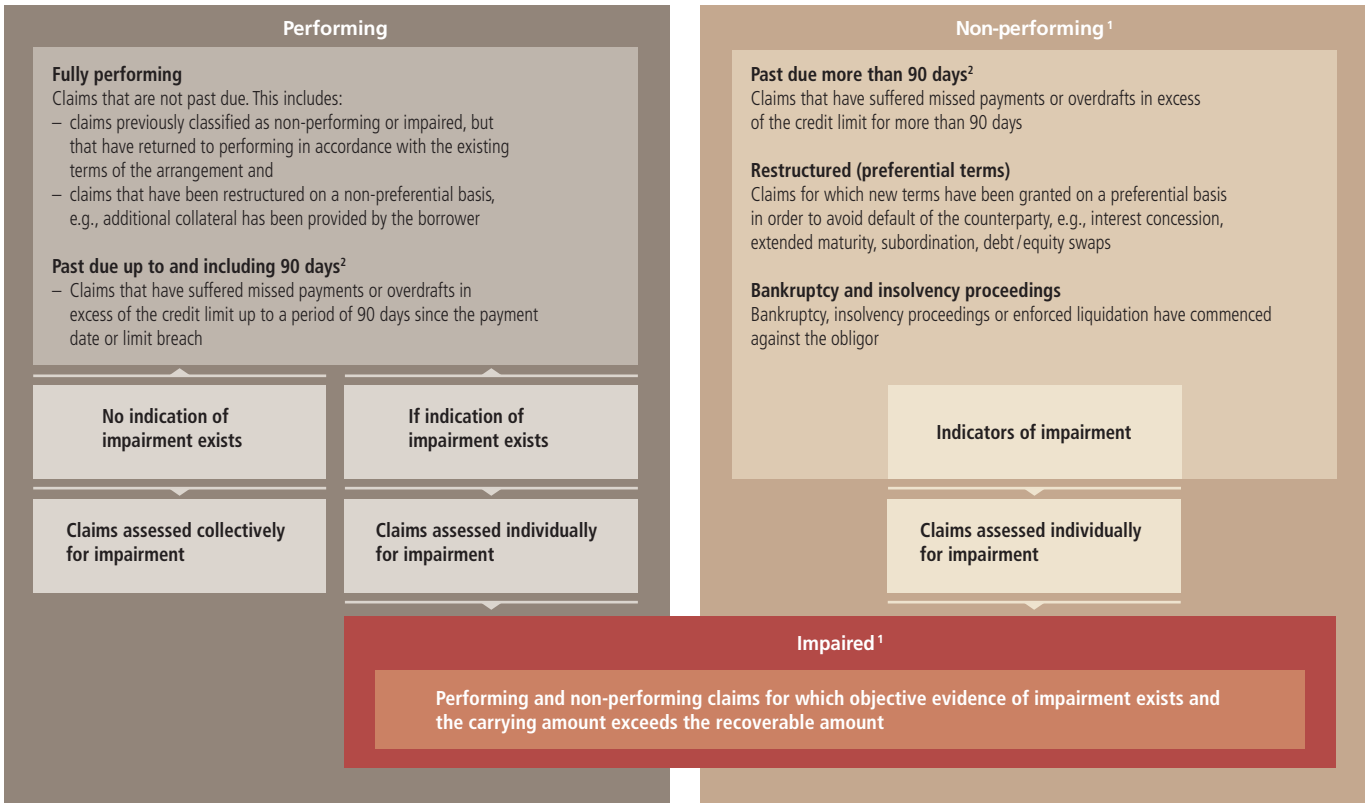
Recognition of impairment

Audited | The recognition of impairment in our financial statements depends on the accounting treatment of the claim. For claims carried at amortized cost, impairment is recognized through the creation of an allowance, or in the case of off-balance sheet items such as financial guarantees and certain loan commitments through a provision, both charged to the income statement as a credit loss expense.

For claims measured at fair value, a deterioration of the credit quality is recognized as a CVA in the income statement in *Net trading income*. ▲

→ **Refer to "Note 1 Summary of significant accounting policies," "Note 11 Allowances and provisions for credit losses" and "Note 22d Valuation adjustments" in the "Consolidated financial statements" section of this report for more information**

Exposure categorization



1 Claims rated as in default. All such claims are excluded from collective impairment assessment. 2 180 days for certain specified retail portfolios.

Impaired financial instruments

Audited I The following tables show impaired financial instruments, comprising loans, guarantees and loan commitments, and SFTs. As of 31 December 2017, gross impaired financial instruments stood at CHF 1.3 billion compared with CHF 1.2 billion as of 31 December 2016. After deducting the estimated liquidation proceeds of collateral and specific allowances and provisions, net impaired financial instruments were CHF 0.3 billion compared with CHF 0.4 billion. ▲

→ **Refer to the "Investment Bank, Non-core and Legacy Portfolio and Group ALM: distribution of net OTC derivatives and SFT exposure across internal UBS ratings and loss given default (LGD) buckets" table in this section for OTC derivative exposures in the Investment Bank and Corporate Center – Non-core and Legacy Portfolio that are rated at level 13 or in default according to our internal rating scale**

→ **Refer to "Note 11 Allowances and provisions for credit losses" in the "Consolidated financial statements" section of this report for more information on movements in allowances and provisions**

Impaired loans

During 2017, gross impaired loans (including amounts due from banks) increased to CHF 1,076 million from CHF 975 million. The majority of this exposure relates to loans in our Swiss domestic business. The ratio of impaired loans to total loans remained at 0.3%.

Audited I Collateral held against our impaired loan exposure mainly consisted of real estate and securities. It is our policy to dispose of foreclosed real estate as soon as practicable. The carrying amount of foreclosed property recorded in our balance sheet at the end of 2017 and 2016 amounted to CHF 60 million and CHF 51 million, respectively. We seek to liquidate collateral held in the form of financial assets expeditiously and at prices considered fair. This may require us to purchase assets for our own account, where permitted by law, pending orderly liquidation. ▲

Specific and collective allowances and provisions for credit losses increased by CHF 41 million to CHF 694 million as of 31 December 2017. This includes collective loan loss allowances of CHF 13 million, broadly unchanged from the prior year.

The "Loss history statistics" table below provides a five-year history of our credit loss experience for loans (including due from banks) relative to our impaired and non-performing loans.

→ **Refer to "Policies for past due, non-performing and impaired claims" in this section, and to "Note 10 Due from banks and loans (held at amortized cost)" and "Note 11 Allowances and provisions for credit losses" in the "Consolidated financial statements" section of this report for more information**

Audited I

Impaired financial instruments by type

CHF million	Gross impaired financial instruments		Allowances and provisions		Estimated liquidation proceeds of collateral[1]		Net impaired financial instruments	
	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Loans (including amounts due from banks)	1,076	975	(661)	(599)	(206)	(161)	210	215
Guarantees and loan commitments	199	260	(33)	(54)	(5)	(10)	161	195
Total impaired financial instruments	1,275[2]	1,235	(694)[2]	(653)	(210)	(171)	371	411

1 Does not include oil and gas reserves related to reserve-based lending. 2 Includes CHF 13 million in collective loan loss allowances (31 December 2016: CHF 12 million). Does not include exposures within Other assets of CHF 352 million, with associated allowances of CHF 19 million.

▲

Loss history statistics

CHF million, except where indicated	31.12.17	31.12.16	31.12.15	31.12.14	31.12.13
Due from banks and loans (gross)	333,967	320,080	324,594	329,800	301,601
Impaired loans (including due from banks)	1,076	975	1,226	1,204	1,241
Non-performing loans (including due from banks)	2,095	2,399	1,630	1,602	1,582
Allowances and provisions for credit losses[1,2]	694	653	727	735	750
of which: allowances for due from banks and loans[1]	*661*	*599*	*692*	*708*	*686*
Net write-offs[3]	98	123	116	124	83
of which: net write-offs for due from banks and loans	*98*	*123*	*116*	*124*	*83*
Credit loss (expense) / recovery[4]	(128)	(37)	(117)	(78)	(50)
Ratios					
Impaired loans as a percentage of due from banks and loans (gross)	0.3	0.3	0.4	0.4	0.4
Non-performing loans as a percentage of due from banks and loans (gross)	0.6	0.7	0.5	0.5	0.5
Allowances as a percentage of due from banks and loans (gross)	0.2	0.2	0.2	0.2	0.2
Net write-offs as a percentage of average due from banks and loans (gross) outstanding during the period	0.0	0.0	0.0	0.0	0.0

1 Includes collective loan loss allowances. Does not include allowances for other receivables for an amount of CHF 19 million (31 December 2016: CHF 0 million, 31 December 2015: CHF 0 million, 31 December 2014: CHF 0 million, 31 December 2013: CHF 0 million). 2 Includes provisions for loan commitments and allowances for securities financing transactions. 3 Includes net write-offs for loan commitments and securities financing transactions. 4 Includes credit loss (expense) / recovery for loan commitments, guarantees and securities financing transactions.

Allowances and provisions for credit losses

	IFRS exposure, gross[1]		Impaired exposure, gross		Estimated liquidation proceeds of collateral[2]		Allowances and provisions for credit losses[3]		Impairment ratio (%)	
CHF million, except where indicated	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Group										
Balances with central banks	87,078	107,100								
Due from banks	13,741	13,159	3	3			3	3	0.0	0.0
Loans	320,225	306,921	1,074	972	206	161	658	596	0.3	0.3
Guarantees	18,854	16,711	168	202	4	7	13	8	0.9	1.2
Loan commitments	39,069	54,430	31	58	1	3	20	47	0.1	0.1
Total	478,967[4,5]	498,322	1,275	1,235	210	171	694[5]	653	0.3	0.2
Wealth Management										
Balances with central banks	427	901								
Due from banks	1,356	915								
Loans	115,180	101,876	160[6]	77	45	13	104[6]	61	0.1	0.1
Guarantees	1,982	2,187					1	1		
Loan commitments	1,861	1,730								
Total	120,806	107,608	160[6]	77	45	13	105[6]	62	0.1	0.1
Wealth Management Americas										
Balances with central banks	0	0								
Due from banks	3,357	2,635								
Loans	53,014	52,486	22	27			26	29	0.0	0.1
Guarantees	460	558								
Loan commitments	347	375								
Total	57,178	56,054	22	27	0	0	26	29	0.0	0.0
Personal & Corporate Banking										
Balances with central banks	0	0								
Due from banks	1,485	2,156	3	3			3	3	0.2	0.1
Loans	131,380	133,861	733	756	113	121	441	443	0.6	0.6
Guarantees	9,551	9,023	158	202	4	7	12	7	1.7	2.2
Loan commitments	9,160	8,861	12	35	1	3	16	34	0.1	0.4
Total	151,576	153,900	906	995	118	131	472	486	0.6	0.6
Asset Management										
Total	570	545	0	0	0	0	0	0	0.0	0.0
Investment Bank										
Balances with central banks	32	37								
Due from banks	3,855	4,234								
Loans	11,165	10,086	110	95	47	27	57	48	1.0	0.9
Guarantees	6,739	4,790	10	0					0.1	0.0
Loan commitments	27,700	42,937	19	23			4	13	0.1	0.1
Total	49,491[5]	62,085	139	118	47	27	61[5]	61	0.3	0.2
CC – Services										
Total	496	610	0	0	0	0	0	0	0.0	0.0
CC – Group ALM										
Balances with central banks	86,618	106,162								
Due from banks	2,740	2,176								
Loans	7,226	5,962								
Guarantees	2	1								
Loan commitments	0	0								
Total	96,585	114,301	0	0	0	0	0	0	0.0	0.0
CC – Non-core and Legacy Portfolio										
Balances with central banks	0	0								
Due from banks	22	43								
Loans	2,226	2,606	48	17			29	15	2.1	0.6
Guarantees	16	41								
Loan commitments	0	527								
Total	2,264[5]	3,218	48	17	0	0	29[5]	15	2.1	0.5

1 The measurement requirements of IFRS differ in certain respects from our internal management view of credit risk. 2 Does not include oil and gas reserves related to reserve-based lending. 3 Includes CHF 13 million (31 December 2016: CHF 12 million) in collective loan loss allowances for credit losses. 4 As of 31 December 2017, total IFRS exposure of UBS AG consolidated was CHF 2.1 billion higher than the exposure of UBS Group AG consolidated, related to receivables of UBS AG and UBS Switzerland AG against UBS Group AG (31 December 2016: CHF 0.6 billion). 5 Does not include exposures within Other assets of CHF 352 million, of which CHF 347 million were in Corporate Center – Non-core and Legacy Portfolio and CHF 5 million were in the Investment Bank, with associated allowances of CHF 19 million, of which CHF 14 million were in Corporate Center – Non-core and Legacy Portfolio and CHF 5 million were in the Investment Bank. 6 The increase in impaired exposure and allowances relates mainly to a margin loan to a single client originated by Wealth Management and risk-managed by the Investment Bank.

Development of individually impaired loans (including due from banks)

	For the year ended	
CHF million	31.12.17	31.12.16
Balance at the beginning of the year	975	1,226
New impaired loans	448	356
Increase in existing impaired loans	102	140
Repayments / sales / upgrades	(328)	(605)
Write-offs	(115)[1]	(143)[1]
Foreign currency translations effects	(5)	1
Balance at the end of the year	1,076	975

1 Does not include CHF 2 million in write-offs charged directly to collective loan loss allowances (31 December 2016: CHF 2 million).

Past due but not impaired loans

The table below shows a breakdown of total loan balances where payments have been missed, but that we do not consider impaired because we otherwise expect to collect all amounts due under the contractual terms of the loans or the equivalent value from liquidation of collateral. The loan balances in the table arise predominantly within Personal & Corporate Banking and, to a lesser extent, Wealth Management.

The amount of past due but not impaired mortgage loans was not significant compared with the overall size of the mortgage portfolio.

→ **Refer to "Note 1 Summary of significant accounting policies" in the "Consolidated financial statements" section of this report for more information on our impairment policies**

Audited I

Past due but not impaired loans

CHF million	31.12.17	31.12.16
1–10 days	126	54
11–30 days	108	113
31–60 days	126	68
61–90 days	192	10
>90 days	507	641
of which: mortgage loans	*336*[1]	*542*[1]
Total	1,059	887

1 Total mortgage loans IFRS carrying value was CHF 153,729 million (31 December 2016: CHF 153,006 million).

Market risk

Key developments

We continued to manage market risk to low levels during 2017. Average 1-day, 95% confidence level, management value-at-risk (VaR) was unchanged at CHF 11 million. With VaR at such low levels, we continue to see some volatility in the measure driven by positions arising from client facilitation as well as option expiries. The number of backtesting exceptions within a 250-business-day window decreased to one from seven by the end of the year. Accordingly, the FINMA VaR multiplier used to compute regulatory and stressed VaR RWA decreased to 3.00 from 3.65 as of 31 December 2017.

Audited I Main sources of market risk

- Market risks arise from both our trading and non-trading business activities.
- Trading market risks arise mainly in connection with primary debt and equity underwriting, securities and derivatives trading for market-making and client facilitation within our Investment Bank, as well as the remaining positions within Non-core and Legacy Portfolio and our municipal securities trading business within Wealth Management Americas.
- Non-trading market risk arises predominantly in the form of interest rate and foreign exchange risks in connection with personal banking and lending in our wealth management businesses, our personal and corporate banking business in Switzerland and the Investment Bank's lending business, in addition to treasury activities.
- Corporate Center – Asset and Liability Management (Group ALM) assumes market risks in the process of managing interest rate risk, structural foreign exchange risk and the liquidity and funding profile (including high-quality liquid assets) of the Group.
- Equity and debt investments can also give rise to market risks, as can some aspects of our employee benefits, such as defined benefit pension schemes. ▲

Audited I Overview of measurement, monitoring and management techniques

- Management VaR measures exposures under the market risk framework. This includes trading market risks and parts of non-trading market risks. Non-trading market risks not included in VaR are covered in the risks controlled by Treasury Risk Control as set out further below.
- Market risk limits are set for the Group, the business divisions and Corporate Center units and at granular levels within the various business lines, reflecting the nature and magnitude of the market risks.
- Our primary portfolio measures of market risk are liquidity-adjusted stress (LAS) loss and value-at-risk (VaR). Both are common to all our business divisions and subject to limits that are approved by the Board of Directors (BoD).
- These measures are complemented by concentration and granular limits for general and specific market risk factors. Our trading businesses are subject to multiple market risk limits. These limits take into account the extent of market liquidity and volatility, available operational capacity, valuation uncertainty and, for our single-name exposures, the credit quality of issuers.
- Trading market risks are managed on an integrated basis at a portfolio level. As risk factor sensitivities change due to new transactions, transaction expiries or changes in market levels, risk factors are dynamically rehedged to remain within limits. Accordingly, in the trading portfolio, we do not generally seek to distinguish between specific positions and associated hedges.
- Issuer risk is controlled by limits applied at the business division level based on jump-to-zero measures, which estimate our maximum default exposure (the loss in the case of a default event assuming zero recovery).
- Non-trading foreign exchange risks are managed under market risk limits, with the exception of Corporate Center – Group ALM's management of consolidated capital activity.

Our Treasury Risk Control function applies a holistic risk framework, which sets the appetite for treasury-related risk-taking activities across the Group. A key element of the framework is an overarching economic value sensitivity limit, set by the BoD. This limit is linked to the level of Basel III common equity tier 1 (CET1) capital and takes into account risks arising from interest rates, foreign exchange and credit spreads. In addition, the sensitivity of net interest income to changes in interest rates is monitored against targets set by the Group Chief Executive Officer, in order to analyze the outlook and volatility of net interest income based on market-expected interest rates. Limits are also set by the BoD to balance the impact of foreign exchange movements on our CET1 capital and CET1 capital ratio. Non-trading interest rate and foreign exchange risks are included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework.

Equity and debt investments are subject to a range of risk controls, including preapproval of new investments by business management and Risk Control and regular monitoring and reporting. They are also included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework. ▲

→ **Refer to the "Treasury management" section of this report for more information on Corporate Center – Group ALM's management of foreign exchange risks**

→ **Refer to the "Capital management" section of this report for more information on the sensitivity of our CET1 capital and CET1 capital ratio to currency movements**

Market risk stress loss

In addition to VaR, which is discussed below, we measure and manage our market risks through a comprehensive framework of non-statistical measures and related limits. This includes an extensive series of stress tests and scenario analyses, which we continuously evaluate with the intention of ensuring that any losses resulting from an extreme, yet plausible event do not exceed our risk appetite.

Liquidity-adjusted stress

Our primary measure of stress loss for Group-wide market risk is LAS. The LAS framework is designed to capture the economic losses that could arise under specified stress scenarios. This is in part achieved by replacing the standard one-day and 10-day holding period assumptions used for management and regulatory VaR with liquidity-adjusted holding periods, as explained below. Shocks are then applied to positions based on the expected market movements over the liquidity-adjusted holding periods resulting from the specified scenario.

The holding periods used in LAS are calibrated to reflect the amount of time it would take to reduce or hedge the risk of positions in each major risk factor in a stressed environment, assuming maximum utilization of the relevant position limits. We also apply minimum holding periods, regardless of observed liquidity levels, reflecting the fact that identification of and reaction to a crisis may not always be immediate.

The expected market movements are derived using a combination of historical market behavior, based on an analysis of historical events, and forward-looking analysis that includes consideration of defined scenarios that have not occurred historically.

LAS-based limits are applied at a number of levels: Group, business division and Corporate Center unit, business area and sub-portfolio. In addition, LAS forms the core market risk component of our combined stress test framework and is therefore integral to our overall risk appetite framework.

→ **Refer to "Risk appetite framework" in this section for more information**

→ **Refer to "Stress testing" in this section for more information on our stress testing framework**

Value-at-risk

VaR definition

Audited | VaR is a statistical measure of market risk, representing the market risk losses that could potentially be realized over a set time horizon (holding period) at an established level of confidence. The measure assumes no change in the Group's trading positions over the set time horizon.

We calculate VaR on a daily basis. The profit or loss distribution from which VaR is derived is constructed by our internally developed VaR model. The VaR model simulates returns over the holding period of those risk factors to which our trading positions are sensitive, and subsequently quantifies the profit or loss impact of these risk factor returns on the trading positions. Risk factor returns associated with the risk factor classes of general interest rates, foreign exchange and commodities are based on a pure historical simulation approach, taking into account a five-year look-back window. Risk factor returns for selected issuer-based risk factors, such as equity price and credit spreads, are decomposed into systematic and residual, issuer-specific components using a factor model approach. Systematic returns are based on historical simulation, and residual returns are based on a Monte Carlo simulation. The VaR model profit and loss distribution is derived from the sum of the systematic and the residual returns in such a way that we consistently capture systematic and residual risk. Correlations among risk factors are implicitly captured via the historical simulation approach. In modeling the risk factor returns, we consider the stationarity properties of the historical time series of risk factor changes. Depending on the stationarity properties of the risk factors within a given risk factor class, we choose to model the risk factor returns using absolute returns or logarithmic returns. The risk factor return distributions are updated on a fortnightly basis.

Although our VaR model does not have full revaluation capability, we source full revaluation grids and sensitivities from our front-office systems, enabling us to capture material non-linear profit or loss effects.

We use a single VaR model for both internal management purposes and determining market risk regulatory capital requirements, although we consider different confidence levels and time horizons. For internal management purposes, we establish risk limits and measure exposures using VaR at the 95% confidence level with a one-day holding period, aligned to the way we consider the risks associated with our trading activities. The regulatory measure of market risk used to underpin the market risk capital requirement under Basel III requires a measure equivalent to a 99% confidence level using a 10-day holding period. In the calculation of a 10-day holding period VaR, we employ 10-day risk factor returns, whereby all observations are equally weighted.

Additionally, the population of the portfolio within management and regulatory VaR is slightly different. The population within regulatory VaR meets regulatory requirements for inclusion in regulatory VaR. Management VaR includes a broader population of positions. For example, regulatory VaR excludes the credit spread risks from the securitization portfolio, which are treated instead under the securitization approach for regulatory purposes.

We also use stressed VaR (SVaR) for the calculation of regulatory capital. SVaR adopts broadly the same methodology as regulatory VaR and is calculated using the same population, holding period (10-day) and confidence level (99%). However, unlike regulatory VaR, the historical data set for SVaR is not limited to five years, but spans the time period from 1 January 2007 to the present. In deriving SVaR, we search for the largest 10-day holding period VaR for the current portfolio of the Group across all one-year look-back windows that fall into the interval from 1 January 2007 to the present. SVaR is computed weekly. ▲

→ **Refer to the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the regulatory capital calculation under the advanced internal ratings-based approach**

Management VaR for the period

The tables below show minimum, maximum, average and period-end management VaR by business division and Corporate Center unit, and by general market risk type. We continued to manage management VaR at low levels with average VaR remaining stable compared with year-end 2016.

Audited I

Management value-at-risk (1-day, 95% confidence, 5 years of historical data) by business division and Corporate Center unit and general market risk type[1]

					For the year ended 31.12.17				
CHF million					Equity	Interest rates	Credit spreads	Foreign exchange	Commodities
	Min.				1	6	4	1	0
		Max.			14	12	8	5	6
			Average		6	9	6	2	2
				31.12.17	4	8	8	3	2
Total management VaR, Group	5	18	11	10	*Average (per business division and risk type)*				
Wealth Management	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Wealth Management Americas	0	1	1	1	*0*	*1*	*1*	*0*	*0*
Personal & Corporate Banking	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Asset Management	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Investment Bank	4	17	9	8	*6*	*7*	*5*	*2*	*2*
CC – Services	0	0	0	0	*0*	*0*	*0*	*0*	*0*
CC – Group ALM	3	8	6	4	*0*	*5*	*2*	*1*	*0*
CC – Non-core and Legacy Portfolio	3	5	3	3	*1*	*2*	*2*	*0*	*0*
Diversification effect[2,3]			(8)	(6)	*(1)*	*(6)*	*(4)*	*(1)*	*0*

					For the year ended 31.12.16				
CHF million					Equity	Interest rates	Credit spreads	Foreign exchange	Commodities
	Min.				1	9	3	1	0
		Max.			15	15	6	5	2
			Average		5	11	4	3	1
				31.12.16	4	11	5	2	1
Total management VaR, Group	8	18	11	11	*Average (per business division and risk type)*				
Wealth Management	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Wealth Management Americas	0	1	0	1	*0*	*1*	*1*	*0*	*0*
Personal & Corporate Banking	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Asset Management	0	0	0	0	*0*	*0*	*0*	*0*	*0*
Investment Bank	5	18	9	8	*5*	*8*	*3*	*3*	*1*
CC – Services	0	0	0	0	*0*	*0*	*0*	*0*	*0*
CC – Group ALM	5	9	7	6	*0*	*7*	*1*	*1*	*0*
CC – Non-core and Legacy Portfolio	3	5	4	4	*0*	*4*	*2*	*1*	*0*
Diversification effect[2,3]			(10)	(8)	*0*	*(9)*	*(3)*	*(1)*	*0*

1 Statistics at individual levels may not be summed to deduce the corresponding aggregate figures. The minima and maxima for each level may well occur on different days, and likewise, the VaR for each business line or risk type, being driven by the extreme loss tail of the corresponding distribution of simulated profits and losses for that business line or risk type, may well be driven by different days in the historical time series, rendering invalid the simple summation of figures to arrive at the aggregate total. 2 Difference between the sum of the standalone VaR for the business divisions and Corporate Center units and the VaR for the Group as a whole. 3 As the minimum and maximum occur on different days for different business divisions and Corporate Center, it is not meaningful to calculate a portfolio diversification effect.

▲

VaR limitations

Audited | Actual realized market risk losses may differ from those implied by our VaR for a variety of reasons.

- The VaR measure is calibrated to a specified level of confidence and may not indicate potential losses beyond this confidence level.
- The one-day time horizon used for VaR for internal management purposes, or 10-day in the case of the regulatory VaR measure, may not fully capture the market risk of positions that cannot be closed out or hedged within the specified period.
- In certain cases, VaR calculations approximate the impact of changes in risk factors on the values of positions and portfolios. This may happen because the number of risk factors included in the VaR model is necessarily limited.
- The effect of extreme market movements is subject to estimation errors, which may result from non-linear risk sensitivities, as well as the potential for actual volatility and correlation levels to differ from assumptions implicit in the VaR calculations.
- The use of a five-year window means that sudden increases in market volatility will tend not to increase VaR as quickly as the use of shorter historical observation periods, but the increase will affect our VaR for a longer period of time. Similarly, following a period of increased volatility, as markets stabilize, VaR predictions will remain more conservative for a period of time influenced by the length of the historical observation period.

SVaR is subject to the same limitations as noted for VaR above, but the use of one-year data sets avoids the smoothing effect of the five-year data set used for VaR, and the absence of the five-year window provides for a longer history of potential loss events. Therefore, although the significant period of stress during the financial crisis of 2007–2009 is no longer contained in the historical five-year period used for management and regulatory VaR, SVaR will continue to use this data. This approach is intended to reduce the procyclicality of the regulatory capital requirements for market risks.

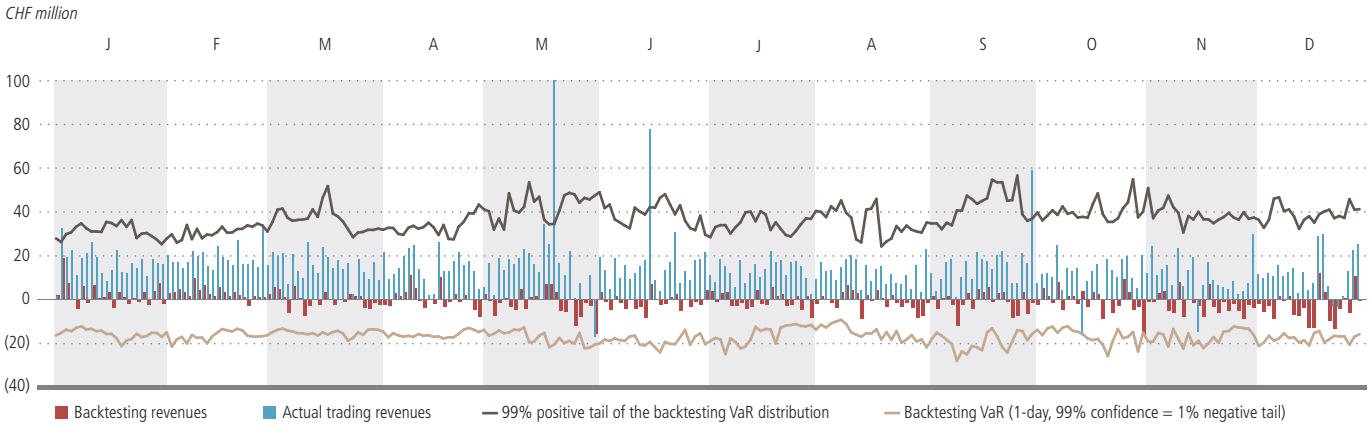
We recognize that no single measure may encompass the entirety of risks associated with a position or portfolio. Consequently, we employ a suite of various metrics with both overlapping and complementary characteristics in order to create a holistic framework that seeks to ensure material completeness of risk identification and measurement. As a statistical aggregate risk measure, VaR supplements our liquidity-adjusted stress and comprehensive stress testing frameworks.

In the fourth quarter of 2017, we went live with a new framework to identify and quantify potential risks that are not fully captured by our VaR model. We refer to these risks as risks-not-in-VaR. This framework is used to underpin these potential risks with regulatory capital, calculated as a multiple of regulatory VaR and stressed VaR. ▲

Backtesting of VaR

For backtesting purposes, we compute backtesting VaR using a 99% confidence level and one-day holding period for the population included within regulatory VaR. The backtesting process compares backtesting VaR calculated on positions at the close of each business day with the revenues generated by those positions on the following business day. Backtesting revenues exclude non-trading revenues, such as fees and commissions and revenues from intraday trading, to provide for a like-for-like comparison. A backtesting exception occurs when backtesting revenues are negative and the absolute value of those revenues is greater than the previous day's backtesting VaR.

Group: development of backtesting revenues[1] and actual trading revenues[2] against backtesting VaR[3] (1-day, 99% confidence)



1 Excludes non-trading revenues, such as commissions and fees, and revenues from intraday trading. 2 Includes backtesting revenues and revenues from intraday trading. 3 Based on Basel III regulatory VaR, excludes CVA positions and their eligible hedges, which are subject to the new standalone CVA charge.

Statistically, given the confidence level of 99%, two or three backtesting exceptions per year can be expected. More exceptions than this could indicate that the VaR model is not performing appropriately, as could too few exceptions over a prolonged period of time. However, as noted in the VaR limitations above, a sudden increase or decrease in market volatility relative to the five-year window could lead to a higher or lower number of exceptions, respectively. Accordingly, Group-level backtesting exceptions are investigated, as are exceptional positive backtesting revenues, with results being reported to senior business management, the Group Chief Risk Officer and the divisional Chief Risk Officers. Backtesting exceptions are also reported to internal and external auditors and to the relevant regulators.

The "Group: development of backtesting revenues and actual trading revenues against backtesting VaR" chart on the previous page shows the 12-month development of backtesting VaR against the Group's backtesting revenues and actual trading revenues for 2017. The chart shows both the negative and positive tails of the backtesting VaR distribution at 99% confidence intervals representing, respectively, the losses and gains that could potentially be realized over a one-day period at that level of confidence. The asymmetry between the negative and positive tails is due to the long gamma risk profile that has been run historically in the Investment Bank. This long gamma position profits from increases in volatility, which therefore benefits the positive tail of the VaR simulated profit or loss distribution.

The actual trading revenues include, in addition to backtesting revenues, intraday revenues.

The number of negative backtesting exceptions within a 250-business-day window decreased to one from seven by the end of the year. Accordingly, the FINMA VaR multiplier used to compute regulatory and stressed VaR RWA decreased to 3.00 from 3.65 as of 31 December 2017.

VaR model confirmation

In addition to model backtesting performed for regulatory purposes as described above, we also conduct extended backtesting for our internal model confirmation purposes. This includes observing model performance across the entire profit or loss distribution, not just the tails, and at multiple levels within the business division and Corporate Center unit hierarchies.

→ **Refer to "Risk measurement" in this section for more information on our approach to model confirmation procedures**

VaR model developments in 2017

Audited | We have not made any material changes to the VaR model in 2017.▲

Future market risk-related regulatory capital developments

In December 2017, the Basel Committee on Banking Supervision extended the implementation date of the revised minimum capital requirements for market risk to 1 January 2022. The extension aligns implementation with the Basel III revisions to credit risk and operational risk and recognizes that some of the market risk-related rules are still being finalized by the Basel Committee.

Key elements of the revised market risk framework include: (i) changes to the internal model-based approach, including changes to the model approval and performance measurement process; (ii) changes to the standardized approach with the aim of it being a credible fallback method for an internal model-based approach; and (iii) a revised boundary between trading book and banking book. UBS maintains a close dialog with FINMA to discuss in more detail the implementation objectives and to ensure a smooth transition of the capital regime for market risk.

→ **Refer to "Capital management objectives, planning and activities" in the "Capital management" section of this report for more information on the development of RWA**
→ **Refer to "Risk measurement" in this section for more information on our approach to model confirmation procedures**
→ **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Interest rate risk in the banking book

Sources of interest rate risk in the banking book

Audited I Interest rate risk in the banking book arises from balance sheet positions such as *Loans, Due from customers, Debt issued, Financial assets available for sale, Financial assets held to maturity,* certain *Financial assets* and *liabilities designated at fair value,* derivatives measured at fair value, including derivatives used for cash flow hedge accounting purposes, as well as related funding transactions. These positions may impact *Other comprehensive income* (OCI) or the income statement, depending on their accounting treatment.

Our largest banking book interest rate exposures arise from client deposits and lending products in our wealth management businesses and Personal & Corporate Banking. For Wealth Management and Personal & Corporate Banking, the inherent interest rate risks are transferred either by means of back-to-back transactions or, in the case of products with no contractual maturity date or direct market-linked rate, by replicating portfolios from the originating business into Corporate Center – Group ALM, which manages the risks on an integrated basis, allowing for netting interest rate risks across different sources. Any residual interest rate risks in our wealth management businesses and Personal & Corporate Banking that are not transferred to Corporate Center – Group ALM are managed locally and are subject to independent monitoring and control by local risk control units as well as centrally by Market Risk Control. To manage the interest rate risk centrally, Corporate Center – Group ALM uses derivative instruments, most of which are in designated hedge accounting relationships. A significant amount of interest rate risk also arises from Corporate Center – Group ALM financing and investing activities, such as the investment and refinancing of non-monetary corporate balance sheet items with indefinite maturities, including equity, goodwill and real estate. For these items, senior management has defined specific target durations as a basis for our funding and investment activities, as applicable. These targets are defined by replication portfolios, which establish rolling benchmarks to execute against. As of 31 December 2017, the target replication portfolios for equity, goodwill and real estate were defined as follows: in Swiss francs with an average duration of approximately two years and fair value sensitivity of CHF 5 million per basis point; in US dollars with an average duration of approximately five years and a sensitivity of CHF 11 million per basis point. Corporate Center – Group ALM also maintains a portfolio of debt investments to meet the Group's liquidity needs.

Interest rate risk within Wealth Management Americas arises from the business division's portfolio of available-for-sale assets, in addition to its lending and deposit products offered to clients. This interest rate risk is closely measured, monitored and managed within approved risk limits and controls, taking into account Wealth Management Americas' balance sheet items that mutually offset interest rate risk.

Banking book interest rate exposure in the Investment Bank arises predominantly from the business of Corporate Client Solutions, where transactions are subject to approval on a case-by-case basis.

Corporate Center – Non-core and Legacy Portfolio assets that are classified as loans and receivables, and certain other debt securities held as loans and receivables, also give rise to non-trading interest rate risk. ▲

Effect of interest rate changes on shareholders' equity and CET1 capital

The "Accounting and capital effect of changes in interest rates" table below illustrates the accounting and CET1 capital treatment of gains and losses resulting from changes in interest rates. For instruments held at fair value, a change in interest rates results in an immediate fair value gain or loss recognized either in the income statement or through OCI. For assets and liabilities held at amortized cost, including financial assets held to maturity, a change in interest rates does not result in a change in the carrying amount of the instruments, but could affect the amount of interest income or expense recognized over time in the income statement.

Typically, increases in interest rates would lead to an immediate reduction in the value of our longer-term assets held at fair value, but we would expect this to be offset over time through higher net interest income (NII) on our core banking products.

In addition to the differing accounting treatments, our banking book positions have different sensitivities to different points on yield curves. For example, our portfolios of debt securities, whether accounted for as instruments designated at fair value, as assets held to maturity or as assets available for sale, and interest rate swaps designated as cash flow hedges, on the whole, are more sensitive to changes in longer-duration interest rates, whereas our deposits and a significant portion of our loans contributing to net interest income are more sensitive to short-term rates. These factors are important as yield curves may not shift on a parallel basis and could, for example, exhibit an initial steepening, followed by a flattening over time.

By virtue of the accounting treatment and yield curve sensitivities outlined above, in a steepening yield curve scenario we would expect to recognize an initial decrease in shareholders' equity as a result of fair value losses recognized in OCI. This would be compensated over time by increased NII once increases in interest rates affect the shorter end of the yield curve in particular. The effect on CET1 capital would be less pronounced, as gains and losses on interest rate swaps designated as cash flow hedges are not recognized for regulatory capital purposes. Fair value losses on instruments designated at fair value are expected to be offset by economic hedges.

We subject the interest rate-sensitive banking book exposures to a suite of interest rate scenarios in order to assess the effect on expected NII over both a one-year and a three-year time horizon assuming constant business volumes. We also consider the effect of the interest rate movements in each scenario on the fair value recognized in OCI of financial assets available for sale and cash flow hedges managed by Corporate Center – Group ALM. The scenario assessment also includes the estimated effect through OCI on shareholders' equity and CET1 capital from pension fund assets and liabilities. While certain standard scenarios, such as a parallel rise in all yield curves of 100 basis points, are retained and regularly used, other scenarios are adopted as a function of changing market conditions.

Accounting and capital effect of changes in interest rates[1]

	Recognition		Shareholders' equity		CET1 capital	
	Timing	Income statement / OCI	Gains	Losses	Gains	Losses
Financial assets available for sale	Immediate	OCI	●	●		●
Derivatives transacted as economic hedges	Immediate	Income statement	●	●	●	●
Derivatives designated as cash flow hedges	Immediate	OCI[2]	●	●		
Loans and deposits at amortized costs[3]	Gradual	Income statement	●	●	●	●
Financial assets designated at fair value	Immediate	Income statement	●	●	●	●
Financial assets held to maturity[3]	Gradual	Income statement	●	●	●	●

1 Refer to the "Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital" table in the "Capital management" section of this report for more information on the differences between shareholders' equity and CET1 capital. 2 Excluding hedge ineffectiveness that is recognized in the income statement in accordance with IFRS. 3 For fixed-rate financial instruments, changes in interest rates impact the income statement when these instruments roll over and reprice.

At the end of 2017, the following scenarios were analyzed in detail:

- Negative Interest Rates (NIR) then Recovery: Yield curves drop 50 basis points in parallel with no zero-floor applied and therefore can become negative, or more negative. Thereafter, all rates recover according to market-implied forward rates.
- NIR then Constant: Same assumptions as the NIR then Recovery scenario, but after the initial shock, rates do not recover but remain at the then-prevailing levels until the end of the simulated time horizon.
- Global Interest Rate Steepener: Represents a sudden shift in market sentiment causing a disorderly sell-off in long-dated bonds and a rapid steepening of the yield curve, exacerbated by the lack of liquidity in financial markets. This corresponds to the general interest rate movements contained in the corresponding CST scenario described in "Stress testing" in this section.
- Parallel +100 basis points: All yield curves rise 100 basis points in parallel.
- Severe Eurozone Crisis: This scenario assumes a eurozone crisis at its core and includes sovereign debt restructuring as a consequence of the ensuing crisis. A China hard landing is also a feature of the scenario. This corresponds to the general interest rate movements contained in the binding stress scenario in our CST framework for 2018 described in "Stress testing" in this section.
- Inverted Steepener: Yield curves across all currencies undergo a sharp rise for short tenors, with only a modest rise in the long end of the yield curve: +200 basis points for tenors up to 1 year, +100 basis points for the 5-year tenor and +20 basis points for 8-year to 10-year tenors.
- Constant Rates: All rates stay at current levels.

The results are compared with a baseline NII, which is calculated assuming that interest rates in all currencies develop according to their market-implied forward rates and under the assumption of constant business volumes and no specific management actions. The calculated effects on baseline NII range between a deterioration of approximately 6% and 9% over a one-year and three-year horizon, respectively, and an improvement of approximately 27% and 52% over a one-year and a three-year horizon, respectively. The most adverse scenario is the Negative Interest Rates then Constant over both a one-year horizon and three-year horizon. The most beneficial scenario is the Inverted Steepener over a one-year horizon and the Global Interest Rate Steepener over a three-year horizon.

In addition to the above scenario analysis, we also monitor the sensitivity of the NII to immediate parallel shocks of –200 and +200 basis points compared with baseline NII, under the assumption of a constant balance sheet volume and structure. Any resulting reduction in first-year NII relative to the baseline NII is subject to predefined threshold levels to monitor the extent to which the NII is exposed to an adverse movement in market rates. As of 31 December 2017, the baseline NII would have been approximately 17% less under a parallel shock of –200 basis points, whereas under a parallel +200-basis-point shock, the baseline NII would have been approximately 29% higher.

To shelter the level of our NII from the persistently low and negative interest rate environment in Swiss francs in particular, we rely on self-funding of our lending businesses through our deposit base in Wealth Management and Personal & Corporate Banking, along with appropriate additional adjustments to our interest rate-linked product pricing. Should we lose this equilibrium on the balance sheet, for example, due to unattractive pricing relative to our peers for either our mortgages or deposits, this could lead to a decrease in our NII in a persistently low and negative interest rate environment. As we assume constant business volumes, these risks do not appear in the aforementioned interest rate scenarios.

Moreover, should the low and negative interest rate environment persist or worsen, this could lead to additional pressure on our NII and we could face additional costs for holding our Swiss franc high-quality liquid asset portfolio. A reduction of the Swiss National Bank's deposit exemption threshold for banks would also lead to increased costs that we might not be able to offset, for example, by passing on some of the costs to our depositors. Should euro interest rates also decline significantly further into negative territory, this could likewise increase our liquidity costs and put our NII generated from euro-denominated loans and deposits at risk of volume imbalances. Depending on the overall economic and market environment, sustained and significant negative rates could also lead to our Wealth Management and Personal & Corporate Banking clients paying down their loans together with reducing any excess cash they hold with us as deposits. This would reduce the underlying business volume and lower our NII accordingly.

A net decrease in deposits would require replacement funding at a potential relative cost increase that would depend on various factors, including the term and nature of the replacement funding, whether such funding is raised in the wholesale markets or from swapping with available funding denominated in another currency. On the other hand, imbalances leading to an excess deposit position could require additional investments at negative yields, which we might not be able to compensate for sufficiently as a result of our excess deposit balance charging mechanisms.

Interest rate risk sensitivity to parallel shifts in yield curves

Audited | Interest rate risk in the banking book is not underpinned for capital purposes, but is subject to a regulatory threshold. As of 31 December 2017, the economic-value effect of an adverse parallel shift in interest rates of ±200 basis points on our banking book interest rate risk exposures was significantly below the threshold of 20% of eligible capital recommended by regulators.

The interest rate risk sensitivity figures presented in the "Interest rate sensitivity – banking book" table on the next page represent the effect of +1, ±100 and ±200-basis-point parallel moves in yield curves on present values of future cash flows, irrespective of accounting treatment. For some portfolios, the +1-basis-point sensitivity has been estimated by dividing the +100-basis-point sensitivity by 100. In the prevailing negative interest rate environment for the Swiss franc in particular, and to a lesser extent for the euro and the Japanese yen, interest rates for Wealth Management and Personal & Corporate Banking client transactions are generally being floored at non-negative levels. Accordingly, for the purposes of this disclosure table, downward moves of 100 / 200 basis points are floored to ensure that the resulting shocked interest rates do not turn negative. The flooring results in non-linear sensitivity behavior.

The sensitivity of the banking book to rising rates was approximately nil compared with negative CHF 3.1 million per basis point at prior year-end. This was mainly due to increased sensitivity in Corporate Center – Group ALM, reduced negative sensitivity in Wealth Management Americas and, to a lesser extent, a change in the sensitivity in Corporate Center – Non-core and Legacy Portfolio from negative CHF 0.1 million per basis point to positive CHF 0.5 million per basis point. The increased sensitivity in Corporate Center – Group ALM was mainly due to adjustments leading to more-positive sensitivity to interest rates in Swiss francs and a reduction of negative sensitivity in US dollar interest rates. The reduction in negative interest rate sensitivity within Wealth Management Americas was primarily due to the introduction of a new deposit pricing approach, which resulted in higher deposit interest rate sensitivity, thus providing a larger offset to asset sensitivity. The change in Corporate Center – Non-core and Legacy Portfolio was due to improved capture of risk sensitivities of auction rate securities and auction preferred securities.

The sensitivity of the banking book to rising rates includes the interest rate sensitivities arising from debt investments classified as *Financial assets available for sale* and their associated hedges. The sensitivity of these positions (excluding hedges and excluding investments in funds accounted for as available for sale) to a 1-basis-point parallel increase in the yields of the respective instruments is approximately negative CHF 2 million, which would be recorded in OCI if such a change occurred. This sensitivity is around CHF 1 million per basis point less than as of 31 December 2016, mainly due to a further reduction in available-for-sale debt securities held in Corporate Center – Group ALM with an associated buildup of debt securities designated at fair value.

The sensitivity of the banking book to rising interest rates also includes interest rate sensitivities arising from interest rate swaps designated in cash flow hedges. Fair value gains or losses associated with the effective portion of these hedges are recognized initially in *Equity*. When the hedged forecast cash flows affect profit or loss, the associated gains or losses on the hedging derivatives are reclassified from *Equity* to profit or loss. These swaps are predominantly denominated in US dollars, euros, Swiss francs and British pounds. A 1-basis-point increase of underlying LIBOR curves would have decreased equity by approximately CHF 20 million, excluding adjustments for tax. ▲

→ **Refer to "Note 13 Financial assets available for sale and held to maturity" in the "Consolidated financial statements" section of this report for more information**

→ **Refer to the "Group performance" section of this report for more information on sensitivity to interest rate movements**

Audited I

Interest rate sensitivity – banking book[1]

	31.12.17				
CHF million	–200 bps	–100 bps	+1 bp	+100 bps	+200 bps
CHF	(31.8)	(31.8)	1.0	97.7	191.2
EUR	(142.0)	(90.5)	0.2	15.2	31.1
GBP	(57.6)	(55.4)	0.1	11.2	21.3
USD	26.6	14.4	(1.3)	(135.1)	(280.6)
Other	4.4	0.8	0.0	5.0	10.3
Total effect on fair value of interest rate-sensitive banking book positions	(200.4)	(162.5)	0.0	(6.0)	(26.7)
of which: Wealth Management Americas	*144.8*	*59.1*	*(1.8)*	*(175.5)*	*(362.3)*
of which: Investment Bank	*32.9*	*18.3*	*(0.2)*	*(15.4)*	*(30.8)*
of which: CC – Group ALM	*(272.4)*	*(188.1)*	*1.4*	*138.6*	*279.8*
of which: CC – Non-core and Legacy Portfolio	*(106.2)*	*(52.1)*	*0.5*	*46.6*	*87.3*

	31.12.16				
CHF million	–200 bps	–100 bps	+1 bp	+100 bps	+200 bps
CHF	(13.0)	(13.0)	0.5	44.8	89.3
EUR	(109.0)	(91.9)	0.0	(2.5)	(2.6)
GBP	(184.5)	(103.0)	(0.1)	(9.9)	(27.7)
USD	823.2	358.9	(3.4)	(347.2)	(704.3)
Other	0.5	(1.7)	0.0	(3.3)	(6.3)
Total effect on fair value of interest rate-sensitive banking book positions	517.1	149.4	(3.1)	(318.1)	(651.6)
of which: Wealth Management Americas	*730.5*	*325.8*	*(2.9)*	*(286.4)*	*(583.8)*
of which: Investment Bank	*26.3*	*14.3*	*(0.1)*	*(12.7)*	*(25.9)*
of which: CC – Group ALM	*(238.8)*	*(192.3)*	*0.0*	*(10.6)*	*(24.2)*
of which: CC – Non-core and Legacy Portfolio	*(1.2)*	*1.2*	*(0.1)*	*(7.3)*	*(15.6)*

1 Does not include interest rate sensitivities for credit valuation adjustments on monoline credit protection, US and non-US reference-linked notes.

Other market risk exposures

Own credit

We are exposed to changes in UBS's own credit that are reflected in the valuation of financial liabilities designated at fair value when UBS's own credit risk would be considered by market participants. We also estimate debit valuation adjustments (DVA) to incorporate own credit in the valuation of derivatives.

→ **Refer to "Note 22 Fair value measurement" in the "Consolidated financial statements" section of this report for more information on own credit**

Structural foreign exchange risk

Upon consolidation, assets and liabilities held in foreign operations are translated into Swiss francs at the closing foreign exchange rate on the balance sheet date. Value changes (in Swiss francs) of non-Swiss franc assets or liabilities due to foreign exchange movements are recognized in OCI and therefore affect shareholders' equity and CET1 capital.

Corporate Center – Group ALM employs strategies to manage this foreign currency exposure, including matched funding of assets and liabilities and net investment hedging.

→ **Refer to the "Treasury management" section of this report for more information on our exposure to and management of structural foreign exchange risk**

→ **Refer to "Note 12 Derivative instruments and hedge accounting" in the "Consolidated financial statements" section of this report for more information on our hedges of net investments in foreign operations**

Equity investments

Audited I Under International Financial Reporting Standards (IFRS) effective on 31 December 2017, equity investments not in the trading book may be classified as *Financial assets available for sale*, *Financial assets designated at fair value* or *Investments in associates*.

We make direct investments in a variety of entities and buy equity holdings in both listed and unlisted companies for a variety of purposes. This includes investments such as exchange and clearing house memberships held to support our business activities. We may also make investments in funds that we manage in order to fund or seed them at inception or to demonstrate that our interests align with those of investors. We also buy, and are sometimes required by agreement to buy, securities and units from funds that we have sold to clients.

The fair value of equity investments tends to be influenced by factors specific to the individual investments. Equity investments are generally intended to be held for the medium or long term and may be subject to lockup agreements. For these reasons, we generally do not control these exposures by using the market risk measures applied to trading activities. However, such equity investments are subject to a different range of controls, including preapproval of new investments by business management and Risk Control, portfolio and concentration limits, and regular monitoring and reporting to senior management. They are also included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework.

As of 31 December 2017, we held equity investments totaling CHF 1.6 billion, of which CHF 0.5 billion were classified as *Financial assets available for sale* and CHF 1.0 billion as *Investments in associates*. This was broadly unchanged from the prior year. ▲

→ **Refer to "Note 13 Financial assets available for sale and held to maturity" and "Note 28 Interests in subsidiaries and other entities" in the "Consolidated financial statements" section of this report for more information**

→ **Refer to the "Significant accounting and financial reporting changes in 2018" section of this report for more information on the classification of financial instruments under IFRS 9**

Debt investments

Audited | Debt investments classified as *Financial assets available for sale* as of 31 December 2017 were measured at fair value with changes in fair value recorded through *Equity*, and can broadly be categorized as money market instruments and debt securities primarily held for statutory, regulatory or liquidity reasons.

The risk control framework applied to debt instruments classified as *Financial assets available for sale* depends on the nature of the instruments and the purpose for which we hold them. Our exposures may be included in market risk limits or be subject to specific monitoring and interest rate sensitivity analysis. They are also included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework.

Debt instruments classified as *Financial assets available for sale* had a fair value of CHF 8.1 billion as of 31 December 2017 compared with CHF 15.0 billion as of 31 December 2016. ▲

→ **Refer to "Note 13 Financial assets available for sale and held to maturity" in the "Consolidated financial statements" section of this report for more information**

→ **Refer to "Interest rate risk sensitivity to parallel shifts in yield curves" in this section for more information**

→ **Refer to the "Treasury management" section of this report for more information**

→ **Refer to the "Significant accounting and financial reporting changes in 2018" section of this report for more information on the classification and measurement of financial instruments under IFRS 9**

Pension risk

We provide a number of pension plans for past and current employees, some of which are classified as defined benefit pension plans under IFRS. These defined benefit plans can have a material effect on our IFRS equity and CET1 capital.

In order to meet the expected future benefit payments, the plans invest employee and employer contributions in various asset classes. The funded status of the plan is the difference between the fair value of these assets and the present value of the expected future benefit payments to plan members, i.e., the defined benefit obligation.

Pension risk is the risk that the funded status of defined benefit plans might decrease, negatively affecting our IFRS equity and / or our CET1 capital. This can arise from a fall in the plan assets' value or in the investment returns, an increase in defined benefit obligations, or a combination of these.

Important risk factors affecting the fair value of the plan assets are, among other things, equity market returns, interest rates, bond yields and real estate prices. Important risk factors affecting the present value of the expected future benefit payments include high-grade bond yields, interest rates, inflation rates and life expectancy.

Pension risk is included in our Group-wide statistical and stress testing metrics, which flow into our risk appetite framework. The potential effects are thus captured in the calculation of our post-stress fully applied CET1 capital ratio.

→ **Refer to "Note 1a item 7 Pension and other post-employment benefit plans," "Note 26 Pension and other post-employment benefit plans" and "Note 35 Events after the reporting period" in the "Consolidated financial statements" section of this report for more information on defined benefit plans and on changes to the pension fund of UBS in Switzerland to support its long-term financial stability**

UBS own share exposure

Group Treasury holds UBS Group AG shares to hedge future share delivery obligations related to employee share-based compensation and participation plans. In addition, the Investment Bank holds a very limited number of UBS Group AG shares, primarily in its capacity as a market-maker in UBS Group AG shares and related derivatives and to hedge certain issued structured debt instruments.

The Group has announced a share repurchase program under which it may acquire up to CHF 2 billion of UBS Group AG shares over the next three years, of which up to CHF 550 million may be acquired in 2018. Shares acquired through the share repurchase program are intended for cancelation. Until the shareholders of UBS Group AG approve cancelation of the shares, shares acquired in the repurchase program will be held in Group Treasury.

→ **Refer to "UBS shares" in the "Capital management" section of this report for more information**

Country risk

Country risk framework

Country risk includes all country-specific events that occur within a sovereign's jurisdiction and may lead to an impairment of UBS's exposures. Country risk may take the form of sovereign risk, which refers to the ability and willingness of a government to honor its financial commitments; transfer risk, which would arise if an issuer or counterparty could not acquire foreign currencies following a moratorium of a central bank on foreign exchange transfers; or "other" country risk. "Other" country risk may manifest itself through increased and multiple counterparty and issuer default risk (systemic risk) on the one hand, and on the other hand through events that may affect the standing of a country, such as adverse shocks affecting political stability or the institutional and legal framework. We maintain a well-established risk control framework, through which we assess the risk profile of all countries where we have exposure.

We attribute to each foreign country a sovereign rating, which expresses the probability of the sovereign defaulting on its own financial obligations in foreign currency. Our ratings are expressed by statistically derived default probabilities as described in the "Probability of default" section. Based on this internal analysis, we also define the probability of a transfer event occurring and establish rules as to how the aspects of "other" country risk should be incorporated into the analysis of the counterparty rating of entities that are domiciled in the respective country.

Our risk exposure to foreign countries considers the credit ratings assigned to those countries. A country risk ceiling (i.e., maximum aggregate exposure) applies to our exposures to counterparties or issuers of securities and financial investments in the respective foreign country. We may limit the extension of credit, transactions in traded products or positions in securities based on a country risk ceiling, even if our exposure to a counterparty is otherwise acceptable.

For internal measurement and control of country risk, we also consider the financial impact of market disruptions arising prior to, during and after a country crisis. These may take the form of a severe deterioration in a country's debt, equity or other asset markets, or a sharp depreciation of the currency. We use stress testing to assess the potential financial impact of a severe country or sovereign crisis. This involves the development of plausible stress scenarios for combined stress testing and the identification of countries that may potentially be subject to a crisis event, determining potential losses and making assumptions about recovery rates depending on the types of credit transactions involved and their economic importance to the affected countries.

Our exposures to market risks are also subject to regular stress tests that cover major global scenarios, which are used for combined stress testing as well, whereby we apply market shock factors to equity indices, interest rates and currency rates in all relevant countries and consider the potential liquidity of the instruments.

Country risk exposure

Country risk exposure measure

The presentation of country risk follows our internal risk view, whereby the basis for measurement of exposures depends on the product category into which we have classified our exposures. In addition to the classification of exposures into banking products and traded products as defined in the "Credit risk profile of the Group" section, within trading inventory we classify issuer risk on securities such as bonds and equities, as well as the risk relating to the underlying reference assets for derivative positions, including those linked to credit protection we buy or sell, loan or security underwriting commitments pending distribution and single-stock margin loans for syndication.

As we manage the trading inventory on a net basis, we net the value of long positions against short positions with the same underlying issuer. Net exposures are, however, floored at zero per issuer in the figures presented in the following tables. We therefore do not recognize the potentially offsetting benefit of certain hedges and short positions across issuers.

We do not recognize any expected recovery values when reporting country exposures as exposure before hedges, except for the risk-reducing effects of master netting agreements and collateral held in the form of either cash or portfolios of diversified marketable securities, which we deduct from the basic positive exposure values. Within banking products and traded products, the risk-reducing effect of any credit protection is taken into account on a notional basis when determining the net of hedges exposures.

Country risk exposure allocation

In general, exposures are shown against the country of domicile of the contractual counterparty or the issuer of the security. For some counterparties whose economic substance in terms of assets or source of revenues is primarily located in a different country, the exposure is allocated to the risk domicile of that issuer.

This is the case, for example, with legal entities incorporated in financial offshore centers, which have their main assets and revenue streams outside the country of domicile. The same principle applies to exposures for which we hold third-party guarantees or collateral, where we report the exposure against the country of domicile of either the guarantor or the issuer of the underlying security, or against the country where pledged physical assets are located.

We apply a specific approach for banking products exposures to branches of financial institutions that are located in a country other than the legal entity's domicile. In such cases, exposures are recorded in full against the country of domicile of the counterparty and additionally in full against the country in which the branch is located.

In the case of derivatives, we show the counterparty risk associated with the positive replacement value (PRV) against the country of domicile of the counterparty (presented within traded products). In addition, the risk associated with the instantaneous fall in value of the underlying reference asset to zero (assuming no recovery) is shown against the country of domicile of the issuer of the reference asset (presented within trading inventory). This approach allows us to capture both the counterparty and, where applicable, issuer elements of risk arising from derivatives and applies comprehensively for all derivatives, including single-name credit default swaps (CDSs) and other credit derivatives.

As a basic example: if CDS protection for a notional value of 100 bought from a counterparty domiciled in country X referencing debt of an issuer domiciled in country Y has a PRV of 20, we record (i) the fair value of the CDS (20) against country X (within traded products) and (ii) the hedge benefit (notional minus fair value) of the CDS (100 – 20 = 80) against country Y (within trading inventory). In the example of protection bought, the 80 hedge benefit would offset any exposure arising from securities held and issued by the same entity as the reference asset, floored at zero per issuer. In the case of protection sold, this would be reflected as a risk exposure of 80 in addition to any exposure arising from securities held and issued by the same entity as the reference asset. In the case of derivatives referencing a basket of assets, the issuer risk against each reference entity is calculated as the expected change in fair value of the derivative given an instantaneous fall in value to zero of the corresponding reference asset (or assets) issued by that entity. Exposures are then aggregated by country across issuers, floored at zero per issuer.

Exposures to selected eurozone countries

Our exposure to peripheral European countries remains limited, but we nevertheless remain watchful regarding the potential broader implications of adverse developments in the eurozone. As noted in "Stress testing" in this section, a eurozone crisis remains a core part of the new binding Severe Eurozone Crisis scenario for combined stress test purposes, making it central to the regular monitoring of risk exposure against the minimum capital, earnings and leverage ratio objectives in our risk appetite framework.

The "Exposures to eurozone countries rated lower than AAA / Aaa by at least one major rating agency" table on the next page provides an overview of our exposures to such rated countries as of 31 December 2017.

CDSs are primarily bought and sold in relation to our trading businesses, but are also used to hedge parts of our risk exposure, including that related to certain eurozone countries. As of 31 December 2017, and not taking into account the risk-reducing effect of master netting agreements, we had purchased approximately CHF 12 billion gross notional of single name CDS protection on issuers domiciled in Greece, Italy, Ireland, Portugal and Spain (GIIPS) and had sold CHF 11 billion gross notional of single-name CDS protection for these same countries. On a net basis, taking into account the risk-reducing effect of master netting agreements, this equates to approximately CHF 3 billion notional purchased and CHF 2 billion notional sold. All gross protection purchased was from investment grade counterparties (based on our internal ratings) and on a collateralized basis. The vast majority of this was from financial institutions domiciled outside the eurozone. The gross protection purchased from counterparties domiciled in a GIIPS country was CHF 66 million, with only CHF 18 million from counterparties domiciled in the same country as the reference entity.

Exposures to eurozone countries rated lower than AAA / Aaa by at least one major rating agency

CHF million	Total		Banking products (loans, guarantees, loan commitments)			Traded products (counterparty risk from derivatives and securities financing) after master netting agreements and net of collateral		Trading inventory (securities and potential benefits / remaining exposure from derivatives)
31.12.17		Net of hedges[1]	Exposure before hedges	Net of hedges[1]	*of which: unfunded*	Exposure before hedges	Net of hedges	Net long per issuer
Austria	**1,001**	**896**	**94**	**94**	***46***	**137**	**32**	**770**
Sovereign, agencies and central bank	621	516	5	5		114	9	502
Local governments								
Banks	354	354	74	74		15	15	264
Other[2]	26	26	15	15		8	8	3
Belgium	**408**	**408**	**88**	**88**	***5***	**85**	**85**	**235**
Sovereign, agencies and central bank	221	221						221
Local governments								
Banks	83	83	71	71		10	10	2
Other[2]	104	104	16	16		76	76	12
Finland	**93**	**77**	**49**	**34**	***2***	**6**	**6**	**37**
Sovereign, agencies and central bank	30	30						30
Local governments	2	2				2	2	
Banks	9	9	6	6		2	2	1
Other[2]	52	37	43	28		2	2	7
France	**7,843**	**7,744**	**722**	**716**	***490***	**1,018**	**926**	**6,102**
Sovereign, agencies and central bank	6,292	6,199	3	3		315	223	5,974
Local governments	0	0						0
Banks	477	477	235	235		241	241	1
Other[2]	1,074	1,068	485	479		462	462	127
Greece	**14**	**14**	**2**	**2**	***1***	**0**	**0**	**11**
Sovereign, agencies and central bank								
Local governments								
Banks	2	2	2	2		0	0	0
Other[2]	11	11	0	0				11
Ireland[3]	**1,114**	**1,114**	**193**	**193**	***44***	**803**	**803**	**118**
Sovereign, agencies and central bank	1	1						1
Local governments								
Banks	99	99	82	82		12	12	5
Other[2]	1,014	1,014	111	111		792	792	112
Italy	**1,507**	**1,114**	**1,212**	**859**	***756***	**207**	**166**	**89**
Sovereign, agencies and central bank	45	5				45	4	1
Local governments	69	69				63	63	6
Banks	271	271	245	245		17	17	9
Other[2]	1,122	769	967	614		82	82	74
Portugal	**31**	**31**	**17**	**17**	***15***	**1**	**1**	**12**
Sovereign, agencies and central bank	0	0						0
Local governments								
Banks	18	18	17	17		0	0	0
Other[2]	13	13				1	1	12
Spain	**749**	**614**	**594**	**460**	***369***	**40**	**40**	**114**
Sovereign, agencies and central bank	48	48	12	12				36
Local governments	2	2						2
Banks	143	143	119	119		24	24	1
Other[2]	555	421	464	329		17	17	75
Other[4]	**465**	**465**	**413**	**413**	***8***	**1**	**1**	**50**

1 Not deducted from the "Net of hedges" exposures are total allowances and provisions for credit losses of CHF 48 million (of which: Malta CHF 36 million, Ireland CHF 6 million and France CHF 4 million). 2 Includes corporates, insurance companies and funds. 3 The majority of the Ireland exposure relates to funds and foreign bank subsidiaries. 4 Represents aggregate exposures to Andorra, Cyprus, Estonia, Latvia, Lithuania, Malta, Monaco, Montenegro, San Marino, Slovakia and Slovenia.

Exposure from single-name credit default swaps referencing Greece, Italy, Ireland, Portugal or Spain (GIIPS)

CHF million	Protection bought						Protection sold		Net position (after application of counterparty master netting agreements)			
			of which: counterparty domiciled in GIIPS country		*of which: counterparty domicile is the same as the reference entity domicile*							
31.12.17	Notional	RV	Notional	RV	Notional	RV	Notional	RV	Buy notional	Sell notional	PRV	NRV
Greece	31	(3)	0	0	0	0	(26)	2	19	(14)	0	(2)
Italy	9,718	(31)	4	0	4	0	(9,430)	(35)	1,669	(1,381)	34	(100)
Ireland	535	(18)	14	(1)	14	(1)	(448)	11	264	(177)	2	(9)
Portugal	392	(10)	0	0	0	0	(396)	8	175	(179)	4	(6)
Spain	1,265	(32)	49	(1)	0	0	(957)	27	622	(315)	11	(16)
Total	11,941	(94)	66	(2)	18	(1)	(11,258)	12	2,749	(2,066)	50	(132)

Holding CDSs for credit default protection does not necessarily protect the buyer of protection against losses, as the contracts will only pay out under certain scenarios. The effectiveness of our CDS protection as a hedge of default risk is influenced by a number of factors, including the contractual terms under which the CDS was written. Generally, only the occurrence of a credit event as defined by the CDS terms (which may include, among other events, failure to pay, restructuring or bankruptcy) results in a payment under the purchased credit protection contracts. For CDS contracts on sovereign obligations, repudiation can also be deemed as a default event. The determination as to whether a credit event has occurred is made by the relevant International Swaps and Derivatives Association (ISDA) determination committees (comprised of various ISDA member firms) based on the terms of the CDS and the facts and circumstances surrounding the event.

Exposure to emerging market countries

The "Emerging market net exposure by major geographical region and product type" table on the following page shows the five largest emerging market country exposures in each major geographical area by product type as of 31 December 2017 compared with 31 December 2016. Based on the sovereign rating categories, as of 31 December 2017, 79% of our emerging market country exposure was rated investment grade, compared with 83% as of 31 December 2016.

Our direct net exposure to China was CHF 5 billion, down CHF 0.1 billion from the prior year. Trading inventory, which is measured at fair value, continues to account for the majority of our exposure to China.

Emerging markets net exposure[1] by internal UBS country rating category

CHF million	31.12.17	31.12.16
Investment grade	14,021	13,833
Sub-investment grade	3,772	2,787
Total	17,794	16,620

1 Net of credit hedges (for banking products and for traded products); net long per issuer (for trading inventory). Total allowances and provisions of CHF 74 million are not deducted (31 December 2016: CHF 79 million).

Emerging market net exposures by major geographical region and product type

CHF million	Total		Banking products (loans, guarantees, loan commitments)		Traded products (counterparty risk from derivatives and securities financing) after master netting agreements and net of collateral		Trading inventory (securities and potential benefits / remaining exposure from derivatives)	
	Net of hedges[1]		Net of hedges[1]		Net of hedges		Net long per issuer	
	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Emerging America	1,405	1,426	400	493	267	321	738	612
Brazil	813	968	131	199	225	263	457	506
Mexico	355	247	148	147	20	49	188	52
Argentina	79	27	22	14	0		57	13
Chile	51	24	28	16	14	2	9	7
Colombia	30	62	18	49	4	4	8	9
Other	76	98	53	69	5	3	19	26
Emerging Asia	12,085	10,799	3,955	3,838	1,705	1,676	6,425	5,285
China	5,020	5,141	706	868	330	394	3,984	3,880
Hong Kong	2,534	1,715	1,445	1,113	403	282	685	320
South Korea	1,453	1,058	527	348	607	469	319	241
India	857	1,047	467	661	165	251	225	135
Thailand	789	443	136	131	8	2	645	310
Other	1,432	1,395	674	717	192	278	566	400
Emerging Europe	1,625	1,467	1,124	1,007	93	106	408	353
Russia	608	532	206	181	51	41	351	311
Turkey	552	467	507	438	21	25	23	4
Azerbaijan	218	145	211	117	1	28	5	
Poland	63	61	43	50	8	7	12	4
Ukraine	60	32	56	23			4	10
Other	126	229	100	199	12	5	13	25
Middle East and Africa	2,678	2,929	1,321	1,029	807	1,373	551	527
South Africa	886	681	345	34	123	239	418	408
United Arab Emirates	533	556	251	391	279	163	3	2
Saudi Arabia	279	577	136	124	143	453		
Kuwait	216	490	19	31	197	459		
Israel	200	225	53	61	35	49	113	115
Other	565	401	518	388	30	10	17	3
Total	17,794	16,620	6,800	6,367	2,872	3,475	8,121	6,778

1 Not deducted are total allowances and provisions for credit losses of CHF 74 million (31 December 2016: CHF 79 million).

Operational risk

Key developments

The pervasive consequential risk themes that continue to challenge UBS and the financial industry are operational resilience, conduct and financial crime.

Operational resilience remains critical, as the cyber threat landscape continues to evolve while other disaster scenarios remain an ever-present threat. In 2017, many organizations were affected by two prominent global malware attacks. Throughout 2017, data theft continued to be the most prevalent threat with a number of serious breaches at high-profile organizations. UBS continues to invest in both preventive measures and measures to detect and recover from cyberattacks. We have implemented cyber recovery playbooks for various scenarios, as well as regular cyber crisis exercises up to the Group Executive Board and Board of Directors level.

As a global firm, UBS was affected by extreme weather events in the US and India in 2017, in each case triggering business continuity procedures, which allowed us to monitor the safety of staff and for operations to continue with minimal disruption.

Achieving fair outcomes for our clients, upholding market integrity and cultivating the highest standards of employee conduct are of critical importance to the firm. Management of conduct risks is an integral part of our operational risk framework. In managing conduct risk, we continue to focus on embedding this framework, enhancing the management information and maintaining momentum on addressing culture. Conduct-related management information is reviewed at the business and regional governance level, providing metrics on employee conduct, clients and markets, with employee conduct being a central consideration in the annual compensation process. Our incentive schemes distinguish clearly between quantitative performance and conduct-related behaviors, so that achievement against financial targets is not the primary determinant of our employees' performance assessment. Furthermore, we continue to deliver on behavioral initiatives, such as the "Principles of Good Supervision," and provide mandatory compliance and risk training.

Suitability risk, product selection, cross-divisional service offerings, quality of advice and price transparency also remain areas of heightened focus for UBS and for the industry as a whole, as low interest rates and major legislative change programs, such as the Markets in Financial Instruments Directive II (MiFID II) in the EU, continue. We regularly monitor our suitability, product and conflicts of interest control frameworks to assess whether they are reasonably designed to facilitate our adherence to applicable laws and regulatory expectations.

Financial crime, including money laundering, terrorist financing, sanctions violations, fraud, bribery and corruption, continues to present risks, as technological innovation and geopolitical developments have increased the complexity of operating an effective program to prevent and detect financial crime. Regulators and other governmental authorities have heightened expectations for financial crime compliance programs and have significantly increased their focus in this area over the last several years. Given the profile of our wealth management businesses as well as heightened regulatory expectations, maintaining effective programs for prevention and detection of money laundering and for sanctions compliance is a high priority for us. We are investing to improve our detection and monitoring capabilities, including in automation of our processes. Money laundering and fraud techniques are becoming increasingly sophisticated, while geopolitical volatility makes the sanctions landscape more complex. We continue to invest in improving our anti-money laundering (AML), terrorist financing prevention, sanctions and fraud control capabilities to meet the evolving challenge and heightened regulatory expectations.

We also continue to invest heavily in our detection capabilities and core systems as part of our financial crime prevention program. We have been exploring new technologies to combat financial crime, and implementing rule-based monitoring by applying self-learning systems to identify suspicious transactions. Furthermore, we are actively participating in AML public-private partnerships with public-sector stakeholders, including law enforcement, to improve information sharing and better detect financial crimes.

Cross-border risk remains an area of regulatory attention for global financial institutions, with a strong focus on fiscal transparency and increased legislation, such as the automatic exchange of information. We continue to adapt our cross-border control framework to adhere to the regulatory expectations and facilitate compliant client-driven cross-border business.

As the overall regulatory environment continues to undergo major change with the introduction of new regulation, international collaboration among regulators, and increased focus on individual liability and industry operating models, it is important that we maintain strong relationships with our industry's regulatory bodies and demonstrate observable progress in achieving and sustaining corrective actions.

→ **Refer to the "Risk factors" section of this report for more information**

Operational risk framework

Operational risk is an inherent part of our business. Losses can result from inadequate or flawed internal processes, decisions and systems, or from external events. We provide a Group-wide framework that supports identifying, assessing and mitigating material operational risks and their potential concentrations, to achieve a suitable balance between risk and return. The divisional Presidents and the Corporate Center function heads are ultimately accountable for the effectiveness of operational risk management and for implementing the operational risk framework. Responsibility for the front-to-back control environment and risk management is held by the Chief Operating Officers. Management in all functions is responsible for establishing a robust operational risk management environment, including establishing and maintaining internal controls, effective supervision and a strong risk culture. In 2017, we further improved our operational risk framework, streamlined administrative processes, strengthened our abilities to detect and mitigate operational risk and better embedded the framework as a key tool used by the business to manage its risks day-to-day.

Compliance & Operational Risk Control (C&ORC) is responsible for providing an independent and objective view of the adequacy of operational risk management across the Group, and aims to ensure that all our operational risks, including compliance and conduct risk, are understood, owned and managed to the firm's risk appetite. C&ORC is governed by the C&ORC Management Committee, which is chaired by the Global Head of C&ORC, who reports to the Group Chief Risk Officer and is a member of the Risk Executive Committee.

The operational risk framework establishes general requirements for managing and controlling operational risks, including compliance and conduct risk at UBS. It is built on the following pillars:

- classifying inherent risks through the operational risk taxonomy
- assessing the design and operating effectiveness of controls through the internal control assessment process
- assessing residual risk through the risk assessment processes with remediation to address identified deficiencies that are outside accepted levels of residual risk
- defining operational risk appetite, identifying levels of operational risk that exceed defined thresholds and taking appropriate measures to bring residual risk back within the defined appetite

The operational risk taxonomy provides a clear and logical classification of our inherent operational risks, across all divisions. Throughout the organizational hierarchy, a level of risk appetite must be agreed for each of the taxonomy categories, together with a minimum set of internal controls and associated performance thresholds considered necessary to keep risk exposure within acceptable levels.

All functions within our firm are required to assess internal controls periodically, whereby they evaluate and evidence the design and operating effectiveness of their key controls. This also forms the basis for the assessment and testing of internal controls over financial reporting as required by the Sarbanes-Oxley Act, section 404 (SOX 404). The framework facilitates the identification of SOX 404-relevant controls for independent testing, functional assessments, management affirmation and, where control weaknesses are identified, remediation tracking. We employ a consistent global framework to assess the aggregated impact of control deficiencies and the adequacy of remediation efforts.

The UBS risk assessment approach covers all business activities and internal as well as external identified or known factors posing a threat to the UBS Group. Aggregated with any identified or known weaknesses in the control environment, the risk assessment articulates the current operational risk exposure against the firm's risk appetite.

Key control deficiencies that surface during the internal control and risk assessment processes are required to be reported in the operational risk inventory, and sustainable remediation must be defined and executed. These issues are assigned to owners at the senior management level and must be reflected in the respective manager's annual performance measurement and management objectives. To assist with prioritizing the known operational risk issues, irrespective of origin, a common rating methodology is adopted by all internal control functions and both internal and external audit. Group Internal Audit conducts an issue assurance process after a risk issue has been closed to maintain rigorous management discipline in the sustainable mitigation and control of operational risk issues.

Advanced measurement approach model

The operational risk framework detailed above is aligned with and underpins the calculation of regulatory capital for operational risk, which in turn allows us to quantify operational risk and to define effective management incentives.

We measure operational risk exposure and calculate operational risk regulatory capital by using the advanced measurement approach (AMA) in accordance with FINMA requirements.

For regulated subsidiaries, the basic indicator or standardized approaches are adopted in agreement with local regulators. For certain UBS entities, the Group AMA methodology is leveraged to meet local regulatory requirements. An entity-specific AMA model has been applied for UBS Switzerland AG, while the Group AMA model is leveraged for UBS Limited, supporting the local Internal Capital Adequacy Assessment Process, and for UBS Bank USA's Dodd-Frank Act stress tests submissions.

Currently, the model includes 15 AMA Units of Measures (UoMs), all aligned with our operational risk taxonomy. For each of the model's UoMs, a frequency and severity parameter is calibrated. The modeled distribution functions for both frequency and severity are then leveraged to generate the annual loss distribution. The resulting 99.9% quantile of the overall annual operational risk loss distribution across all UoMs determines the required regulatory capital. Currently, we do not reflect mitigation through insurance or any other risk transfer mechanism in our AMA model.

A key assumption when calibrating the base or data-driven frequency and severity distributions is that historical loss patterns and exposures form a reasonable proxy for future events. However, it is important to note that our approach not only models historical internal losses, but also includes external industry losses. A statistical mechanism aims to ensure that only those industry losses that are fairly consistent with the internal UBS loss profile are used in modeling.

AMA model calibration and review

To account for fast-changing external developments such as new regulations, geopolitical change, and volatile market and economic conditions, as well as internal factors including changes in business strategy and internal control framework enhancements, the modeling of historical internal and external losses is further enriched to more effectively forecast potential future losses. To refine the loss forecast, qualitative information on both the external business environment and the internal control framework is summarized and an overall rating is determined to structure and facilitate the Subject Matter Expert (SME) inputs. The purpose of the SME reviews is to account for important qualitative elements in calibrating the AMA model, but also to consider expert knowledge and insights that the SMEs can provide into the calibration process.

To maintain risk sensitivity, our model has to be regularly recalibrated. Therefore, the SME reviews are conducted at least annually, and encompass all UoMs. Change recommendations are presented to FINMA for approval prior to their utilization for disclosure purposes. In addition to the annual reviews, a high-level semiannual review accounts for any material developments between annual calibrations to be reflected in the model outputs. Following regulatory approval, these changes become effective for the subsequent disclosures accordingly.

AMA model confirmation

The Group AMA model is subject to an annual quantitative and qualitative review so that model parameters are plausible and reflect the developing operational risk profile of the firm. This review is independently verified and confirmed by Model Risk Management & Control and supplemented with additional sensitivity and benchmarking analysis by the model owner.

Future operational risk-related regulatory capital developments

In December 2017, the Basel Committee on Banking Supervision published the final Basel III framework. Based on the published framework, the regulatory capital requirements on operational risks will be determined by the standardized measurement approach (SMA), which will replace the AMA capital regime.

The SMA is mainly based on two components: a business indicator component, which is basically utilized as a size proxy for the banks in the SMA context, and a historical loss experience component. With regard to the loss experience component, the published framework has a number of parameters that are subject to national discretion. UBS maintains a close dialog with FINMA to discuss in more detail the implementation objectives and to provide for a smooth transition of the capital regime for operational risks.

→ **Refer to "Capital management objectives, planning and activities" in the "Capital management" section of this report for more information on the development of RWA**

→ **Refer to "Risk measurement" in this section for more information on our approach to model confirmation procedures**

→ **Refer to the "Regulatory and legal developments" and "Risk factors" sections of this report for more information**

Capital management

Capital management objectives, planning and activities

Capital management objectives

Audited | An adequate level of total loss-absorbing capacity (TLAC) in accordance with both our internal assessment and regulatory requirements is a prerequisite to conducting our business activities.▲ We are therefore committed to maintaining a strong TLAC position and sound TLAC ratios at all times in order to meet regulatory capital requirements and our target capital ratios, and to support the growth of our businesses.

We expect to meet known future increases in TLAC requirements mainly through a combination of retaining earnings and issuing high-trigger loss-absorbing additional tier 1 (AT1) capital instruments, including Deferred Contingent Capital Plan (DCCP) employee compensation awards, as well as issuing senior unsecured debt that contributes to our TLAC.

As of 31 December 2017, our fully applied common equity tier 1 (CET1) capital ratio and our fully applied CET1 leverage ratio were 13.8% and 3.7%, respectively, each of which is above the requirements for Swiss systemically relevant banks (SRBs), which are stricter than the Basel Committee on Banking Supervision (BCBS) requirements and which will apply from 1 January 2020.

In December 2017, the BCBS announced the finalization of the Basel III framework. As a result, we have provided updated capital guidance for the 2018–2020 period. We plan to operate with a fully applied CET1 capital ratio of around 13% and a fully applied CET1 leverage ratio of around 3.7%.

We currently estimate that the introduction of the revised Basel III framework will likely lead to a further net increase in risk-weighted assets (RWA) of around CHF 35 billion, before taking into account mitigation actions. These estimates are based on our current understanding of the relevant standards and may change as a result of new or changed regulatory interpretations, implementation of the Basel III standards into national law, changes in business growth, market conditions and other factors. We plan to update our guidance on CET1 ratios when further details on the final implementation of the new Basel III rules into national law are available.

In addition, over the next three years, as a result of other known regulatory changes and estimated business growth, we estimate our RWA may increase by around CHF 40 billion and our leverage ratio denominator (LRD) by around CHF 85 billion. Actual increases may vary depending on growth opportunities, market conditions and mitigation actions. As a consequence, and based on the estimates above, we may build approximately CHF 4 billion of additional fully applied CET1 capital over the next three years, subject to market conditions, as well as RWA and LRD development.

We believe that our capital strength is a source of confidence for our stakeholders, contributes to our strong credit ratings and is the foundation of our success.

→ **Refer to the "Our strategy" section of this report for more information on our updated capital guidance**

→ **Refer to "Finalization of the Basel III capital framework" in the "Regulatory and legal developments" section of this report for more information on changes to our regulatory capital requirements**

→ **Refer to "Our stated capital returns objective is based, in part, on capital ratios that are subject to regulatory change and may fluctuate significantly" in the "Risk factors" section of this report for more information on the risks related to our capital ratios**

Capital planning and activities

Audited | We manage our balance sheet, RWA, LRD and TLAC ratio levels within our internal limits and targets and on the basis of our regulatory TLAC requirements. Our strategic focus is set on achieving an optimal attribution and use of financial resources between our business divisions and Corporate Center, as well as between our legal entities, while remaining within the limits defined for the Group and allocated to the business divisions by the Board of Directors (BoD). These resource allocations, in turn, affect business plans and earnings projections, which are reflected in our capital plans.

The annual strategic planning process includes a capital-planning component that is key in defining medium- and longer-term capital targets. It is based on an attribution of Group RWA and LRD internal limits to the business divisions.

Limits and targets are established at both the Group and business division levels, and are submitted to the BoD for approval at least annually. In the target-setting process, we take into account the current and potential future TLAC requirements, our aggregate risk exposure in terms of capital-at-risk, the assessment by rating agencies, comparisons with peers and the effect of expected accounting policy changes.▲ Monitoring is based on these internal limits and targets and provides indications if changes are required. Any breach of the limits in place triggers the imposition of a series of required remediating actions.

Group Treasury plans for, and monitors, consolidated TLAC information on an ongoing basis, also considering developments in capital regulations. In addition, capital planning and monitoring are performed at the legal entity level for our significant subsidiaries that are subject to prudential supervision and must meet capital and other supervisory requirements.

Audited | In 2017, we continued to focus on meeting the Swiss SRB fully applied capital requirements, which will go into effect from 1 January 2020. Therefore, we executed a series of transactions, including:

- the issuance of CHF 10.4 billion equivalent of TLAC-eligible senior unsecured debt
- the issuance of CHF 0.4 billion of high-trigger loss-absorbing AT1 capital instruments related to DCCP awards granted for the performance year 2017
- the call of CHF 2.7 billion equivalent of non-Basel III-compliant tier 1 and tier 2 capital instruments.▲

As of 31 December 2017, these transactions contributed to our fully applied TLAC ratio amounting to 33.0% of our RWA and 8.8% of our LRD compared with the respective minimum requirements of 26.6%, excluding countercyclical buffer requirements, and 9.3%, which are applicable as of 1 January 2020.

→ **Refer to "Equity attribution and return on attributed equity" in this section for more information on how equity is attributed to our business divisions**

→ **Refer to "Capital and capital ratios of our significant regulated subsidiaries" in this section for more information**

Swiss SRB total loss-absorbing capacity framework

Disclosures in this section are provided for UBS Group AG on a consolidated basis and focus on information in accordance with the Basel III framework as applicable to Swiss systemically relevant banks (SRBs).

Information in accordance with the Basel Committee on Banking Supervision (BCBS) framework, including requirements for global systemically important banks as of 31 December 2017 for UBS Group AG consolidated, is provided in the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors.*

Capital and other regulatory information as of 31 December 2017 for UBS AG consolidated is provided in the UBS Group AG and UBS AG Annual Report 2017 under "Annual reporting" at *www.ubs.com/investors.*

Capital and other regulatory information as of 31 December 2017 for UBS AG standalone, UBS Switzerland AG standalone, UBS Limited standalone and UBS Americas Holding LLC consolidated is provided in the "Financial and regulatory key figures for our significant regulated subsidiaries and sub-groups" section of this report and in the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors.*

Regulatory framework

The Basel III framework came into effect in Switzerland on 1 January 2013 and is embedded in the Swiss Capital Adequacy Ordinance (CAO). The CAO also includes the too big to fail provisions applicable to Swiss SRBs, which became effective on 1 July 2016 and will be transitioned in until 1 January 2020.

Under the Swiss SRB framework, going and gone concern requirements represent the total loss-absorbing capacity (TLAC) requirement of the Group. TLAC encompasses regulatory capital, such as common equity tier 1 (CET1), loss-absorbing additional tier 1 (AT1) and tier 2 capital instruments, as well as liabilities that can be written down or converted into equity in case of resolution or for the purpose of restructuring measures.

Common equity tier 1 capital

The Basel III framework includes prudential filters for the calculation of capital. These prudential filters consist mainly of capital deductions for deferred tax assets (DTAs) recognized for tax loss carry-forwards, DTAs on temporary differences that exceed a certain threshold and effects related to defined benefit plans. As these filters are being phased in between 2014 and 2018, their effects are gradually factored into our calculations of capital, risk-weighted assets (RWA) and capital ratios on a phase-in basis and are entirely reflected in our capital, RWA and capital ratios on a fully applied basis.

In 2017, we deducted from our phase-in CET1 capital 80% (in 2016: 60%) of: (i) DTAs recognized for tax loss carry-forwards, (ii) DTAs on temporary differences that exceed the threshold of 10% of CET1 capital before deductions for DTAs on temporary differences and (iii) net defined benefit pension plan assets. As of 31 December 2017, we deducted 80% (in 2016: 60%) of our goodwill from phase-in CET1 capital and 20% (in 2016: 40%) of our goodwill from loss-absorbing AT1 capital. Starting 1 January 2018, the aforementioned requirements are fully phased in.

Capital and other instruments contributing to our total loss-absorbing capacity

In addition to CET1 capital, the following instruments contribute to our loss-absorbing capacity:

- Loss-absorbing AT1 capital instruments (high- and low-trigger)
- Loss-absorbing tier 2 capital instruments (high- and low-trigger)
- Non-Basel III-compliant tier 2 capital instruments
- TLAC-eligible senior unsecured debt instruments

Under the fully applied Swiss SRB rules, going concern capital includes CET1 and high-trigger loss-absorbing AT1 capital instruments. Under the transitional rules for the Swiss SRB framework, outstanding low-trigger loss-absorbing AT1 capital instruments are available to meet the going concern capital requirements until their first call date, even if the first call date is after 31 December 2019. As of their first call date, these instruments are eligible to meet the gone concern requirements.

Outstanding high- and low-trigger loss-absorbing tier 2 capital instruments are available to meet the going concern capital requirements until the earlier of (i) their maturity or first call date or (ii) 31 December 2019, and to meet gone concern requirements thereafter. Outstanding low-trigger loss-absorbing tier 2 capital instruments are subject to amortization starting five years prior to their maturity, with the amortized portion qualifying as gone concern loss-absorbing capacity.

Non-Basel III-compliant tier 2 capital instruments and TLAC-eligible senior unsecured debt instruments are eligible to meet gone concern requirements.

Instruments available to meet gone concern requirements are eligible until one year before maturity, with a haircut of 50% applied in the last year of eligibility.

→ **Refer to "Bondholder information" at** *www.ubs.com/investors* **for more information on the eligibility of capital and senior unsecured debt instruments and on key features and terms and conditions of capital instruments**

Total loss-absorbing capacity and leverage ratio requirements

Going concern capital requirements

Once the Swiss SRB requirements are fully implemented by 1 January 2020, total going concern minimum requirements for all Swiss SRBs are a capital ratio requirement of 12.86% of RWA and a leverage ratio requirement of 4.5%. In addition to these minimum requirements, an add-on reflecting the degree of systemic importance is applied based on market share and the leverage ratio denominator (LRD). The add-on for UBS is expected to be 1.44% of RWA and 0.5% of our LRD, resulting in total going concern capital requirements applicable starting as of 1 January 2020 of 14.3% of RWA (excluding countercyclical buffer requirements) and 5.0% of the LRD. Furthermore, of the total going concern capital requirement of 14.3% of RWA, at least 10% must be met with CET1 capital, while a maximum of 4.3% can be met with high-trigger loss-absorbing AT1 capital instruments. Similarly, of the total going concern leverage ratio requirement of 5.0%, 3.5% must be met with CET1 capital, while a maximum of 1.5% can be met with high-trigger loss-absorbing AT1 capital instruments.

National authorities can put in place a countercyclical buffer requirement of up to 2.5% of RWA for private sector credit exposures in their jurisdictions. The requirement must also be met with CET1 capital. The Swiss Federal Council has activated a countercyclical buffer requirement of 2% of RWA for mortgage loans on residential property in Switzerland, applicable since 30 June 2014. Furthermore, since 1 July 2016, we are required to apply additional countercyclical buffer requirements implemented in other Basel Committee member jurisdictions. The requirements will be phased in by and become fully effective on 1 January 2019. The effect as of 31 December 2017 was immaterial.

Gone concern loss-absorbing capacity requirements

As an internationally active Swiss SRB, UBS is also subject to gone concern loss-absorbing capacity requirements. The gone concern requirements also include add-ons for market share and the LRD, and may be met with senior unsecured debt that is TLAC eligible.

Under the Swiss SRB framework, banks are eligible for a rebate on the gone concern requirement if they take actions that facilitate recovery and resolvability beyond the minimum requirements to ensure the integrity of systemically important functions in the case of an impending insolvency. In addition, in the event that certain low-trigger loss-absorbing AT1 or tier 2 capital instruments are used to meet the gone concern requirements, such requirements may be reduced by up to 2.86% for the RWA-based requirement and up to 1% for the LRD-based requirement. The combined reduction applied for resolvability measures and the aforementioned gone concern requirement reduction for use of low-trigger loss-absorbing AT1 and tier 2 capital instruments may not exceed 5.72% for the RWA-based requirement of 14.3% and 2% for the LRD-based requirement of 5%. The amount of the rebate for improved resolvability is assessed annually by FINMA. Based on actions we completed up to December 2016 to improve resolvability, FINMA granted a rebate on the gone concern requirement of 35% of the aforementioned maximum rebate in 2017, which resulted in a reduction of 2.0 percentage points for the RWA-based requirement and 0.7 percentage points for the LRD-based requirement. This rebate will be phased in until 1 January 2020, when UBS will be subject to a 12.3% RWA-based and 4.3% LRD-based gone concern requirement. As we complete additional measures to improve the resolvability of the Group, we expect to qualify for a larger rebate and therefore aim to operate with a gone concern ratio of less than 4% of the LRD upon completion of the phase-in period.

In this report, we refer to the RWA-based gone concern requirements as gone concern loss-absorbing capacity requirements, and the RWA-based gone concern ratio is referred to as the gone concern loss-absorbing capacity ratio.

Swiss SRB going and gone concern requirements – time series[1]

	Risk-weighted assets (%)				Leverage ratio (%)			
	Requirements				Requirements			
	31.12.17	1.1.18	1.1.19	1.1.20	31.12.17	1.1.18	1.1.19	1.1.20
Going concern								
Minimum capital	8.00	8.00	8.00	8.00	3.00	3.00	3.00	3.00
Buffer capital including applicable add-ons[2]	4.22	4.86	5.58	6.30	0.50	1.00	1.50	2.00
Total going concern	12.22	12.86	13.58	14.30	3.50	4.00	4.50	5.00
of which: common equity tier 1 capital[2]	*9.22*	*9.46*	*9.68*	*10.00*	*2.60*	*2.90*	*3.20*	*3.50*
of which: maximum high-trigger loss-absorbing additional tier 1 capital	*3.00*	*3.40*	*3.90*	*4.30*	*0.90*	*1.10*	*1.30*	*1.50*
Gone concern								
Base requirement including applicable add-ons and rebate	5.33	7.65	9.98	12.30	1.72	2.58	3.44	4.30
Total gone concern	5.33	7.65	9.98	12.30	1.72	2.58	3.44	4.30
Total loss-absorbing capacity	17.55	20.51	23.56	26.60	5.22	6.58	7.94	9.30

1 This table includes a rebate equal to 35% of the maximum rebate on the gone concern requirements, which was granted by FINMA due to improved resolvability. This resulted in a reduction of 2.0 percentage points for the RWA-based requirement and 0.7 percentage points for the LRD-based requirement and will be phased in until 1 January 2020. This table does not include a rebate for the usage of low-trigger loss-absorbing additional tier 1 or tier 2 capital instruments to meet the gone concern requirements. 2 Going concern capital ratio requirements as of 31 December 2017 include a countercyclical buffer requirement of 0.22%. Requirements for subsequent periods exclude the effect of the countercyclical buffer requirement, as potential future countercyclical buffer requirements are not yet known.

Swiss SRB going and gone concern requirements and information[1]

	Swiss SRB, including transitional arrangements (phase-in)							
As of 31.12.17	RWA				LRD			
CHF million, except where indicated	Requirement (%)	Actual (%)	Requirement	Eligible	Requirement (%)	Actual (%)	Requirement	Eligible
Common equity tier 1 capital	9.22	14.89	21,974	35,494	2.60	4.00	23,079	35,494
Maximum high-trigger loss-absorbing additional tier 1 capital[2,3]	3.00	6.82	7,152	16,254	0.90	1.83	7,989	16,254
of which: high-trigger loss-absorbing additional tier 1 capital		*2.88*		*6,857*		*0.77*		*6,857*
of which: low-trigger loss-absorbing additional tier 1 capital		*0.46*		*1,087*		*0.12*		*1,087*
of which: high-trigger loss-absorbing tier 2 capital		*0.18*		*435*		*0.05*		*435*
of which: low-trigger loss-absorbing tier 2 capital		*3.30*		*7,874*		*0.89*		*7,874*
Total going concern capital	**12.22[4]**	**21.71**	**29,126**	**51,748**	**3.50[5]**	**5.83**	**31,067**	**51,748**
Base gone concern loss-absorbing capacity, including applicable add-ons and rebate	5.33[6]	11.87	12,711	28,300	1.72[6]	3.19	15,267	28,300
Total gone concern loss-absorbing capacity	**5.33**	**11.87**	**12,711**	**28,300**	**1.72**	**3.19**	**15,267**	**28,300**
Total loss-absorbing capacity	**17.55**	**33.58**	**41,837**	**80,048**	**5.22**	**9.02**	**46,335**	**80,048**

	Swiss SRB as of 1.1.20 (fully applied)							
As of 31.12.17	RWA				LRD			
CHF million, except where indicated	Requirement (%)	Actual (%)	Requirement	Eligible	Requirement (%)	Actual (%)	Requirement	Eligible
Common equity tier 1 capital	10.22	13.76	24,266	32,671	3.50	3.69	31,014	32,671
Maximum high-trigger loss-absorbing additional tier 1 capital[2]	4.30	3.89	10,212	9,240	1.50	1.04	13,292	9,240
of which: high-trigger loss-absorbing additional tier 1 capital		*2.89*		*6,857*		*0.77*		*6,857*
of which: low-trigger loss-absorbing additional tier 1 capital		*1.00*		*2,383*		*0.27*		*2,383*
Total going concern capital	**14.52[7]**	**17.65**	**34,478**	**41,911**	**5.00[8]**	**4.73**	**44,306**	**41,911**
Base gone concern loss-absorbing capacity, including applicable add-ons and rebate	12.30[9]	15.32	29,207	36,392	4.30[9]	4.11	38,103	36,392
Total gone concern loss-absorbing capacity	**12.30**	**15.32**	**29,207**	**36,392**	**4.30**	**4.11**	**38,103**	**36,392**
Total loss-absorbing capacity	**26.82**	**32.97**	**63,685**	**78,303**	**9.30**	**8.84**	**82,409**	**78,303**

1 This table includes a rebate equal to 35% of the maximum rebate on the gone concern requirements, which was granted by FINMA. This resulted in a reduction of 2.0 percentage points for the RWA-based requirement and 0.7 percentage points for the LRD-based requirement and will be phased in until 1 January 2020. This table does not include a rebate for the usage of low-trigger loss-absorbing additional tier 1 or tier 2 capital instruments to meet the gone concern requirements. 2 Includes outstanding low-trigger loss-absorbing additional tier 1 (AT1) capital instruments, which are available under the transitional rules of the Swiss SRB framework to meet the going concern requirements until their first call date, even if the first call date is after 31 December 2019. As of their first call date, these instruments are eligible to meet the gone concern requirements. Low-trigger loss-absorbing AT1 capital was partly offset by required deductions for goodwill on a phase-in basis. 3 Includes outstanding high- and low-trigger loss-absorbing tier 2 capital instruments, which are available under the transitional rules of the Swiss SRB framework to meet the going concern requirements until the earlier of (i) their maturity or first call date or (ii) 31 December 2019, and to meet gone concern requirements thereafter. Outstanding low-trigger loss-absorbing tier 2 capital instruments are subject to amortization starting five years prior to their maturity, with the amortized portion qualifying as gone concern loss-absorbing capacity. Instruments available to meet gone concern requirements are eligible until one year before maturity, with a haircut of 50% applied in the last year of eligibility. 4 Consists of a minimum capital requirement of 8% and a buffer capital requirement of 4.22%, including the effect of countercyclical buffers of 0.22%. 5 Consists of a minimum leverage ratio requirement of 3% and a buffer leverage ratio requirement of 0.5%. 6 Includes applicable add-ons of 0.36% for RWA and 0.13% for leverage ratio denominator and a rebate of 0.87% for RWA and 0.28% for LRD. 7 Consists of a minimum capital requirement of 8% and a buffer capital requirement of 6.52%, including the effect of countercyclical buffers of 0.22% and applicable add-ons of 1.44%. 8 Consists of a minimum leverage ratio requirement of 3% and a buffer leverage ratio requirement of 2%, including applicable add-ons of 0.5%. 9 Includes applicable add-ons of 1.44% for RWA and 0.5% for LRD and a rebate of 2% for RWA and 0.7% for LRD.

Total loss-absorbing capacity

Swiss SRB going and gone concern information

	Swiss SRB, including transitional arrangements (phase-in)		Swiss SRB as of 1.1.20 (fully applied)	
CHF million, except where indicated	31.12.17	31.12.16	31.12.17	31.12.16
Going concern capital				
Common equity tier 1 capital	35,494	37,788	32,671	30,693
High-trigger loss-absorbing additional tier 1 capital	6,857	6,512[1]	6,857	6,809
Low-trigger loss-absorbing additional tier 1 capital	1,087[1]	0[1]	2,383	2,342
Total loss-absorbing additional tier 1 capital	7,944	6,512	9,240	9,151
Total tier 1 capital	43,438	44,299	41,911	39,844
High-trigger loss-absorbing tier 2 capital	435	891		
Low-trigger loss-absorbing tier 2 capital	7,874[2]	10,402		
Total tier 2 capital	8,309	11,293		
Total going concern capital	51,748	55,593	41,911	39,844
Gone concern loss-absorbing capacity[3]				
Non-Basel III-compliant tier 1 capital[4]	0	642	0	642
Total tier 1 capital	0	642	0	642
High-trigger loss-absorbing tier 2 capital			218	679
Low-trigger loss-absorbing tier 2 capital	378[2]		8,252	10,402
Non-Basel III-compliant tier 2 capital[4]	689	698	689	698
Total tier 2 capital	1,067	698	9,159	11,779
TLAC-eligible senior unsecured debt	27,233	16,890	27,233	16,890
Total gone concern loss-absorbing capacity	28,300	18,229	36,392	29,311
Total loss-absorbing capacity				
Total loss-absorbing capacity	80,048	73,822	78,303	69,154
Risk-weighted assets / leverage ratio denominator				
Risk-weighted assets	238,394	225,412	237,494	222,677
Leverage ratio denominator	887,635	874,925	886,116	870,470
Capital and loss-absorbing capacity ratios (%)				
Going concern capital ratio	21.7	24.7	17.6	17.9
of which: common equity tier 1 capital ratio	*14.9*	*16.8*	*13.8[5]*	*13.8*
Gone concern loss-absorbing capacity ratio	11.9	8.1	15.3	13.2
Total loss-absorbing capacity ratio	33.6	32.7	33.0	31.1
Leverage ratios (%)				
Going concern leverage ratio	5.8	6.4	4.7	4.6
of which: common equity tier 1 leverage ratio	*4.0*	*4.3*	*3.7*	*3.5*
Gone concern leverage ratio	3.2	2.1	4.1	3.4
Total loss-absorbing capacity leverage ratio	9.0	8.4	8.8	7.9

1 High-trigger loss-absorbing additional tier 1 (AT1) capital (31 December 2016: CHF 6,809 million) and low-trigger loss-absorbing AT1 capital (31 December 2017: CHF 2,383 million; 31 December 2016: CHF 2,342 million) were partly offset by required deductions for goodwill (31 December 2017: CHF 1,296 million; 31 December 2016: CHF 2,639 million). 2 Outstanding low-trigger loss-absorbing tier 2 capital instruments are subject to amortization starting five years prior to their maturity, with the amortized portion qualifying as gone concern loss-absorbing capacity. 3 Instruments available to meet gone concern requirements are eligible until one year before maturity, with a haircut of 50% applied in the last year of eligibility. 4 Non-Basel III-compliant tier 1 and tier 2 capital instruments qualify as gone concern instruments. 5 Our post-stress CET1 capital ratio exceeded the 10% objective as of 31 December 2017.

Audited I

Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital

	Swiss SRB, including transitional arrangements (phase-in)		Swiss SRB as of 1.1.20 (fully applied)	
CHF million	31.12.17	31.12.16	31.12.17	31.12.16
Total IFRS equity	51,271	54,302	51,271	54,302
Equity attributable to non-controlling interests	(57)	(682)	(57)	(682)
Deferred tax assets recognized for tax loss carry-forwards[1]	(4,637)	(5,042)	(5,797)	(8,403)
Deferred tax assets on temporary differences, excess over threshold	(489)	(741)	(857)	(1,835)
Goodwill, net of tax[1,2]	(5,183)	(3,959)	(6,479)	(6,599)
Intangible assets, net of tax	(214)	(241)	(214)	(241)
Compensation-related components (not recognized in net profit)	(1,620)	(1,589)	(1,620)	(1,589)
Expected losses on advanced internal ratings-based portfolio less general provisions	(634)	(356)	(634)	(356)
Unrealized (gains) / losses from cash flow hedges, net of tax	(351)	(972)	(351)	(972)
Unrealized own credit related to financial liabilities designated at fair value, net of tax, and replacement values	133	(294)	133	(294)
Unrealized gains related to financial assets available for sale, net of tax	(193)	(262)	(193)	(262)
Prudential valuation adjustments	(59)	(68)	(59)	(68)
Consolidation scope	(44)	(129)	(44)	(129)
Accruals for proposed dividends to shareholders	(2,438)	(2,250)	(2,438)	(2,250)
Other	10	71	10	71
Total common equity tier 1 capital	35,494	37,788	32,671	30,693

1 As of 31 December 2017, the phase-in deduction applied was 80%; as of 31 December 2016, the phase-in deduction applied was 60%. 2 Includes goodwill related to significant investments in financial institutions of CHF 350 million (31 December 2016: CHF 342 million).

▲

Total loss-absorbing capacity and movement

Going concern capital and movement

Audited I Our CET1 capital mainly consists of share capital, share premium, which primarily consists of additional paid-in capital related to shares issued, and retained earnings. A detailed reconciliation of IFRS equity to CET1 capital is provided in the "Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital" table.

Our fully applied CET1 capital increased by CHF 2.0 billion to CHF 32.7 billion as of 31 December 2017, mainly as a result of operating profit before tax, partly offset by accruals for capital returns to shareholders. Our loss-absorbing additional tier 1 capital remained at CHF 9.2 billion, unchanged from 31 December 2016, as a CHF 0.4 billion increase related to Deferred Contingent Capital Plan (DCCP) awards granted for the performance year 2017 was offset by currency effects. ▲

Gone concern loss-absorbing capacity and movement

Audited I Our fully applied total gone concern loss-absorbing capacity increased by CHF 7.1 billion to CHF 36.4 billion as of 31 December 2017, including CHF 27.2 billion of TLAC-eligible senior unsecured debt. ▲ This was primarily driven by the issuance of CHF 10.4 billion TLAC-eligible senior unsecured debt, partly offset by a CHF 3.3 billion decrease mainly resulting from the call of a low-trigger tier 2 capital instrument equivalent to CHF 2.0 billion, the call of a CHF 0.7 billion non-Basel III-compliant tier 1 capital instrument and CHF 0.4 billion related to the decrease in eligibility of certain DCCP awards due to the shortening of the residual tenor.

Loss-absorbing capacity and leverage ratios

Our fully applied CET1 capital ratio was 13.8%, unchanged from 31 December 2016, exceeding our 2017 target ratio of 13.0%, reflecting a CHF 2.0 billion increase in CET1 capital and a CHF 14.8 billion increase in risk-weighted assets (RWA). The net write-down of deferred tax assets (DTAs) following a reduction in the US federal corporate tax rate after the enactment of the Tax Cuts and Jobs Act in the US during the fourth quarter of 2017 had a negligible effect on this ratio.

Our fully applied CET1 leverage ratio increased 0.2 percentage points to 3.7% as of 31 December 2017, reflecting the aforementioned increase in CET1 capital, partly offset by a CHF 16 billion increase in the leverage ratio denominator (LRD).

On a fully applied basis, our gone concern loss-absorbing capacity ratio increased 2.1 percentage points to 15.3%, primarily driven by the aforementioned issuance of TLAC-eligible senior unsecured debt. Our gone concern leverage ratio on a fully applied basis increased 0.7 percentage points to 4.1% due to the aforementioned increase in the gone concern loss-absorbing capacity, partly offset by the higher LRD.

→ **Refer to the "Regulatory and legal developments" section of this report for more information on the significant tax law changes enacted in the US**

Swiss SRB total loss-absorbing capacity movement

CHF million	Swiss SRB, including transitional arrangements (phase-in)	Swiss SRB as of 1.1.20 (fully applied)
Going concern capital		
Common equity tier 1 capital as of 31.12.16	37,788	30,693
Operating profit before tax	5,268	5,268
Net (profit) / loss attributable to non-controlling interests	(76)	(76)
Current tax (expense) / benefit	(875)	(875)
Deferred tax assets recognized for tax loss carry-forwards, additional phase-in effect	(1,681)	
Deferred tax assets recognized for temporary differences, additional phase-in effect	(547)	
Goodwill, additional phase-in effect	(1,320)	
Deferred tax assets recognized for tax loss carry-forwards	(432)	
Deferred tax assets recognized for temporary differences	(79)	100
Foreign currency translation effects	(302)	(186)
Expected loss on advanced IRB portfolio less general provisions	(278)	(278)
Compensation-related capital and share premium components	(28)	(28)
Defined benefit plans	263	263
Own credit risk related to derivative liabilities	101	101
Consolidation scope	85	85
Accruals for proposed dividends to shareholders	(2,438)	(2,438)
Other	45	42
Common equity tier 1 capital as of 31.12.17	35,494	32,671
Loss-absorbing additional tier 1 capital as of 31.12.16	6,512	9,151
Goodwill, additional phase-in effect	1,320	
Issuance of high-trigger loss-absorbing additional tier 1 capital	383	383
Foreign currency translation and other effects	(270)	(294)
Loss-absorbing additional tier 1 capital as of 31.12.17	7,944	9,240
Tier 2 capital as of 31.12.16	11,293	
Call of a low-trigger loss-absorbing tier 2 capital instrument	(1,982)	
Amortization due to shortening residual tenor	(380)	
Amortization of Deferred Contingent Capital Plan (DCCP)	(398)	
Foreign currency translation and other effects	(225)	
Tier 2 capital as of 31.12.17	8,309	
Total going concern capital as of 31.12.16	55,593	39,844
Total going concern capital as of 31.12.17	51,748	41,911
Gone concern loss-absorbing capacity		
Tier 1 capital as of 31.12.16	642	642
Call of the non-Basel III-compliant tier 1 capital instrument	(687)	(687)
Foreign currency translation and other effects	45	45
Tier 1 capital as of 31.12.17	0	0
Tier 2 capital as of 31.12.16	698	11,779
Call of a low-trigger loss-absorbing tier 2 capital instrument		(1,982)
Amortized portion, which qualifies as gone concern loss-absorbing capacity	380	
Decrease in eligibility due to shortening residual tenor (DCCP)		(446)
Foreign currency translation and other effects	(10)	(193)
Tier 2 capital as of 31.12.17	1,067	9,159
TLAC-eligible senior unsecured debt as of 31.12.16	16,890	16,890
Issuance of TLAC-eligible senior unsecured debt instruments	10,377	10,377
Foreign currency translation and other effects	(33)	(33)
TLAC-eligible senior unsecured debt as of 31.12.17	27,233	27,233
Total gone concern loss-absorbing capacity as of 31.12.16	18,229	29,311
Total gone concern loss-absorbing capacity as of 31.12.17	28,300	36,392
Total loss-absorbing capacity		
Total loss-absorbing capacity as of 31.12.16	73,822	69,154
Total loss-absorbing capacity as of 31.12.17	80,048	78,303

Additional information

Active management of sensitivity to currency movements

Corporate Center – Group Asset and Liability Management (Group ALM) is mandated to minimize adverse effects from changes in currency rates on our fully applied CET1 capital and CET1 capital ratio. A significant portion of our capital and RWA are denominated in US dollars, euros, British pounds and other foreign currencies. In order to hedge the CET1 capital ratio, CET1 capital needs to have foreign currency exposure, leading to currency sensitivity of CET1 capital. As a consequence, it is not possible to simultaneously fully hedge the capital and the capital ratio. As the proportion of RWA denominated in foreign currencies outweighs the capital in these currencies, a significant appreciation of the Swiss franc against these currencies could benefit our capital ratios, while a significant depreciation of the Swiss franc against these currencies could adversely affect our capital ratios. The Group Asset and Liability Management Committee, a committee of the Group Executive Board, can adjust the currency mix in capital, within limits set by the Board of Directors, to balance the effect of foreign exchange movements on the fully applied CET1 capital and capital ratio. Limits are in place for the sensitivity of both CET1 capital and the capital ratio to an appreciation or depreciation of 10% in the value of the Swiss franc against other currencies.

Sensitivity to currency movements

Risk-weighted assets

We estimate that a 10% depreciation of the Swiss franc against other currencies would have increased our fully applied RWA by CHF 11 billion and our fully applied CET1 capital by CHF 1.2 billion as of 31 December 2017 (31 December 2016: CHF 10 billion and CHF 1.2 billion, respectively) and reduced our fully applied CET1 capital ratio by 11 basis points (31 December 2016: 7 basis points). Conversely, we estimate that a 10% appreciation of the Swiss franc against other currencies would have reduced our fully applied RWA by CHF 10 billion and our fully applied CET1 capital by CHF 1.1 billion (31 December 2016: CHF 9 billion and CHF 1.1 billion, respectively) and increased our fully applied CET1 capital ratio by 11 basis points (31 December 2016: 7 basis points).

Leverage ratio denominator

Our leverage ratio is also sensitive to foreign exchange movements due to the currency mix of our capital and LRD. When adjusting the currency mix in capital, potential effects on the going concern leverage ratio are taken into account and the sensitivity of the going concern leverage ratio to an appreciation or depreciation of 10% in the value of the Swiss franc against other currencies is actively monitored.

We estimate that a 10% depreciation of the Swiss franc against other currencies would have increased our fully applied LRD by CHF 68 billion (31 December 2016: CHF 64 billion) and reduced our fully applied Swiss SRB going concern leverage ratio by 12 basis points (31 December 2016: 9 basis points). Conversely, we estimate that a 10% appreciation of the Swiss franc against other currencies would have reduced our fully applied LRD by CHF 61 billion (31 December 2016: CHF 58 billion) and increased our fully applied Swiss SRB going concern leverage ratio by 12 basis points (31 December 2016: 10 basis points).

The aforementioned sensitivities do not consider foreign currency translation effects related to defined benefit plans other than those related to the currency translation of the net equity of foreign operations.

Estimated effect on capital from litigation, regulatory and similar matters subject to provisions and contingent liabilities

We have estimated the loss in capital that we could incur as a result of the risks associated with the matters described in "Note 20 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report. We have used for this purpose the advanced measurement approach (AMA) methodology that we use when determining the capital requirements associated with operational risks, based on a 99.9% confidence level over a 12-month horizon. The methodology takes into consideration UBS and industry experience for the AMA operational risk categories to which those matters correspond, as well as the external environment affecting risks of these types, in isolation from other areas. On this standalone basis, we estimate the loss in capital that we could incur over a 12-month period as a result of our risks associated with these operational risk categories at CHF 4.8 billion as of 31 December 2017 (31 December 2016: CHF 4.8 billion). This estimate is not related to and does not take into account any provisions recognized for any of these matters and does not constitute a subjective assessment of our actual exposure in any of these matters.

→ **Refer to "Operational risk" in the "Risk management and control" section of this report for more information**

→ **Refer to "Note 20 Provisions and contingent liabilities" in the "Consolidated financial statements" section of this report for more information**

Capital and capital ratios of our significant regulated subsidiaries

UBS Group AG is a holding company and conducts substantially all of its operations through UBS AG and its subsidiaries. UBS Group AG and UBS AG have contributed a significant portion of their respective capital and provide substantial liquidity to subsidiaries. Many of these subsidiaries are subject to regulations requiring compliance with minimum capital, liquidity and similar requirements. Regulatory capital components and capital ratios of our significant regulated subsidiaries determined under the regulatory framework of each subsidiary's home jurisdiction are provided in the "Financial and regulatory key figures for our significant regulated subsidiaries and sub-groups" section of this report. Supervisory authorities generally have discretion to impose higher requirements or to otherwise limit the activities of subsidiaries. Supervisory authorities also may require entities to measure capital and leverage ratios on a stressed basis and may limit the ability of the entity to engage in new activities or take capital actions based on the results of those tests.

→ **Refer to the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on capital and other regulatory information of our subsidiaries and sub-groups**

Joint liability of UBS AG and UBS Switzerland AG

In June 2015, upon the transfer of the Personal & Corporate Banking and Wealth Management businesses booked in Switzerland from UBS AG to UBS Switzerland AG, UBS AG and UBS Switzerland AG assumed joint liability for obligations transferred to UBS Switzerland AG and existing at UBS AG, respectively. Under certain circumstances, the Swiss Banking Act and FINMA's Banking Insolvency Ordinance authorize FINMA to modify, extinguish or convert to common equity liabilities of a bank in connection with a resolution or insolvency of such bank.

Both joint liability amounts have declined as obligations matured, terminated or were novated following the transfer date. As of 31 December 2017, the joint liability of UBS AG and UBS Switzerland AG amounted to less than CHF 1 billion and CHF 69 billion, respectively.

Risk-weighted assets

Our risk-weighted assets (RWA) on a fully applied basis are the same as on a phase-in basis, except for differences related to defined benefit plans and deferred tax assets (DTAs) on temporary differences.

On a fully applied basis, any net defined benefit pension asset recognized in accordance with IAS 19 is fully deducted from common equity tier 1 (CET1) capital. On a phase-in basis, the deduction of net defined benefit pension assets from capital is phased in, and the portion of the net defined benefit pension asset that is not yet deducted from CET1 capital is risk weighted at 100%.

On a fully applied basis, DTAs on temporary differences below a deduction threshold are risk weighted at 250%. On a phase-in basis, the amount that is risk weighted at 250% is higher due to a higher deduction threshold.

As a result of these differences, our phase-in RWA were CHF 0.9 billion higher than our fully applied RWA as of 31 December 2017 (31 December 2016: CHF 2.7 billion higher), entirely attributable to non-counterparty-related risk RWA.

RWA development in 2017

As of 31 December 2017, fully applied RWA increased by CHF 14.8 billion to CHF 237.5 billion, driven by a CHF 15.6 billion increase in credit and counterparty credit risk and a CHF 1.6 billion increase in operational risk, partly offset by a CHF 3.2 billion decrease in market risk.

The total RWA increase was primarily driven by a CHF 17.4 billion increase from methodology, policy changes and model updates, mainly relating to credit and counterparty credit risk. RWA also slightly increased by CHF 0.4 billion as CHF 2.2 billion higher regulatory add-ons for credit and counterparty credit risk were partly offset by CHF 1.8 billion lower regulatory add-ons for market risk.

These increases were partly offset by a CHF 2.1 billion decrease in asset size and other movements, primarily in credit and counterparty credit risk and in market risk, as well as CHF 1.0 billion lower RWA due to currency effects.

On a phase-in basis, RWA increased by CHF 13.0 billion to CHF 238.4 billion as of 31 December 2017.

→ **Refer to the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on RWA movements and definitions of RWA movement key drivers**

Movement in fully applied risk-weighted assets by key driver

CHF billion	RWA as of 31.12.16	Currency effects	Methodology, policy changes and model updates	Regulatory add-ons	Asset size and other[1]	RWA as of 31.12.17
Credit and counterparty credit risk[2]	112.8	(0.7)	16.5	2.2	(2.3)	128.4
Non-counterparty-related risk	16.6	(0.2)			1.0	17.4
Market risk	15.5		(0.7)	(1.8)	(0.8)	12.3
Operational risk	77.8		1.6		0.0	79.4
Total	**222.7**	**(1.0)**	**17.4**	**0.4**	**(2.1)**	**237.5**

1 Includes the Pillar 3 categories "Asset size," "Credit quality of counterparties," "Acquisitions and disposals" and "Other." Refer to the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at www.ubs.com/investors for more information. 2 Includes settlement risk, credit valuation adjustments, equity exposures in the banking book and securitization exposures in the banking book.

Credit and counterparty credit risk

Credit and counterparty credit risk RWA increased by CHF 15.6 billion to CHF 128.4 billion as of 31 December 2017. This increase was primarily driven by a CHF 16.4 billion increase resulting from model updates and a CHF 2.2 billion increase from regulatory add-ons, partly offset by a CHF 1.0 billion decrease in asset quality and a CHF 0.8 billion decrease in asset size as well as currency effects and other changes.

Movement in fully applied credit and counterparty credit risk RWA by key driver[1]

CHF billion	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Group
Total credit and counterparty credit risk RWA as of 31.12.16	12.5	9.1	37.7	1.6	37.0	1.4	7.3	6.2	112.8
Asset size	1.4	0.6	(1.6)	0.1	(0.2)	0.4	(0.4)	(1.0)	(0.8)
Asset quality	(0.4)	0.1	1.4	0.0	(1.4)	0.0	0.0	(0.8)	(1.0)
Model updates	1.8	1.2	6.3	0.0	6.1	0.0	0.9	0.2	16.4
Methodology and policy changes	0.0	0.0	0.0	(0.2)	0.0	0.0	0.3	0.0	0.1
Regulatory add-ons	0.0	0.0	(0.2)	0.0	2.4	0.0	0.0	0.0	2.2
Acquisitions and disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Foreign exchange movements	0.1	(0.4)	(0.1)	0.0	(0.3)	0.0	0.0	(0.1)	(0.7)
Other	0.0	(0.3)	0.6	0.0	(0.6)	0.0	(0.1)	(0.1)	(0.5)
Total movement	2.9	1.3	6.3	(0.1)	5.9	0.4	0.7	(1.7)	15.6
Total credit and counterparty credit risk RWA as of 31.12.17	15.4	10.4	44.0	1.5	42.9	1.8	8.0	4.5	128.4

1 Refer to the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at www.ubs.com/investors for the definitions of credit and counterparty credit risk RWA movement categories.

Model updates

The increase in credit and counterparty credit risk RWA from model updates of CHF 16.4 billion was driven by an increase of CHF 6.6 billion resulting from the implementation of changes to the probability of default (PD) and loss given default (LGD) parameters for income-producing real estate exposures and Lombard exposures, of which CHF 4.3 billion was in Personal & Corporate Banking, CHF 1.7 billion in Wealth Management and CHF 0.6 billion in Wealth Management Americas. A CHF 5.4 billion increase primarily resulted from changes to LGD parameters for exposures to multinationals, sovereigns and financial institutions, of which CHF 3.6 billion was in the Investment Bank, CHF 0.9 billion in Corporate Center – Group Asset and Liability Management (Group ALM) and CHF 0.7 billion in Personal & Corporate Banking. A further increase of CHF 2.0 billion was driven by the implementation of revised credit conversion factors (CCFs) for letters of credit, trade finance-related guarantees, deferred payments and construction loans in Personal & Corporate Banking of CHF 1.2 billion, as well as for unutilized Lombard loan facilities of CHF 0.6 billion in Wealth Management Americas. An increase of CHF 2.5 billion was due to higher RWA for derivative exposures, driven by an update of the stress period used for the Basel III exposure-at-default calculation, mainly in the Investment Bank.

We anticipate that methodology changes and model updates, including adjustments to probability of default and loss given default factors, CCFs, the revised Basel III securitization framework, and scheduled increases in the FINMA-required multiplier for Investment Bank exposures to corporates will increase credit risk RWA by around CHF 12 billion in 2018, of which around CHF 4 billion in the first quarter of 2018. The extent and timing of RWA increases may vary as methodology changes and model updates are completed and receive regulatory approval, and as regulatory multipliers are adjusted. In addition, changes in composition of the relevant portfolios and other factors will affect our RWA.

→ **Refer to "Credit risk models" in the "Risk management and control" section of this report for more information on model updates**

Regulatory add-ons

The net RWA increase from regulatory add-ons of CHF 2.2 billion was mainly driven by an increase in the internal ratings-based (IRB) multiplier on Investment Bank exposures to corporates of CHF 2.9 billion, as well as an increase in the IRB multiplier on Swiss residential mortgages of CHF 1.4 billion in Personal & Corporate Banking and CHF 0.4 billion in Wealth Management. These increases were partly offset by decreases of CHF 1.8 billion in Personal & Corporate Banking, CHF 0.4 billion in Wealth Management and CHF 0.5 billion in the Investment Bank, following FINMA approval of the aforementioned updates to PD and LGD parameters.

→ **Refer to the "Risk management and control" section of this report and the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on credit and counterparty credit risk developments**

Market risk

Market risk RWA decreased by CHF 3.2 billion to CHF 12.3 billion as of 31 December 2017, mainly driven by CHF 1.8 billion lower regulatory add-ons, a CHF 0.8 billion decrease due to asset size and other movements and a CHF 0.7 billion decrease due to methodology, policy changes and model updates.

The CHF 1.8 billion lower RWA from regulatory add-ons mainly reflected a lower regulatory value-at-risk (VaR) multiplier, which decreased from 3.65 to 3.0 as a result of fewer backtesting exceptions, partly offset by changes to the risks-not-in-VaR (RniV) framework.

The CHF 0.8 billion decrease in asset size and other movements was primarily driven by lower average VaR and stressed VaR levels observed during the year, primarily in the Investment Bank's Equities business.

The CHF 0.7 billion decrease in methodology, policy changes and model updates resulted from the effects of an enhancement to VaR model parameters. We will continue to implement the changes to the RniV framework over the first three quarters of 2018, with RWA expected to increase by around CHF 3 billion in total, of which around CHF 1 billion in the first quarter. Our estimates of future RWA increases do not reflect mitigating actions that we may take or any changes in the trading book composition or risk levels.

→ **Refer to the "Risk management and control" section of this report and the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on market risk developments**

Operational risk

Operational risk RWA increased by CHF 1.6 billion to CHF 79.4 billion as of 31 December 2017, driven by changes to the advanced measurement approach (AMA) model used for the calculation of operational risk capital. These changes were approved by FINMA in the first quarter of 2017.

→ **Refer to "Operational risk" in the "Risk management and control" section of this report for more information on the AMA model**

Risk-weighted assets by business division and Corporate Center unit

CHF billion	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Total RWA
				31.12.17					
Credit and counterparty credit risk[1]	15.4	10.4	44.0	1.5	42.9	1.8	8.0	4.5	128.4
Advanced IRB approach[2]	*11.0*	*5.2*	*41.6*	*0.8*	*40.2*	*0.4*	*6.3*	*3.4*	*108.9*
Standardized approach[3]	*4.4*	*5.2*	*2.4*	*0.6*	*2.8*	*1.4*	*1.8*	*1.1*	*19.6*
Non-counterparty-related risk[4]	0.0	0.0	0.1	0.1	0.0	18.0	0.0	0.0	18.3
Market risk	0.0	1.6	0.0	0.0	11.7	(3.1)[5]	0.7	1.3	12.3
Operational risk	13.5	13.5	4.0	2.4	19.8	13.3	2.5	10.3	79.4
Total RWA, phase-in	29.0	25.5	48.0	3.9	74.5	30.1	11.2	16.1	238.4
Phase-out items[6]	0.0	0.0	0.0	0.0	0.0	(0.9)	0.0	0.0	(0.9)
Total RWA, fully applied[7]	29.0	25.5	48.0	3.9	74.5	29.2	11.2	16.1	237.5
RWA held by CC – Group ALM on behalf of business divisions and other CC units[8]	1.2	1.0	1.0	0.1	0.5	0.0	(3.9)	0.0	0.0
RWA after allocation from CC – Group ALM to business divisions and other CC units	30.2	26.5	49.1	4.0	75.0	29.2	7.3	16.1	237.5
				31.12.16					
Credit and counterparty credit risk[1]	12.5	9.1	37.7	1.6	37.0	1.4	7.3	6.2	112.8
Advanced IRB approach[2]	*9.0*	*3.7*	*36.1*	*0.9*	*33.7*	*0.2*	*4.8*	*5.0*	*93.4*
Standardized approach[3]	*3.5*	*5.4*	*1.6*	*0.6*	*3.3*	*1.2*	*2.6*	*1.2*	*19.4*
Non-counterparty-related risk[4]	0.1	0.0	0.1	0.0	0.0	19.1	0.0	0.0	19.3
Market risk	0.0	1.4	0.0	0.0	14.0	(3.2)[5]	0.7	2.6	15.5
Operational risk	13.2	13.2	3.9	2.3	19.5	13.1	2.5	10.1	77.8
Total RWA, phase-in	25.8	23.8	41.6	3.9	70.4	30.3	10.6	18.9	225.4
Phase-out items[6]	0.0	0.0	0.0	0.0	0.0	(2.7)	0.0	0.0	(2.7)
Total RWA, fully applied	25.8	23.8	41.6	3.9	70.4	27.6	10.6	18.9	222.7
				31.12.17 vs 31.12.16					
Credit and counterparty credit risk[1]	2.9	1.3	6.3	(0.1)	5.9	0.4	0.7	(1.7)	15.6
Advanced IRB approach[2]	*2.0*	*1.5*	*5.5*	*(0.1)*	*6.5*	*0.2*	*1.5*	*(1.6)*	*15.5*
Standardized approach[3]	*0.9*	*(0.2)*	*0.8*	*0.0*	*(0.5)*	*0.2*	*(0.8)*	*(0.1)*	*0.2*
Non-counterparty-related risk[4]	(0.1)	0.0	0.0	0.1	0.0	(1.1)	0.0	0.0	(1.0)
Market risk	0.0	0.2	0.0	0.0	(2.3)	0.1	0.0	(1.3)	(3.2)
Operational risk	0.3	0.3	0.1	0.1	0.3	0.2	0.0	0.2	1.6
Total RWA, phase-in	3.2	1.7	6.4	0.0	4.1	(0.2)	0.6	(2.8)	13.0
Phase-out items[6]	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	1.8
Total RWA, fully applied	3.2	1.7	6.4	0.0	4.1	1.6	0.6	(2.8)	14.8

1 Includes settlement risk, credit valuation adjustments, equity exposures in the banking book and securitization exposures in the banking book. 2 Includes equity exposures in the banking book according to the simple risk weight method. 3 Includes settlement risk and business transfers. 4 Non-counterparty-related risk includes deferred tax assets recognized for temporary differences (31 December 2017: CHF 9.3 billion; 31 December 2016: CHF 10.9 billion), property, equipment and software (31 December 2017: CHF 8.8 billion; 31 December 2016: CHF 8.3 billion) and other items (31 December 2017: CHF 0.2 billion; 31 December 2016: CHF 0.2 billion). 5 Corporate Center – Services market risk RWA were negative, as they included the effect of portfolio diversification across businesses. 6 Phase-out items are entirely related to non-counterparty-related risk RWA. 7 Represents RWA held by the respective business division or Corporate Center unit. 8 Represents RWA held by Corporate Center – Group ALM that are directly associated with activity managed centrally on behalf of the business divisions and other Corporate Center units. For the purpose of attributing equity under the revised framework effective as of 1 January 2017, these resources are allocated to the business divisions and other Corporate Center units, primarily based on the level of high-quality liquid assets needed to meet the Group's minimum liquidity coverage ratio requirement of 110%. Refer to "Equity attribution and return on attributed equity" in this section for more information.

Leverage ratio denominator

The fully applied leverage ratio denominator (LRD) increased by CHF 16 billion to CHF 886 billion as of 31 December 2017, primarily driven by asset size and other increases of CHF 20 billion, partly offset by CHF 3 billion incremental netting and collateral mitigation and currency effects of CHF 1 billion.

Movement in fully applied leverage ratio denominator by key driver

CHF billion	LRD as of 31.12.16	Currency effects	Incremental netting and collateral mitigation	Asset size and other	LRD as of 31.12.17
On-balance sheet exposures (excluding derivative exposures and SFTs)[1]	638.1	(2.4)		11.3	646.9
Derivative exposures	107.6	1.3	(2.2)	(8.6)	98.1
Securities financing transactions	104.7	0.0	(0.8)	20.2	124.2
Off-balance sheet items	37.7	(0.5)		(6.1)	31.1
Deduction items	(17.7)	0.5		3.1	(14.1)
Total	**870.5**	**(1.1)**	**(3.0)**	**19.8**	**886.1**

1 Excludes positive replacement values, cash collateral receivables on derivative instruments, cash collateral on securities borrowed, reverse repurchase agreements, margin loans and prime brokerage receivables related to securities financing transactions, which are presented separately under Derivative exposures and Securities financing transactions in this table.

Currency effects mainly reflect the weakening of the US dollar against the Swiss franc. The LRD movements described below exclude currency effects.

Securities financing transactions (SFTs) increased by CHF 20 billion due to asset size and other movements, primarily resulting from the rebalancing of our high-quality liquid assets (HQLA) portfolio in Corporate Center – Group Asset and Liability Management (Group ALM) of CHF 16 billion, as well as CHF 3 billion client-driven increases in the Investment Bank, mainly related to higher prime brokerage receivables.

On-balance sheet exposures (excluding derivative exposures and SFTs) increased by CHF 11 billion. This was mainly driven by a CHF 33 billion increase in trading portfolio assets, primarily in our Investment Bank's Equities business, mainly reflecting a client-driven increase and higher equity markets. An increase in lending by CHF 14 billion primarily reflects higher Lombard lending balances in Wealth Management. These increases were partly offset by a CHF 20 billion decrease in cash and balances with central banks primarily in Corporate Center – Group ALM, mainly due to higher funding consumption by the business divisions, partly offset by net issuances of short-term and long-term debt. Financial assets designated at fair value, available for sale and held to maturity decreased by CHF 12 billion, mainly resulting from the aforementioned rebalancing within our HQLA portfolio held by Corporate Center – Group ALM, partly offset by a CHF 7 billion client-driven increase in Corporate Client Solutions within the Investment Bank. A CHF 2 billion decrease in Corporate Center – Services mainly resulted from a net write-down in the Group's deferred tax assets (DTAs) following a reduction in the US federal corporate tax rate after the enactment of the Tax Cuts and Jobs Act in the US during the fourth quarter of 2017, which was fully offset by lower deduction items for DTAs.

Derivative exposures decreased by CHF 9 billion due to asset size and other movements, primarily resulting from a CHF 6 billion reduction in our Corporate Center – Non-core and Legacy Portfolio, primarily reflecting trade terminations and maturities, mainly related to interest rate and foreign exchange contracts, and a CHF 3 billion net decrease in the Investment Bank, mainly related to foreign exchange contracts in our Foreign Exchange, Rates and Credit business, primarily reflecting net maturities, partly offset by fair value changes resulting from currency market movements. A decrease of CHF 2 billion related to incremental netting and collateral mitigation benefits mainly reflected improved netting of eligible cash variation margin.

Off-balance sheet items decreased by CHF 6 billion, primarily due to terminations of committed credit facilities in the Investment Bank's Corporate Client Solutions business.

→ **Refer to "Balance sheet, liquidity and funding management" in the "Treasury management" section of this report for more information on balance sheet movements**

Leverage ratio denominator by business division and Corporate Center unit

CHF billion	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Total
				31.12.17					
Total IFRS assets	123.0	67.1	135.6	14.3	262.9	20.9	245.7	46.2	915.6
Difference in scope of consolidation[1]	0.0	(0.2)	0.0	(11.6)	(0.3)	(0.1)	0.1	(0.1)	(12.1)
Less: derivative exposures and SFTs[2]	(2.6)	(2.1)	(1.2)	0.0	(130.6)	0.0	(78.1)	(41.9)	(256.6)
On-balance sheet exposures	**120.4**	**64.8**	**134.4**	**2.7**	**132.1**	**20.7**	**167.8**	**4.2**	**646.9**
Derivative exposures	2.9	5.2	1.8	0.0	73.0	0.0	5.8	9.4	98.1
Securities financing transactions	1.2	1.0	0.0	0.0	44.6	0.0	76.1	1.3	124.2
Off-balance sheet items	3.6	0.8	11.9	0.0	14.5	0.1	0.1	0.0	31.1
Items deducted from Swiss SRB tier 1 capital						(12.6)			(12.6)
LRD, phase-in	**128.0**	**71.8**	**148.0**	**2.7**	**264.1**	**8.2**	**249.9**	**14.9**	**887.6**
Additional items deducted from Swiss SRB tier 1 capital						(1.5)			(1.5)
LRD, fully applied[3]	**128.0**	**71.8**	**148.0**	**2.7**	**264.1**	**6.7**	**249.9**	**14.9**	**886.1**
LRD held by CC – Group ALM on behalf of business divisions and other CC units[4]	45.9	16.2	38.9	2.1	19.4	0.1	(124.4)	1.7	0.0
LRD after allocation from CC – Group ALM to business divisions and other CC units	**173.9**	**88.0**	**186.9**	**4.8**	**283.6**	**6.8**	**125.5**	**16.6**	**886.1**
				31.12.16					
Total IFRS assets	115.5	65.9	139.9	12.0	242.3	23.7	267.2	68.5	935.0
Difference in scope of consolidation[1]	(5.1)	(0.2)	0.0	(9.3)	(0.7)	(0.2)	0.2	0.0	(15.5)
Less: derivative exposures and SFTs[2]	(2.0)	(2.0)	(2.2)	0.0	(151.4)	0.0	(60.6)	(63.3)	(281.4)
On-balance sheet exposures	**108.4**	**63.7**	**137.7**	**2.7**	**90.2**	**23.4**	**206.7**	**5.2**	**638.1**
Derivative exposures	3.5	2.5	2.7	0.0	77.5	0.0	6.3	15.2	107.6
Securities financing transactions	0.0	1.0	0.0	0.0	42.9	0.0	59.1	1.8	104.7
Off-balance sheet items	3.6	0.9	11.9	0.0	20.6	0.1	0.3	0.3	37.7
Items deducted from Swiss SRB tier 1 capital						(13.2)			(13.2)
LRD, phase-in	**115.5**	**68.1**	**152.2**	**2.7**	**231.2**	**10.3**	**272.4**	**22.4**	**874.9**
Additional items deducted from Swiss SRB tier 1 capital						(4.5)			(4.5)
LRD, fully applied	**115.5**	**68.1**	**152.2**	**2.7**	**231.2**	**5.8**	**272.4**	**22.4**	**870.5**
				31.12.17 vs 31.12.16					
Total IFRS assets	7.5	1.2	(4.3)	2.3	20.6	(2.8)	(21.5)	(22.3)	(19.4)
Difference in scope of consolidation[1]	5.1	0.0	0.0	(2.3)	0.4	0.1	(0.1)	(0.1)	3.4
Less: derivative exposures and SFTs[2]	(0.6)	(0.1)	1.0	0.0	20.8	0.0	(17.5)	21.4	24.8
On-balance sheet exposures	**12.0**	**1.1**	**(3.3)**	**0.0**	**41.9**	**(2.7)**	**(38.9)**	**(1.0)**	**8.8**
Derivative exposures	(0.6)	2.7	(0.9)	0.0	(4.5)	0.0	(0.5)	(5.8)	(9.5)
Securities financing transactions	1.2	0.0	0.0	0.0	1.7	0.0	17.0	(0.5)	19.5
Off-balance sheet items	0.0	(0.1)	0.0	0.0	(6.1)	0.0	(0.2)	(0.3)	(6.6)
Items deducted from Swiss SRB tier 1 capital						0.6			0.6
LRD, phase-in	**12.5**	**3.7**	**(4.2)**	**0.0**	**32.9**	**(2.1)**	**(22.5)**	**(7.5)**	**12.7**
Additional items deducted from Swiss SRB tier 1 capital						3.0			3.0
LRD, fully applied	**12.5**	**3.7**	**(4.2)**	**0.0**	**32.9**	**0.9**	**(22.5)**	**(7.5)**	**15.6**

1 Represents the difference between the IFRS and the regulatory scope of consolidation, which is the applicable scope for the LRD calculation. 2 Consists of positive replacement values, cash collateral receivables on derivative instruments, cash collateral on securities borrowed, reverse repurchase agreements, margin loans and prime brokerage receivables related to securities financing transactions in accordance with the regulatory scope of consolidation, which are presented separately under Derivative exposures and Securities financing transactions. 3 Represents LRD held by the respective business division or Corporate Center unit. 4 Represents LRD held by Corporate Center – Group ALM that is directly associated with activity managed centrally on behalf of the business divisions and other Corporate Center units. For the purpose of attributing equity under the revised framework effective as of 1 January 2017, these resources are allocated to the business divisions and other Corporate Center units, primarily based on the level of high-quality liquid assets needed to meet the Group's minimum liquidity coverage ratio requirement of 110%. Refer to "Equity attribution and return on attributed equity" in this section for more information.

UBS AG consolidated total loss-absorbing capacity and leverage ratio information

Going and gone concern requirements and information

UBS is considered a systemically relevant bank (SRB) under Swiss banking law and, on a consolidated basis, both UBS Group AG and UBS AG are required to comply with regulations based on the Basel III framework as applicable for Swiss SRBs.

The Swiss SRB framework and requirements applicable to UBS AG consolidated are consistent with those applicable to UBS Group AG consolidated and are described in the "Capital management" section of this report.

→ **Refer to "Regulatory framework" in this section for more information on total loss-absorbing capacity, leverage ratio requirements and gone concern rebate**

UBS AG is subject to going concern requirements on a standalone basis. Capital and other regulatory information for UBS AG standalone is provided under "Holding company and significant regulated subsidiaries and sub-groups" at *www.ubs.com/investors* and in the 31 December 2017 Pillar 3 report – Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors*.

The table below provides the risk-weighted assets (RWA)- and leverage ratio denominator (LRD)-based requirements and information as of 31 December 2017 for UBS AG consolidated.

Swiss SRB going and gone concern requirements and information[1]

As of 31.12.17	Swiss SRB, including transitional arrangements (phase-in)				Swiss SRB as of 1.1.20 (fully applied)			
CHF million, except where indicated	RWA		LRD		RWA		LRD	
Required loss-absorbing capacity	in %		in %		in %		in %	
Common equity tier 1 capital	9.22	21,890	2.60	23,106	10.22	24,178	3.50	31,052
of which: minimum capital	*5.80*	*13,772*	*2.10*	*18,662*	*4.50*	*10,647*	*1.50*	*13,308*
of which: buffer capital	*3.20*	*7,599*	*0.50*	*4,443*	*5.50*	*13,013*	*2.00*	*17,744*
of which: countercyclical buffer[2]	*0.22*	*519*			*0.22*	*517*		
Maximum additional tier 1 capital	3.00	7,124	0.90	7,998	4.30	10,174	1.50	13,308
of which: high-trigger loss-absorbing additional tier 1 minimum capital	*2.20*	*5,224*	*0.90*	*7,998*	*3.50*	*8,281*	*1.50*	*13,308*
of which: high-trigger loss-absorbing additional tier 1 buffer capital	*0.80*	*1,900*			*0.80*	*1,893*		
Total going concern capital	12.22	29,014	3.50	31,104	14.52[3]	34,352	5.00[3]	44,359
Base gone concern loss-absorbing capacity, including applicable add-ons and rebate	5.33[4]	12,661	1.72[4]	15,285	12.30[5]	29,098	4.30[5]	38,149
Total gone concern loss-absorbing capacity	5.33	12,661	1.72	15,285	12.30	29,098	4.30	38,149
Total loss-absorbing capacity	17.55	41,675	5.22	46,389	26.82	63,449	9.30	82,509
Eligible loss-absorbing capacity								
Common equity tier 1 capital	15.18	36,042	4.06	36,042	14.05	33,240	3.75	33,240
High-trigger loss-absorbing additional tier 1 capital[6,7]	4.31	10,244	1.15	10,244	1.55	3,666	0.41	3,666
of which: high-trigger loss-absorbing additional tier 1 capital	*1.00*	*2,371*	*0.27*	*2,371*	*1.55*	*3,666*	*0.41*	*3,666*
of which: low-trigger loss-absorbing tier 2 capital	*3.32*	*7,874*	*0.89*	*7,874*				
Total going concern capital	19.49	46,286	5.21	46,286	15.60	36,906	4.16	36,906
Gone concern loss-absorbing capacity	12.42	29,483	3.32	29,483	15.79	37,357	4.21	37,357
of which: TLAC-eligible debt	*11.47*	*27,233*	*3.06*	*27,233*	*11.51*	*27,233*	*3.07*	*27,233*
Total gone concern loss-absorbing capacity	12.42	29,483	3.32	29,483	15.79	37,357	4.21	37,357
Total loss-absorbing capacity	31.91	75,769	8.53	75,769	31.39	74,263	8.37	74,263
Risk-weighted assets / leverage ratio denominator								
Risk-weighted assets		237,456				236,606		
Leverage ratio denominator				888,687				887,189

1 This table includes a rebate equal to 35% of the maximum rebate on the gone concern requirements, which was granted by FINMA. This resulted in a reduction of 2.0 percentage points for the RWA-based requirement and 0.7 percentage points for the LRD-based requirement and will be phased in until 1 January 2020. This table does not include a rebate for the usage of low-trigger loss-absorbing additional tier 1 or tier 2 capital instruments to meet the gone concern requirements. 2 Going concern capital ratio requirements include countercyclical buffer requirements of 0.22% for the phase-in and fully applied requirement. 3 Includes applicable add-ons of 1.44% for risk-weighted assets (RWA) and 0.5% for leverage ratio denominator (LRD). 4 Includes applicable add-ons of 0.36% for RWA and 0.13% for LRD and a rebate of 0.87% for RWA and 0.28% for LRD. 5 Includes applicable add-ons of 1.44% for RWA and 0.5% for LRD and a rebate of 2% for RWA and 0.7% for LRD. 6 High-trigger loss-absorbing additional tier 1 capital was partly offset by required deductions for goodwill on a phase-in basis. 7 Includes outstanding low-trigger loss-absorbing tier 2 capital instruments, which are available under the transitional rules of the Swiss SRB framework to meet the going concern requirements until the earlier of (i) their maturity or first call date or (ii) 31 December 2019, and to meet gone concern requirements thereafter. Outstanding low-trigger loss-absorbing tier 2 capital instruments are subject to amortization starting five years prior to their maturity, with the amortized portion qualifying as gone concern loss-absorbing capacity. Instruments available to meet gone concern requirements are eligible until one year before maturity, with a haircut of 50% applied in the last year of eligibility.

Swiss SRB going and gone concern information

	Swiss SRB, including transitional arrangements (phase-in)		Swiss SRB as of 1.1.20 (fully applied)	
CHF million, except where indicated	31.12.17	31.12.16	31.12.17	31.12.16
Going concern capital				
Common equity tier 1 capital	36,042	39,474	33,240	32,447
High-trigger loss-absorbing additional tier 1 capital	2,371[1]	1,208[1]	3,666	3,848
Total loss-absorbing additional tier 1 capital	2,371	1,208	3,666	3,848
Total tier 1 capital	38,412	40,682	36,906	36,294
Low-trigger loss-absorbing tier 2 capital	7,874[2]	10,402		
Total tier 2 capital	7,874	10,402		
Total going concern capital	46,286	51,084	36,906	36,294
Gone concern loss-absorbing capacity[3]				
Low-trigger loss-absorbing additional tier 1 capital[4]	1,183	1,071	1,183	1,071
Non-Basel III-compliant tier 1 capital[5]	0	642	0	642
Total tier 1 capital	1,183	1,713	1,183	1,713
Low-trigger loss-absorbing tier 2 capital	378[2]		8,252	10,402
Non-Basel III-compliant tier 2 capital[5]	689	698	689	698
Total tier 2 capital	1,067	698	8,941	11,100
TLAC-eligible debt	27,233	16,960	27,233	16,960
Total gone concern loss-absorbing capacity	29,483	19,372	37,357	29,774
Total loss-absorbing capacity				
Total loss-absorbing capacity	75,769	70,456	74,263	66,068
Risk-weighted assets / leverage ratio denominator				
Risk-weighted assets	237,456	225,743	236,606	223,232
Leverage ratio denominator	888,687	875,325	887,189	870,942
Capital and loss-absorbing capacity ratios (%)				
Going concern capital ratio	19.5	22.6	15.6	16.3
of which: common equity tier 1 capital ratio	*15.2*	*17.5*	*14.0*	*14.5*
Gone concern loss-absorbing capacity ratio	12.4	8.6	15.8	13.3
Total loss-absorbing capacity ratio	31.9	31.2	31.4	29.6
Leverage ratios (%)				
Going concern leverage ratio	5.2	5.8	4.2	4.2
of which: common equity tier 1 leverage ratio	*4.1*	*4.5*	*3.7*	*3.7*
Gone concern leverage ratio	3.3	2.2	4.2	3.4
Total loss-absorbing capacity leverage ratio	8.5	8.0	8.4	7.6

1 High-trigger loss-absorbing additional tier 1 capital (31 December 2017: CHF 3,666 million; 31 December 2016: CHF 3,848 million) was partly offset by required deductions for goodwill (31 December 2017: CHF 1,296 million; 31 December 2016: CHF 2,639 million). 2 Outstanding low-trigger loss-absorbing tier 2 capital instruments are subject to amortization starting five years prior to their maturity, with the amortized portion qualifying as gone concern loss-absorbing capacity. 3 Instruments available to meet gone concern requirements are eligible until one year before maturity, with a haircut of 50% applied in the last year of eligibility. 4 The relevant capital instrument was issued after the new Swiss SRB framework had been implemented and therefore qualifies as gone concern loss-absorbing capacity. 5 Non-Basel III-compliant tier 1 and tier 2 capital instruments qualify as gone concern instruments.

UBS Group AG vs UBS AG consolidated loss-absorbing capacity and leverage ratio information

As of 31 December 2017, fully applied going concern capital of UBS AG consolidated was CHF 5.0 billion lower than for UBS Group AG consolidated, reflecting CHF 5.6 billion lower going concern loss-absorbing additional tier 1 (AT1) capital, partly offset by CHF 0.6 billion higher common equity tier 1 (CET1) capital. The fully applied gone concern loss-absorbing capacity was CHF 1.0 billion higher, due to CHF 1.2 billion higher low-trigger loss-absorbing AT1 capital, partly offset by CHF 0.2 billion lower high-trigger loss-absorbing tier 2 capital.

The difference of CHF 0.6 billion in fully applied CET1 capital was primarily due to compensation-related capital components, related regulatory capital accruals, liabilities and capital instruments that are reflected at the UBS Group AG level.

The difference of CHF 5.6 billion in going concern loss-absorbing AT1 capital on a fully applied basis relates to loss-absorbing AT1 capital instruments issued at the UBS Group AG level, including CHF 1.7 billion of high-trigger loss-absorbing Deferred Contingent Capital Plan (DCCP) awards granted to eligible employees for the performance years 2014 to 2017.

The difference of CHF 1.2 billion in gone concern low-trigger AT1 capital relates to a capital instrument that was issued by UBS AG after the new Swiss SRB framework had been implemented and is therefore not recognized within going concern capital but qualifies as gone concern loss-absorbing capacity. Issuances of low-trigger AT1 capital from UBS Group AG were all made prior to implementation of the new Swiss SRB framework and therefore qualify as going concern capital.

The difference of CHF 0.2 billion in fully applied gone concern tier 2 capital relates to high-trigger loss-absorbing capital instruments, in the form of 2013 DCCP awards, held at UBS Group AG level.

Differences in capital between UBS Group AG consolidated and UBS AG consolidated related to employee compensation plans will reverse to the extent underlying services are performed by employees of, and are consequently charged to, UBS AG and its subsidiaries. Such reversal generally occurs over the service period of the employee compensation plans.

The leverage ratio framework for UBS AG consolidated is consistent with that of UBS Group AG consolidated. As of 31 December 2017, the going concern leverage ratio of UBS AG consolidated was 0.5 percentage points lower than that of UBS Group AG consolidated on a fully applied basis, mainly as the going concern capital of UBS AG consolidated was CHF 5.0 billion lower.

Audited I

Reconciliation of IFRS equity to Swiss SRB common equity tier 1 capital (UBS Group AG vs UBS AG consolidated)

As of 31.12.17	Swiss SRB, including transitional arrangements (phase-in)			Swiss SRB as of 1.1.20 (fully applied)		
CHF million	UBS Group AG (consolidated)	UBS AG (consolidated)	Differences	UBS Group AG (consolidated)	UBS AG (consolidated)	Differences
Total IFRS equity	51,271	50,775	496	51,271	50,775	496
Equity attributable to preferred noteholders and non-controlling interests	(57)	(57)	0	(57)	(57)	0
Deferred tax assets recognized for tax loss carry-forwards	(4,637)	(4,637)	0	(5,797)	(5,797)	0
Deferred tax assets on temporary differences, excess over threshold	(489)	(403)	(86)	(857)	(749)	(108)
Goodwill, net of tax	(5,183)	(5,183)	0	(6,479)	(6,479)	0
Intangible assets, net of tax	(214)	(214)	0	(214)	(214)	0
Compensation-related components (not recognized in net profit)	(1,620)		(1,620)	(1,620)		(1,620)
Expected losses on advanced internal ratings-based portfolio less general provisions	(634)	(634)	0	(634)	(634)	0
Unrealized (gains) / losses from cash flow hedges, net of tax	(351)	(351)	0	(351)	(351)	0
Unrealized own credit related to financial liabilities designated at fair value, net of tax, and replacement values	133	133	0	133	133	0
Unrealized gains related to financial assets available for sale, net of tax	(193)	(193)	0	(193)	(193)	0
Prudential valuation adjustments	(59)	(59)	0	(59)	(59)	0
Consolidation scope	(44)	(44)	0	(44)	(44)	0
Accruals for proposed dividends to shareholders	(2,438)	(3,065)	627	(2,438)	(3,065)	627
Other	10	(26)	36	10	(26)	36
Total common equity tier 1 capital	35,494	36,042	(548)	32,671	33,240	(569)

Swiss SRB going and gone concern information (UBS Group AG vs UBS AG consolidated)

As of 31.12.17	Swiss SRB, including transitional arrangements (phase-in)			Swiss SRB as of 1.1.20 (fully applied)		
CHF million, except where indicated	UBS Group AG (consolidated)	UBS AG (consolidated)	Differences	UBS Group AG (consolidated)	UBS AG (consolidated)	Differences
Going concern capital						
Common equity tier 1 capital	35,494	36,042	(548)	32,671	33,240	(569)
High-trigger loss-absorbing additional tier 1 capital	6,857	2,371[1]	4,486	6,857	3,666	3,191
Low-trigger loss-absorbing additional tier 1 capital	1,087[2]		1,087	2,383		2,383
Total loss-absorbing additional tier 1 capital	7,944	2,371	5,573	9,240	3,666	5,574
Total tier 1 capital	43,438	38,412	5,026	41,911	36,906	5,005
High-trigger loss-absorbing tier 2 capital	435		435			
Low-trigger loss-absorbing tier 2 capital	7,874[3]	7,874[3]	0			
Total tier 2 capital	8,309	7,874	435			
Total going concern capital	51,748	46,286	5,462	41,911	36,906	5,005
Gone concern loss-absorbing capacity[4]						
Low-trigger loss-absorbing additional tier 1 capital		1,183[5]	(1,183)		1,183[5]	(1,183)
Total tier 1 capital		1,183	(1,183)		1,183	(1,183)
High-trigger loss-absorbing tier 2 capital				218		218
Low-trigger loss-absorbing tier 2 capital	378[3]	378[3]	0	8,252	8,252	0
Non-Basel III-compliant tier 2 capital	689	689	0	689	689	0
Total tier 2 capital	1,067	1,067	0	9,159	8,941	218
TLAC-eligible debt	27,233	27,233	0	27,233	27,233	0
Total gone concern loss-absorbing capacity	28,300	29,483	(1,183)	36,392	37,357	(965)
Total loss-absorbing capacity						
Total loss-absorbing capacity	80,048	75,769	4,279	78,303	74,263	4,040
Risk-weighted assets / leverage ratio denominator						
Risk-weighted assets	238,394	237,456	938	237,494	236,606	888
Leverage ratio denominator	887,635	888,687	(1,052)	886,116	887,189	(1,073)
Capital and loss-absorbing capacity ratios (%)						
Going concern capital ratio	21.7	19.5	2.2	17.6	15.6	2.0
of which: common equity tier 1 capital ratio	*14.9*	*15.2*	*(0.3)*	*13.8*	*14.0*	*(0.2)*
Gone concern loss-absorbing capacity ratio	11.9	12.4	(0.5)	15.3	15.8	(0.5)
Total loss-absorbing capacity ratio	33.6	31.9	1.7	33.0	31.4	1.6
Leverage ratios (%)						
Going concern leverage ratio	5.8	5.2	0.6	4.7	4.2	0.5
of which: common equity tier 1 leverage ratio	*4.0*	*4.1*	*(0.1)*	*3.7*	*3.7*	*0.0*
Gone concern leverage ratio	3.2	3.3	(0.1)	4.1	4.2	(0.1)
Total loss-absorbing capacity leverage ratio	9.0	8.5	0.5	8.8	8.4	0.4

1 High-trigger loss-absorbing AT1 capital of CHF 3,666 million was partly offset by required deductions for goodwill of CHF 1,296 million. 2 Low-trigger loss-absorbing AT1 capital of CHF 2,383 million was partly offset by required deductions for goodwill of CHF 1,296 million. 3 Outstanding low-trigger loss-absorbing tier 2 capital instruments are subject to amortization starting five years prior to their maturity, with the amortized portion qualifying as gone concern loss-absorbing capacity. 4 Instruments available to meet gone concern requirements are eligible until one year before maturity, with a haircut of 50% applied in the last year of eligibility. 5 The relevant capital instrument was issued after the new Swiss SRB framework had been implemented and therefore qualifies as gone concern loss-absorbing capacity.

Equity attribution and return on attributed equity

Average attributed equity to business divisions and Corporate Center increased by CHF 4.6 billion to CHF 52.8 billion in 2017, primarily driven by the changes to the equity attribution framework described below.

Change in equity attribution framework in 2017

In the first quarter of 2017, we implemented an updated equity attribution framework, which reflects the revision of the too big to fail provisions applicable to Swiss systemically relevant banks.

Effective 1 January 2017, the weighting used for the attribution of tangible equity was changed from an equal driver weighting of one-third each for average fully applied risk-weighted assets (RWA), average fully applied leverage ratio denominator (LRD) and risk-based capital (RBC) to 50% each for RWA and LRD. Average fully applied RWA and LRD continue to be converted to their common equity tier 1 (CET1) capital equivalents based on capital ratios of 11% and 3.75%, respectively, both of which exceed future regulatory requirements. If the tangible attributed equity calculated under the weighted-driver approach is less than the CET1 capital equivalent of RBC for any business division, the CET1 capital equivalent of RBC will be used as a floor for that business division.

Under the revised framework, LRD and RWA held by Corporate Center – Group Asset and Liability Management (Group ALM) directly associated with activities that Corporate Center – Group ALM manages centrally on behalf of the business divisions and other Corporate Center units are allocated to those business divisions and other Corporate Center units for the purpose of equity attribution. This allocation is primarily based on the level of high-quality liquid assets that is needed to meet the Group's minimum liquidity coverage ratio requirement of 110%. Corporate Center – Group ALM continues to retain attributed equity related to liquidity and funding surpluses, i.e., at levels above regulatory requirements, together with that related to its own activities.

In addition to tangible equity, we continue to allocate equity to our businesses to support goodwill and intangible assets. However, following the aforementioned change in the first quarter of 2017, we now also attribute to the business divisions equity for goodwill and intangible assets resulting from the acquisition of PaineWebber that until 1 January 2017 was held centrally in Group items within Corporate Center – Services under the previous framework.

We attribute all Basel III capital deduction items to Group items. These deduction items include deferred tax assets, which constitute the largest component of Group items, unrealized gains from cash flow hedges and compensation- and own shares-related components. Prior to 2017, Group items only included an amount of attributed equity for certain capital deduction items. The total amount of attributed equity now equals average shareholders' equity.

Average attributed equity and attributed tangible equity

	Total attributed equity			Attributed tangible equity[1,2]
	For the year ended			For the year ended
		Prior framework		
CHF billion	31.12.17	31.12.16	31.12.15	31.12.17
Wealth Management	6.2	3.5	3.5	4.8
Wealth Management Americas	6.6	2.6	2.5	3.0
Personal & Corporate Banking	6.1	4.1	3.9	6.1
Asset Management	1.7	1.4	1.6	0.3
Investment Bank	9.3	7.7	7.3	9.3
Corporate Center	22.9	29.1	25.8	22.9
of which: CC – Services	*18.9*	*22.8*	*19.6*	*18.9*
of which: Group items	*17.2*	*21.4*	*18.2*	*17.2*
of which: CC – Group ALM	*2.7*	*4.3*	*3.3*	*2.7*
of which: CC – Non-core and Legacy Portfolio	*1.3*	*2.1*	*2.9*	*1.3*
Average equity attributed to business divisions and Corporate Center	52.8	48.2	44.6	46.4
Difference	0.0	5.7	7.8	0.0
Average equity attributable to shareholders	52.8	53.9	52.4	46.4

1 Attributed tangible equity equals attributed equity less goodwill and intangible assets. 2 Attributed tangible equity is shown for the period for which Return on attributed tangible equity is available. This is a new measure introduced in 2017, accordingly no comparative period information is available.

Return on (attributed) equity and return on (attributed) tangible equity[1]

	Return on (attributed) equity			Return on (attributed) tangible equity[2]
	For the year ended			For the year ended
		Prior framework		
In %	31.12.17	31.12.16	31.12.15	31.12.17
Reported				
Wealth Management	37.1	56.1	77.4	47.7
Wealth Management Americas	18.3	43.4	29.0	41.6
Personal & Corporate Banking	25.8	43.2	41.9	25.8
Asset Management	34.0	32.3	36.5	184.6
Investment Bank	13.4	13.1	25.9	13.6
UBS Group[3]	2.0	5.9	11.8	2.4
Adjusted[4]				
Wealth Management	44.6	69.0	81.4	57.3
Wealth Management Americas	20.1	48.5	33.7	45.4
Personal & Corporate Banking	27.5	43.0	42.8	27.5
Asset Management	30.9	39.4	38.1	167.7
Investment Bank	16.0	19.6	31.3	16.3
UBS Group[3]	3.4	7.8	11.8	4.0

1 Return on attributed equity and return on attributed tangible equity shown for the business divisions. Return on equity attributable to shareholders and return on tangible equity shown for the UBS Group. Return on attributed equity and return on attributed tangible equity for Corporate Center are not shown, as they are not meaningful. 2 This is a new measure introduced in 2017, accordingly no comparative period information is available. 3 Returns for UBS Group are calculated on a post-tax basis, whereas the returns for the business divisions are calculated on a pre-tax basis. 4 Adjusted results are non-GAAP financial measures as defined by SEC regulations.

UBS shares

UBS Group AG shares

Audited | As of 31 December 2017, IFRS equity attributable to shareholders amounted to CHF 51,214 million, represented by 3,853,096,603 shares issued. Shares issued increased by 2,330,214 shares in 2017 due to the issuance of shares out of conditional share capital upon exercise of employee share options.

Each share has a par value of CHF 0.10 and entitles the holder to one vote at the UBS Group AG shareholders' meeting, if entered into the share register as having the right to vote, and also a proportionate share of distributed dividends. As the Articles of Association of UBS Group AG indicate, there are no other classes of shares and no preferential rights for shareholders. ▲

→ **Refer to the "Corporate governance" section of this report for more information on UBS shares**

UBS Group share information

	As of or for the year ended		% change from
	31.12.17	31.12.16	31.12.16
Shares issued	3,853,096,603	3,850,766,389	0
Treasury shares	132,301,550	138,441,772	(4)
Shares outstanding	3,720,795,053	3,712,324,617	0
Basic earnings per share (CHF)[1]	0.28	0.86	(67)
Diluted earnings per share (CHF)[1]	0.27	0.84	(68)
Equity attributable to shareholders (CHF million)	51,214	53,621	(4)
Less: goodwill and intangible assets (CHF million)	6,398	6,556	(2)
Tangible equity attributable to shareholders (CHF million)	44,816	47,065	(5)
Total book value per share (CHF)	13.76	14.44	(5)
Tangible book value per share (CHF)	12.04	12.68	(5)
Share price (CHF)	17.94	15.95	12
Market capitalization (CHF million)[2]	69,125	61,420	13

1 Refer to "Note 9 Earnings per share (EPS) and shares outstanding" in the "Consolidated financial statements" section of this report for more information. 2 Market capitalization is calculated as total shares issued multiplied by the share price at the end of the period.

Holding of UBS Group AG shares

Group Treasury holds UBS Group AG shares to hedge future share delivery obligations related to employee share-based compensation awards. In addition, the Investment Bank holds a limited number of UBS Group AG shares, primarily in its capacity as a market-maker in UBS Group AG shares and related derivatives and to hedge certain issued structured debt instruments. As of 31 December 2017, we held a total of 132,301,550 treasury shares (31 December 2016: 138,441,772), or 3.4% (31 December 2016: 3.6%) of shares issued.

Share delivery obligations related to employee share-based compensation awards totaled 166 million shares as of 31 December 2017 (31 December 2016: 166 million). Share delivery obligations are calculated on the basis of unvested notional share awards, options and stock appreciation rights, taking applicable performance conditions into account. Treasury shares held are delivered to employees at exercise or vesting. However, share delivery obligations related to certain options and stock appreciation rights can also be satisfied by shares issued out of conditional capital. As of 31 December 2017, the number of UBS Group AG shares that could have been issued out of conditional capital for this purpose was 128 million (31 December 2016: 130 million).

The table below outlines the market purchases of UBS Group AG shares by Group Treasury. It does not include the activities of the Investment Bank.

Treasury share purchases[1]

	Treasury shares purchased			
Month of purchase	Number of shares	Average price in CHF	Number of shares (cumulative)	Average price in CHF
January 2017				
February 2017				
March 2017	34,000,000	15.99	34,000,000	15.99
April 2017			34,000,000	15.99
May 2017			34,000,000	15.99
June 2017			34,000,000	15.99
July 2017			34,000,000	15.99
August 2017			34,000,000	15.99
September 2017			34,000,000	15.99
October 2017			34,000,000	15.99
November 2017			34,000,000	15.99
December 2017			34,000,000	15.99

1 This table excludes purchases for the purpose of hedging derivatives linked to UBS Group AG shares and for market-making in UBS Group AG shares. The table also excludes UBS Group AG shares purchased by pension and retirement benefit funds for UBS employees, which are managed by a board of UBS management and employee representatives in accordance with Swiss law. UBS's pension and other post-employment benefit funds purchased 904,558 UBS Group AG shares during the year and held 16,370,040 UBS Group AG shares as of 31 December 2017.

Trading volumes

	For the year ended		
1,000 shares	31.12.17	31.12.16	31.12.15
SIX Swiss Exchange total	3,084,804	3,761,294	2,870,766
SIX Swiss Exchange daily average	12,290	14,808	11,437
New York Stock Exchange total	146,902	160,887	102,069
New York Stock Exchange daily average	585	638	405

Source: Reuters

Listing of UBS Group AG shares

UBS Group AG shares are listed on the SIX Swiss Exchange (SIX). They are also listed on the New York Stock Exchange (NYSE) as global registered shares. As such, they can be traded and transferred across applicable borders without the need for conversion, with identical shares traded on different stock exchanges in different currencies.

During 2017, the average daily trading volume of UBS Group AG shares was 12.3 million shares on the SIX and 0.6 million shares on the NYSE. The SIX is expected to remain the main venue for determining the movement in our share price due to the high volume traded on this exchange.

During the hours in which both the SIX and the NYSE are simultaneously open for trading (generally 3:30 p.m. to 5:30 p.m. Central European Time), price differences between these exchanges are likely to be arbitraged away by professional market-makers. Accordingly, the share price will typically be similar between the two exchanges when considering the prevailing US dollar / Swiss franc exchange rate. When the SIX is closed for trading, globally traded volumes will typically be lower. However, the specialist firm making a market in UBS Group AG shares on the NYSE is required to facilitate sufficient liquidity and maintain an orderly market in UBS Group AG shares throughout normal NYSE trading hours.

Ticker symbols UBS Group AG

Trading exchange	SIX/NYSE	Bloomberg	Reuters
SIX Swiss Exchange	UBSG	UBSG SW	UBSG.S
New York Stock Exchange	UBS	UBS UN	UBS.N

Security identification codes

ISIN	CH0244767585
Valoren	24 476 758
CUSIP	CINS H42097 10 7

Stock exchange prices[1]

	SIX Swiss Exchange			New York Stock Exchange		
	High (CHF)	Low (CHF)	Period end (CHF)	High (USD)	Low (USD)	Period end (USD)
2018						
February	19.20	17.09	18.07	20.69	18.15	18.97
January	19.77	18.04	18.90	20.89	18.45	20.32
2017	**18.24**	**15.11**	**17.94**	**18.47**	**15.11**	**18.39**
Fourth quarter 2017	**18.24**	**16.46**	**17.94**	**18.47**	**16.80**	**18.39**
December	18.24	16.78	17.94	18.47	16.97	18.39
November	17.18	16.47	16.99	17.39	16.80	17.18
October	17.60	16.46	16.98	17.47	16.89	17.01
Third quarter 2017	**17.42**	**15.36**	**16.55**	**18.31**	**16.08**	**17.15**
September	16.60	15.36	16.55	17.15	16.08	17.15
August	17.11	15.57	15.80	17.66	16.37	16.44
July	17.42	16.32	16.82	18.31	17.15	17.43
Second quarter 2017	**17.49**	**15.13**	**16.24**	**17.71**	**15.11**	**16.98**
First quarter 2017	**17.49**	**15.11**	**16.03**	**17.26**	**15.24**	**15.95**
2016	**19.32**	**11.58**	**15.95**	**19.14**	**11.94**	**15.67**
Fourth quarter 2016	17.73	12.97	15.95	17.44	13.22	15.67
Third quarter 2016	14.53	11.58	13.23	14.88	11.94	13.62
Second quarter 2016	16.85	12.24	12.57	17.37	12.46	12.96
First quarter 2016	19.32	13.51	15.49	19.14	14.01	16.02
2015	**22.57**	**13.58**	**19.52**	**23.19**	**16.02**	**19.37**
2014	**19.10**	**13.95**	**17.09**	**21.50**	**15.04**	**17.05**
2013	**19.60**	**14.09**	**16.92**	**21.61**	**15.09**	**19.25**

1 Based on the share price of UBS AG until 27 November 2014 and of UBS Group AG from 28 November 2014 onward.

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of UBS AG

Opinion on Internal Control over Financial Reporting
We have audited UBS AG and subsidiaries' internal control over financial reporting as of 31 December 2017, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework) (the COSO criteria). In our opinion, UBS AG and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of 31 December 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of UBS AG and subsidiaries as of 31 December, 2017 and 2016, and the related consolidated income statements, statements of comprehensive income, changes in equity and cash flows for each of the three years in the period ended 31 December 2017, and the related notes and our report dated 8 March 2018 expresses an unqualified opinion thereon.

Basis for Opinion
UBS AG's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on UBS AG's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting
A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Ernst & Young Ltd

Ernst & Young Ltd
Basel, 8 March 2018

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Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of UBS AG

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of UBS AG and subsidiaries (the Company) as of 31 December 2017 and 2016, and the related consolidated income statements, statements of comprehensive income, changes in equity and cash flows, for each of the three years in the period ended 31 December 2017, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the consolidated financial position of UBS AG and subsidiaries as of December 31, 2017 and 2016, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2017, in conformity with International Financial Reporting Standards, as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), UBS AG and subsidiaries' internal control over financial reporting as of 31 December 2017, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated 8 March 2018, expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's Board of Directors. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the US federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

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We have served as the Company's auditor since 1998.

Basel, 8 March 2018

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To the General Meeting of
UBS AG, Zurich and Basel

Basel, 8 March 2018

Statutory auditor's report on the audit of the consolidated financial statements

Opinion

We have audited the consolidated financial statements of UBS AG and its subsidiaries (the Group), which comprise the consolidated balance sheets as of 31 December 2017 and 2016, and the consolidated income statements, statements of comprehensive income, changes in equity and cash flows for each of the three years in the period ended 31 December 2017, and notes to the consolidated financial statements, including a summary of significant accounting policies in note 1.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2017 and 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended 31 December 2017 in accordance with International Financial Reporting Standards (IFRS) and comply with Swiss law.

Basis for opinion

We conducted our audit in accordance with Swiss law, International Standards on Auditing (ISAs) and Swiss Auditing Standards. Our responsibilities under those provisions and standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report.

We are independent of the Group in accordance with the provisions of Swiss law and the requirements of the Swiss audit profession, as well as the IESBA Code of Ethics for Professional Accountants, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Deferred tax asset valuation

Area of focus	We focused on this area because there is significant judgment exercised when determining the valuation of Deferred Tax Assets ("DTAs") given the significant amount of tax net operating loss carryforwards (net operating losses or "NOLs") the Group has available and the impact of the Tax Cuts and Jobs Act ("TCJA") in the United States. DTAs can be recognized to the extent it is probable they will be utilized to offset taxable profits within the loss carryforward period or be used against deductible temporary differences. The estimate of future taxable income is based on the strategic plan which is then allocated to the tax-paying entities in the various jurisdictions. The recognition of deferred tax assets is therefore sensitive to changes in the strategic plan as well as to assumptions made in the allocation of future taxable income. See note 8 to the financial statements.
Our audit response	We obtained an understanding of the TCJA. We evaluated the design and tested the operational effectiveness of the Group's key controls over accounting for the impact of the TCJA. We assessed the impact that the reduction in the federal corporate rate had on deferred taxes and the Group's disclosures in note 8. We obtained an understanding, evaluated the design and tested the operational effectiveness of the Group's key controls over the recognition and measurement of DTAs and the assumptions used in estimating the Group's future taxable income. We assessed the completeness and accuracy of the data used for the estimations of future taxable income. This included auditing of computations of the models applied to the recognition process for DTAs and testing the control framework around the models. We involved EY specialists to assess the key economic assumptions embedded in the strategic plan. We compared key inputs used by the Group to forecast future taxable income to externally available data, the Group's historical data and performance and assessed the sensitivity of the outcomes to reasonably possible changes in assumptions. We assessed the completeness and accuracy of the data used in the determination of the legal entity allocation, the assumptions applied by the Group, and the accuracy of the computation of the legal entity allocations. We also assessed whether the Group's disclosure regarding the application of judgment in estimating recognized and unrecognized DTAs appropriately reflects the Group's deferred tax position (within note 8).

Legal provision & contingencies

Area of focus	We focused on this area because the Group operates in a legal and regulatory environment that is exposed to significant litigation and similar risks arising from disputes and regulatory proceedings. Such matters are subject to many uncertainties and the outcome may be difficult to predict. These uncertainties inherently affect the amount and timing of potential outflows with respect to the provisions which have been established and other contingent liabilities. Overall, the legal provision represents the Group's best estimate for existing legal matters that have a probable and estimable impact on the Group's financial position. See note 20 to the financial statements.
Our audit response	We obtained an understanding, evaluated the design and tested the operational effectiveness of the Group's key controls over the legal provision and contingencies process. We assessed the methodologies on which the provision amounts are based, recalculated the provisions, and tested the completeness and accuracy of the underlying information. We read the legal analyses supporting the judgmental aspects impacted by legal interpretations. We obtained correspondence directly from external legal counsel to corroborate the information provided by the Group and followed up directly with external counsel as deemed necessary. We also assessed the Group's provisions and contingent liabilities disclosure (within note 20).

IT Controls relevant to financial reporting

Area of focus	We focused on this area because the Group is highly dependent on its IT systems for business processes and financial reporting. The Group continues to invest in its IT systems to meet client needs and business requirements including the effectiveness of its logical access and change management IT controls.
Our audit response	In assessing the reliability of electronic data processing, we included specialized IT auditors as part of our audit team. Our audit procedures focused on the IT infrastructure and applications relevant to financial reporting including evaluation of the design and testing of the operating effectiveness of key IT general controls and IT automated controls. Our audit procedures related to logical access included testing of user access management, privileged user access, periodic access right recertifications and user authentication controls.

Valuation of complex or illiquid trading portfolio assets and liabilities, financial assets and liabilities and derivative financial instruments held at fair value

Area of focus	We focused on this area because of the complexity and judgments and assumptions over the fair valuation of financial assets and liabilities with significant unobservable inputs. We have continued to focus on market developments in fair value methodologies and specifically on the Group's higher estimation uncertainty ("HEU") products, Credit Valuation Adjustment ("CVA") / and Funding Valuation Adjustment ("FVA"). See note 22 to the financial statements.
Our audit response	We obtained an understanding, evaluated the design and tested the operating effectiveness of the key controls over the financial instrument valuation processes, including controls over market data inputs into valuation models, model governance, and valuation adjustments. We tested a sample of the valuation models and the inputs used in those models, using a variety of techniques, including comparing inputs to available market data. We selected a sample of positions and independently determined estimated values and compared the values to the Group's recorded values. In addition, we evaluated the methodology and inputs used by the Group in determining funding and credit fair value adjustments on uncollateralized derivatives and fair value option liabilities. We also assessed the Group's disclosure (within note 22).

Other information in the annual report

The Board of Directors is responsible for the other information in the Annual Report. The other information comprises all information included in the Annual Report, but does not include the consolidated financial statements, the unconsolidated financial statements of UBS AG , the compensation report (pages 278–281 and page 304), disclosures denoted with an audited "signpost", and our auditor's report thereon.

Our opinions on the consolidated financial statements, the standalone financial statements of UBS AG and the compensation report do not cover the other information in the annual report and we do not express any form of assurance conclusion thereon other than the disclosures denoted with an audited "signpost".

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information in the Annual Report and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

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Responsibility of the Board of Directors for the consolidated financial statements
The Board of Directors is responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with IFRS and the provisions of Swiss law, and for such internal control as the Board of Directors determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the Board of Directors is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Board of Directors either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the consolidated financial statements
Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Swiss law, ISAs, and Swiss Auditing Standards and will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

A further description of our responsibilities for the audit of the consolidated financial statements is located at the website of EXPERTsuisse: http://www.expertsuisse.ch/en/audit-report-for-public-companies. This description forms part of our auditor's report.

Report on other legal and regulatory requirements
In accordance with article 728a paragraph 1 item 3 CO and the Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of consolidated financial statements in accordance with the instructions of the Board of Directors.

We recommend that the consolidated financial statements submitted to you be approved.

Ernst & Young Ltd

Marie-Laure Delarue
Licensed Audit Expert
(Auditor in Charge)

Ira S.Fitlin
Certified Public Accountant (U.S.)

UBS AG consolidated financial statements

Primary financial statements

Audited I

Income statement

		For the year ended		
CHF million	Note	31.12.17	31.12.16	31.12.15
Interest income	3	14,208	13,782	13,178
Interest expense	3	(7,728)	(7,399)	(6,449)
Net interest income	3	6,480	6,383	6,729
Credit loss (expense) / recovery	11	(128)	(37)	(117)
Net interest income after credit loss expense		6,352	6,346	6,612
Net fee and commission income	4	17,214	16,447	17,184
Net trading income	3	4,974	4,943	5,696
Other income	5	939	685	1,112
Total operating income		29,479	28,421	30,605
Personnel expenses	6	14,673	15,591	15,954
General and administrative expenses	7	8,811	7,690	8,219
Depreciation and impairment of property, equipment and software	14	928	980	918
Amortization and impairment of intangible assets	15	70	91	107
Total operating expenses		24,481	24,352	25,198
Operating profit / (loss) before tax		4,998	4,069	5,407
Tax expense / (benefit)	8	4,077	781	(908)
Net profit / (loss)		921	3,288	6,314
Net profit / (loss) attributable to preferred noteholders		72	78	77
Net profit / (loss) attributable to non-controlling interests		4	4	3
Net profit / (loss) attributable to shareholders		845	3,207	6,235

Statement of comprehensive income

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Comprehensive income attributable to shareholders			
Net profit / (loss)	845	3,207	6,235
Other comprehensive income that may be reclassified to the income statement			
Foreign currency translation			
Foreign currency translation movements, before tax	(753)	251	(174)
Foreign exchange amounts reclassified to the income statement from equity	21	126	(90)
Income tax relating to foreign currency translation movements	196	(84)	(1)
Subtotal foreign currency translation, net of tax	(535)	293	(266)
Financial assets available for sale			
Net unrealized gains / (losses) on financial assets available for sale, before tax	99	240	180
Impairment charges reclassified to the income statement from equity	15	5	1
Realized gains reclassified to the income statement from equity	(206)	(372)	(298)
Realized losses reclassified to the income statement from equity	14	25	45
Income tax relating to net unrealized gains / (losses) on financial assets available for sale	(7)	28	8
Subtotal financial assets available for sale, net of tax	(86)	(73)	(64)
Cash flow hedges			
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	45	246	550
Net realized (gains) / losses reclassified to the income statement from equity	(826)	(1,082)	(1,199)
Income tax relating to cash flow hedges	160	170	131
Subtotal cash flow hedges, net of tax	(621)	(666)	(518)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(1,242)	(447)	(848)
Other comprehensive income that will not be reclassified to the income statement			
Defined benefit plans			
Gains / (losses) on defined benefit plans, before tax	299	(876)	322
Income tax relating to defined benefit plans	6	52	(19)
Subtotal defined benefit plans, net of tax	305	(824)	304
Own credit on financial liabilities designated at fair value			
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	(312)	(120)	
Income tax relating to own credit on financial liabilities designated at fair value	(1)	5	
Subtotal own credit on financial liabilities designated at fair value, net of tax	(313)	(115)	
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(8)	(939)	304
Total other comprehensive income	(1,250)	(1,386)	(545)
Total comprehensive income attributable to shareholders	(404)	1,820	5,690

Table continues on the next page.

Statement of comprehensive income (continued)

Table continued from previous page.

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Comprehensive income attributable to preferred noteholders			
Net profit / (loss)	72	78	77
Other comprehensive income that will not be reclassified to the income statement			
Foreign currency translation movements, before tax	351	271	(59)
Income tax relating to foreign currency translation movements	0	0	0
Subtotal foreign currency translation, net of tax	351	271	(59)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	351	271	(59)
Total comprehensive income attributable to preferred noteholders	423	349	18
Comprehensive income attributable to non-controlling interests			
Net profit / (loss)	4	4	3
Other comprehensive income that will not be reclassified to the income statement			
Foreign currency translation movements, before tax	1	0	(2)
Income tax relating to foreign currency translation movements	0	0	0
Subtotal foreign currency translation, net of tax	1	0	(2)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	1	0	(2)
Total comprehensive income attributable to non-controlling interests	5	3	1
Total comprehensive income			
Net profit / (loss)	921	3,288	6,314
Other comprehensive income	(898)	(1,115)	(606)
of which: other comprehensive income that may be reclassified to the income statement	*(1,242)*	*(447)*	*(848)*
of which: other comprehensive income that will not be reclassified to the income statement	*344*	*(669)*	*243*
Total comprehensive income	23	2,173	5,709

Balance sheet

CHF million	Note	31.12.17	31.12.16
Assets			
Cash and balances with central banks		87,775	107,767
Due from banks	10, 11	13,693	13,125
Cash collateral on securities borrowed	24	12,393	15,111
Reverse repurchase agreements	24	77,240	66,246
Trading portfolio assets	22	130,807	96,661
of which: assets pledged as collateral that may be sold or repledged by counterparties	*23*	*35,363*	*30,260*
Positive replacement values	12, 22, 24	118,229	158,411
Cash collateral receivables on derivative instruments	24	23,434	26,664
Loans	10, 11	321,718	307,004
Financial assets designated at fair value	22, 24, 25	58,556	65,024
Financial assets available for sale	13, 22	8,665	15,676
Financial assets held to maturity	13	9,166	9,289
Investments in associates	28	1,018	963
Property, equipment and software	14	7,985	8,297
Goodwill and intangible assets	15	6,398	6,556
Deferred tax assets	8	9,783	13,144
Other assets	16	29,505	25,412
Total assets		916,363	935,353
Liabilities			
Due to banks	17	7,533	10,645
Cash collateral on securities lent	24	1,789	2,818
Repurchase agreements	24	15,255	6,612
Trading portfolio liabilities	22	30,463	22,825
Negative replacement values	12, 22, 24	116,134	153,810
Cash collateral payables on derivative instruments	24	30,247	35,472
Due to customers	17	447,141	450,199
Financial liabilities designated at fair value	18, 22, 24	54,202	55,017
Debt issued	19	104,749	78,998
Provisions	20	3,084	4,169
Other liabilities	8, 21	54,990	60,443
Total liabilities		865,588	881,009
Equity			
Share capital		386	386
Share premium		26,966	29,505
Retained earnings		29,102	28,265
Other comprehensive income recognized directly in equity, net of tax		(5,736)	(4,494)
Equity attributable to shareholders		50,718	53,662
Equity attributable to preferred noteholders		0	642
Equity attributable to non-controlling interests		57	40
Total equity		50,775	54,343
Total liabilities and equity		916,363	935,353

Statement of changes in equity

CHF million	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 1 January 2015	**384**	**32,057**	**(37)**	**22,902**
Issuance of share capital	1			
Acquisition of treasury shares			(292)	
Premium on shares issued and warrants exercised		290		
Tax (expense) / benefit		9		
Dividends		(2,914)		(8)
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		35	328	
Total comprehensive income for the year				6,538
of which: net profit / (loss)				*6,235*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*304*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 December 2015	**386**	**29,477**	**0**	**29,433**
Issuance of share capital				
Premium on shares issued and warrants exercised		4		
Tax (expense) / benefit		25		
Dividends				(3,434)
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		(2)		(1)
Total comprehensive income for the year				2,267
of which: net profit / (loss)				*3,207*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*(824)*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*(115)*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				

Other comprehensive income recognized directly in equity, net of tax[1]	*of which: foreign currency translation*	*of which: financial assets available for sale*	*of which: cash flow hedges*	Total equity attributable to shareholders	Preferred noteholders	Non-controlling interests	Total equity
(3,199)	*(5,591)*	*236*	*2,156*	**52,108**	**2,013**	**45**	**54,165**
				1			1
				(292)			(292)
				290			290
				9			9
				(2,922)	(77)	(5)	(3,004)
				0	1		1
				364		(1)	363
(848)	*(266)*	*(64)*	*(518)*	5,690	18	1	5,709
				6,235	*77*	*3*	*6,314*
(848)	*(266)*	*(64)*	*(518)*	*(848)*			*(848)*
				304			*304*
				0	*(59)*	*(2)*	*(61)*
(4,047)	*(5,857)*	*172*	*1,638*	**55,248**	**1,954**	**41**	**57,243**
				0			0
				4			4
				25			25
				(3,434)	(78)	(5)	(3,517)
				0	(1,583)		(1,583)
				(3)		0	(2)
(447)	*293*	*(73)*	*(666)*	1,820	349	3	2,173
				3,207	*78*	*4*	*3,288*
(447)	*293*	*(73)*	*(666)*	*(447)*			*(447)*
				(824)			*(824)*
				(115)			*(115)*
				0	*271*	*0*	*271*

Statement of changes in equity (continued)

CHF million	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 31 December 2016	**386**	**29,505**	**0**	**28,265**
Issuance of share capital				
Premium on shares issued and warrants exercised		6		
Tax (expense) / benefit		16		
Dividends		(2,250)		
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		(311)[2]		
Total comprehensive income for the year				837
of which: net profit / (loss)				*845*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*305*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*(313)*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 December 2017	**386**	**26,966**	**0**	**29,102**

1 Excludes defined benefit plans and own credit that are recorded directly in retained earnings. 2 Includes a CHF 307 million reduction related to the transfer of shared services functions in Switzerland from UBS AG to UBS Business Solutions AG, a wholly owned subsidiary of UBS Group AG. Refer to Note 30 for more information.

Other comprehensive income recognized directly in equity, net of tax[1]	*of which: foreign currency translation*	*of which: financial assets available for sale*	*of which: cash flow hedges*	Total equity attributable to shareholders	Preferred noteholders	Non-controlling interests	Total equity
(4,494)	*(5,564)*	*98*	*972*	53,662	642	40	54,343
				0			0
				6			6
				16			16
				(2,250)	(72)	(4)	(2,327)
				0	(993)		(993)
				(311)		17	(294)
(1,242)	*(535)*	*(86)*	*(621)*	(404)	423	5	23
				845	*72*	*4*	*921*
(1,242)	*(535)*	*(86)*	*(621)*	*(1,242)*			*(1,242)*
				305			*305*
				(313)			*(313)*
				0	*351*	*1*	*352*
(5,736)	*(6,099)*	*12*	*351*	50,718	0	57	50,775

UBS AG shares issued and treasury shares held

As of 31 December 2017, shares issued by UBS AG totaled 3,858,408,466 (31 December 2016: 3,858,408,466 shares).

No treasury shares were held as of 31 December 2017 and as of 31 December 2016.

Conditional share capital

As of 31 December 2017, UBS AG's share capital could have been increased through the issuance of 136,200,312 shares upon exercise of employee options.

Additional conditional capital up to a maximum number of 380,000,000 shares was available as of 31 December 2017 for conversion rights and warrants granted in connection with the issuance of bonds or similar financial instruments.

Statement of cash flows

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Cash flow from / (used in) operating activities			
Net profit / (loss)	921	3,288	6,314
Non-cash items included in net profit and other adjustments:			
Depreciation and impairment of property, equipment and software	928	980	918
Amortization and impairment of intangible assets	70	91	107
Credit loss expense / (recovery)	128	37	117
Share of net profits of associates / joint ventures and impairment of associates	(68)	(106)	(169)
Deferred tax expense / (benefit)	3,248	2	(1,614)
Net loss / (gain) from investing activities	(203)	(1,176)	(934)
Net loss / (gain) from financing activities	2,132	9,647	(1,654)
Other net adjustments	(519)	(300)	3,628
Net change in operating assets and liabilities:			
Due from / to banks	(3,184)	(1,183)	1,768
Cash collateral on securities borrowed and reverse repurchase agreements	(7,654)	7,933	(2,712)
Cash collateral on securities lent and repurchase agreements	7,432	(6,637)	(2,909)
Trading portfolio and replacement values	(21,931)	6,024	6,853
Financial assets designated at fair value	7,316	(60,658)	(1,446)
Cash collateral on derivative instruments	(2,479)	(4,169)	3,285
Loans	(15,411)	3,740	841
Due to customers	(11,187)	33,925	(17,362)
Other assets, provisions and other liabilities	(10,417)	(8,204)	7,516
Income taxes paid, net of refunds	(992)	(649)	(551)
Net cash flow from / (used in) operating activities	(51,872)	(17,413)	1,997
Cash flow from / (used in) investing activities			
Purchase of subsidiaries, associates and intangible assets	(102)	(26)	(13)
Disposal of subsidiaries, associates and intangible assets[1]	336	93	477
Purchase of property, equipment and software	(1,500)	(1,746)	(1,841)
Disposal of property, equipment and software	213	209	547
Purchase of financial assets available for sale	(8,448)	(7,271)	(101,189)
Disposal and redemption of financial assets available for sale	14,917	54,097	93,584
Net (purchase) / redemption of financial assets held to maturity	(77)	(8,996)	
Net cash flow from / (used in) investing activities	5,338	36,359	(8,434)

Table continues on the next page.

Statement of cash flows (continued)

Table continued from previous page.

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Cash flow from / (used in) financing activities			
Net short-term debt issued / (repaid)	24,141	5,440	(6,404)
Distributions paid on UBS AG shares	(2,250)	(3,434)	(2,626)
Issuance of long-term debt, including financial liabilities designated at fair value	49,506	33,453	47,790
Repayment of long-term debt, including financial liabilities designated at fair value	(43,299)	(34,081)	(44,221)
Dividends paid and repayments of preferred notes	(776)	(1,366)	(108)
Net changes in non-controlling interests	(5)	(5)	(5)
Net cash flow from / (used in) financing activities	27,317	6	(5,573)
Total cash flow			
Cash and cash equivalents at the beginning of the year	121,107	102,962	116,715
Net cash flow from / (used in) operating, investing and financing activities	(19,216)	18,952	(12,011)
Effects of exchange rate differences on cash and cash equivalents	264	(807)	(1,742)
Cash and cash equivalents at the end of the year[2]	102,154	121,107	102,962
of which: cash and balances with central banks	87,700	107,715	91,306
of which: due from banks	12,406	11,927	10,732
of which: money market paper[3]	2,049	1,465	924
Additional information			
Net cash flow from / (used in) operating activities includes:			
Interest received in cash	12,457	12,223	11,144
Interest paid in cash	6,627	6,141	5,267
Dividends on equity investments, investment funds and associates received in cash[4]	1,790	1,595	2,120

1 Includes dividends received from associates. 2 CHF 2,434 million, CHF 2,662 million and CHF 3,963 million of cash and cash equivalents (mainly reflected in Due from banks) were restricted as of 31 December 2017, 31 December 2016 and 31 December 2015, respectively. Refer to Note 23 for more information. 3 Money market paper is included in the balance sheet under Trading portfolio assets (31 December 2017: CHF 131 million, 31 December 2016: CHF 75 million, 31 December 2015: CHF 795 million), Financial assets available for sale (31 December 2017: CHF 23 million, 31 December 2016: CHF 430 million, 31 December 2015: CHF 129 million) and Financial assets designated at fair value (31 December 2017: CHF 1,894 million, 31 December 2016: CHF 959 million, 31 December 2015: CHF 0 million). 4 Includes dividends received from associates (2017: CHF 51 million, 2016: CHF 50 million, 2015: CHF 114 million) reported within Cash flow from / (used in) investing activities.

Changes in liabilities arising from financing activities

CHF million	Debt issued	*of which: short-term*	*of which: long-term*	Financial liabilities designated at fair value	Funding from UBS Group AG and its subsidiaries[2]	Total
Balance as of 1 January 2017	78,998	*26,178*	*52,820*	55,017	24,632	158,647
Cash flows	25,534	*24,141*	*1,393*	(5,556)	10,371	30,348
Non-cash changes	217	*634*	*(417)*	4,740	(254)	4,704
of which: foreign currency translation	*561*	*634*	*(73)*	*593*	*(138)*	*1,016*
of which: fair value changes				*4,147*		*4,147*
of which: other	*(344)[1]*	*0*	*(344)[1]*	*0*	*(115)[1]*	*(459)*
Balance as of 31 December 2017	104,749	*50,953*	*53,796*	54,202	34,749	193,700

1 Includes the effect of fair value hedges on long-term debt issued. Refer to Note 1a item k and Note 19 for more information. 2 Represents Group-internal funding obtained from UBS Group AG and UBS Group Funding (Switzerland) AG that is reported in the balance sheet line Due to customers.

Notes to the UBS AG consolidated financial statements

Note 1 Summary of significant accounting policies

a) Significant accounting policies

This Note describes the significant accounting policies applied in the preparation of the consolidated financial statements (the "Financial Statements") of UBS AG and its subsidiaries ("UBS AG"). On 8 March 2018, the Financial Statements were authorized for issue by the Board of Directors.

Basis of accounting

The Financial Statements have been prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), which is also the functional currency of UBS AG's Head Office and its Swiss-based operations.

Disclosures provided in the "Risk, treasury and capital management" section of this report that are marked as audited form an integral part of the Financial Statements. These disclosures relate to requirements under IFRS 7, *Financial Instruments: Disclosures* and IAS 1, *Presentation of Financial Statements* and are not repeated in this section.

The accounting policies described in this Note have been applied consistently in all years presented unless otherwise stated in Note 1b.

Critical accounting estimates and judgments

Preparation of these Financial Statements under IFRS requires management to apply judgment and make estimates and assumptions that affect reported amounts of assets, liabilities, income and expenses and disclosure of contingent assets and liabilities, and may involve significant uncertainty at the time they are made. Such estimates and assumptions are based on the best available information. UBS AG regularly reassesses the estimates and assumptions, which encompass historical experience, expectations of the future and other pertinent factors, to determine their continuing relevance based on current conditions and it updates them as necessary. Changes in those estimates and assumptions may have a significant impact on the Financial Statements. Further, actual results may differ significantly from UBS AG's estimates, which could result in significant loss to it, beyond what it anticipated or provided for.

The following areas contain estimation uncertainty or require critical judgment and have a significant effect on the amounts recognized in the Financial Statements:

- fair value of financial instruments (refer to item 3f in this Note and to Note 22)
- allowances and provisions for credit losses (refer to item 3g in this Note and to Note 11)
- pension and other post-employment benefit plans (refer to item 7 in this Note and to Note 26)
- income taxes (refer to item 8 in this Note and to Note 8)
- goodwill (refer to item 11 in this Note and to Note 15)
- provisions and contingent liabilities (refer to item 12 in this Note and to Note 20)
- consolidation of structured entities (refer to item 1 in this Note and to Note 28).

1) Consolidation

a. Consolidation principles

The Financial Statements comprise the financial statements of UBS AG and its subsidiaries, presented as a single economic entity, whereby intercompany transactions and balances have been eliminated. UBS AG consolidates all entities that it controls, including controlled structured entities (SEs), which is the case when it has (i) power over the relevant activities of the entity, (ii) exposure to an entity's variable returns and (iii) the ability to use its power to affect its own returns.

Where an entity is governed by voting rights, control is generally indicated by a direct shareholding of more than one-half of the voting rights.

Note 1 Summary of significant accounting policies (continued)

In other cases, the assessment of control is more complex and requires greater use of judgment. Where UBS AG has an interest in an entity that absorbs variability, UBS AG considers whether it has power over the relevant activities of the entity that allows it to affect the variability of its returns. Consideration is given to all facts and circumstances to determine whether UBS AG has power over another entity; that is, the current ability to direct the relevant activities of an entity when decisions about those activities need to be made. Factors such as the purpose and design of the entity, rights held through contractual arrangements, such as call rights, put rights or liquidation rights, as well as potential decision-making rights are all considered in this assessment. Where UBS AG has power over the relevant activities, a further assessment is made to determine whether, through that power, it has the ability to affect its own returns by assessing whether power is held in a principal or agent capacity. Consideration is given to (i) the scope of decision-making authority, (ii) rights held by other parties, including removal or other participating rights, and (iii) exposure to variability, including remuneration, relative to total variability of the entity as well as whether that exposure is different from that of other investors. If, after review of these factors, UBS AG concludes that it can exercise its power to affect its own returns, the entity is consolidated.

Subsidiaries, including SEs, are consolidated from the date when control is obtained and are deconsolidated from the date when control ceases. Control, or the lack thereof, is reassessed if facts and circumstances indicate that there is a change to one or more of the elements required to establish that control is present.

→ **Refer to Note 28 for more information**

b. Structured entities

UBS AG sponsors the formation of SEs and interacts with non-sponsored SEs for a variety of reasons, including allowing clients to obtain or be exposed to particular risk profiles, to provide funding or to sell or purchase credit risk. An SE is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity. Such entities generally have a narrow and well-defined objective and include those historically referred to as special purpose entities, as well as some investment funds. UBS AG assesses whether an entity is an SE by considering the nature of the activities of the entity as well as the substance of voting or similar rights afforded to other parties, including investors and independent boards or directors. UBS AG considers rights such as the ability to liquidate the entity or remove the decision maker to be similar to voting rights when the holder has the substantive ability to exercise such rights without cause. In the absence of such rights or in cases where the existence of such rights cannot be fully established, the entity is considered to be an SE.

The classes of SEs with which UBS AG is involved include:

- *Securitization structured entities* are established to issue securities to investors that are backed by assets held by the SE and whereby (i) significant credit risk associated with the securitized exposures has been transferred to third parties and (ii) there is more than one risk position or tranche issued by the securitization vehicle in line with the Basel III securitization definition. All securitization entities are classified as SEs.
- *Client investment structured entities* are established predominantly for clients to invest in specific assets or risk exposures through purchasing notes issued by the SE, predominantly on a fixed-term basis. The SE may source assets via a transfer from UBS AG or through an external market transaction. In some cases, UBS AG may enter into derivatives with the SE to either align the cash flows of the entity with the investor's intended investment objective or to introduce other desired risk exposures. In certain cases, UBS AG may have interests in a third-party-sponsored SE to hedge specific risks or participate in asset-backed financing.
- *Investment fund structured entities* have a collective investment objective, are managed by an investment manager and are either passively managed, so that any decision making does not have a substantive effect on variability, or are actively managed and investors or their governing bodies do not have substantive voting or similar rights. UBS AG creates and sponsors a large number of funds in which it may have an interest through the receipt of variable management fees and / or a direct investment. In addition, UBS AG has interests in a number of funds created and sponsored by third parties, including exchange-traded funds and hedge funds, to hedge issued structured products.

When UBS AG does not consolidate an SE, but has an interest in an SE or has sponsored an SE, disclosures are provided on the nature of these interests and sponsorship activities.

Critical accounting estimates and judgments

Each individual entity is assessed for consolidation in line with the aforementioned consolidation principles. The assessment of control can be complex and requires the use of significant judgment. As the nature and extent of UBS AG's involvement are unique to each entity, there is no uniform consolidation outcome by entity. Certain entities within a class may be consolidated while others may not.

→ **Refer to Note 28 for more information**

Note 1 Summary of significant accounting policies (continued)

2) Segment reporting

As of 31 December 2017, UBS AG's businesses were organized globally into five business divisions: Wealth Management, Wealth Management Americas, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which were supported by Corporate Center. The five business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center, reflect the management structure of UBS AG. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Financial information about the five business divisions and Corporate Center (with its units: Services, Group Asset and Liability Management (Group ALM), Non-core and Legacy Portfolio) is presented separately in internal reporting to management.

UBS AG's internal accounting policies, which include management accounting policies and service level agreements, determine the revenues and expenses directly attributable to each reportable segment. Transactions between the reportable segments are carried out at internally agreed rates and are reflected in the operating results of the reportable segments. Revenue-sharing agreements are used to allocate external client revenues to reportable segments where several reportable segments are involved in the value creation chain. Commissions are credited to the reportable segments based on the corresponding client relationship. Total intersegment revenues for UBS AG are immaterial, as the majority of the revenues are allocated across the segments by means of revenue-sharing agreements. Net interest income is generally allocated to the reportable segments based on their balance sheet positions. Interest income earned from managing UBS AG's consolidated equity is allocated to the reportable segments based on average attributed equity. Assets and liabilities of the reportable segments are funded through and invested with Corporate Center – Group ALM, and the net interest margin is reflected in the results of each reportable segment.

Segment assets are based on a third-party view and do not include intercompany balances. This view is in line with internal reporting to management. Certain assets managed centrally by Corporate Center – Services and Corporate Center – Group ALM may be allocated to other segments on a basis different to that on which the corresponding costs or revenues are allocated. For example, certain assets that are reported in Corporate Center – Services or Corporate Center – Group ALM may be retained on the balance sheet of these components of Corporate Center notwithstanding that the costs or revenues associated with these assets may be entirely or partly allocated to the segments. Similarly, certain assets are reported in the business divisions, whereas the corresponding costs or revenues are entirely or partly allocated to Corporate Center – Services and Corporate Center – Group ALM.

Non-current assets disclosed for segment reporting purposes represent assets that are expected to be recovered more than twelve months after the reporting date, excluding financial instruments, deferred tax assets, post-employment benefits and rights arising under insurance contracts.

→ **Refer to Notes 1c and 2 for more information**

3) Financial instruments

a. Recognition

UBS AG recognizes financial instruments when it becomes a party to the contractual provisions of the instrument. UBS AG applies settlement date accounting to all regular way purchases and sales of financial instruments.

In transactions in which UBS AG acts as a transferee, to the extent that the transfer of a financial asset does not qualify for derecognition by the transferor, UBS AG does not recognize the transferred asset as its asset.

UBS AG also acts in a fiduciary capacity, which results in the holding or placing of assets on behalf of individuals, trusts, retirement benefit plans and other institutions. Unless the recognition criteria are satisfied, these assets are not recognized on UBS AG's balance sheet. Consequently, the related income is excluded from these Financial Statements.

Client cash balances associated with derivatives clearing and execution services are not recognized on the balance sheet if, through contractual agreement, regulation or practice, UBS AG neither obtains benefits from nor controls the client cash balances.

b. Classification, measurement and presentation

Upon initial recognition, UBS records financial instruments at fair value plus, for financial instruments not measured at fair value through profit or loss, directly attributable transaction costs. After initial recognition, UBS AG classifies, measures and presents its financial assets and liabilities in accordance with IAS 39, *Financial Instruments: Recognition and Measurement* as described in the following table.

→ **Refer to Note 25a for an overview of financial assets and liabilities by IAS 39 category**

→ **Refer to the balance sheet for references to Notes that provide information on the composition of individual financial asset and liability categories**

Note 1 Summary of significant accounting policies (continued)

Financial assets classification	Significant items included	Measurement and presentation
Held for trading	All derivatives with a positive replacement value, except those that are designated and effective hedging instruments. Any other financial asset acquired principally for the purpose of selling or repurchasing in the near term, or part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans), equity instruments, and assets held under unit-linked investment contracts.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Net trading income,* except interest and dividend income on instruments other than derivatives (refer to item 3c in this Note), interest on derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain short duration foreign exchange contracts, which are reported in *Net interest income.* Derivative assets are generally presented as *Positive replacement values.* Bifurcated embedded derivatives are measured at fair value, but presented on the same balance sheet line as the host contract measured at amortized cost. The presentation of fair value changes on derivatives that are designated and effective hedging instruments differs depending on the type of hedge relationship (refer to item 3k in this Note for more information). Financial assets held for trading (other than derivatives) are presented as *Trading portfolio assets.* Financial assets designated at fair value through profit or loss are presented as *Financial assets designated at fair value.*
Designated at fair value through profit or loss	A financial asset may be designated at fair value through profit or loss only upon initial recognition and this designation is irrevocable. The fair value option can be applied only if one of the following criteria is met: – the financial instrument is a hybrid instrument that includes a substantive embedded derivative; – the financial instrument is part of a portfolio that is risk managed on a fair value basis and reported to senior management on that basis; or – the application of the fair value option eliminates or significantly reduces an accounting mismatch that would otherwise arise. UBS AG designated at fair value through profit or loss the following financial assets: – Certain structured loans, reverse repurchase and securities borrowing agreements that are managed on a fair value basis. – Loans that are hedged predominantly with credit derivatives. These instruments are designated at fair value to eliminate an accounting mismatch. – Certain debt securities held as high-quality liquid assets (HQLA) and managed by Corporate Center – Group ALM on a fair value basis. – Assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets are designated at fair value in order to eliminate an accounting mismatch that would otherwise arise due to the liability being measured on a fair value basis.	
Loans and receivables (amortized cost)	Non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and are not assets for which UBS AG may not recover substantially all of its initial net investment for reasons other than credit deterioration. This classification includes: – cash and balances with central banks – cash collateral receivables on derivative instruments – residential and commercial mortgages – secured loans, including reverse repurchase agreements, receivables under stock borrowing and Lombard loans, and unsecured loans – certain securities held within Corporate Center – Non-core and Legacy Portfolio – trade and lease receivables.	Measured at amortized cost using the effective interest rate method less allowances for credit losses (refer to items 3c and 3g in this Note). Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments are deferred and amortized over the life of the loan using the effective interest rate method. Loans and receivables are presented on the balance sheet primarily as *Cash and balances with central banks, Due from banks, Loans, Cash collateral on securities borrowed, Reverse repurchase agreements* and *Cash collateral receivables on derivative instruments.* Amounts arising from exchange-traded derivatives (ETD) and certain over-the-counter (OTC) derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to items 3d and 3j in this Note) are presented within *Cash collateral receivables on derivative instruments.*

Note 1 Summary of significant accounting policies (continued)

Financial assets classification	Significant items included	Measurement and presentation
Available for sale	Financial assets classified as available for sale are non-derivative financial assets that are not classified as held for trading, designated at fair value through profit or loss, or loans and receivables. This classification mainly includes debt securities held as HQLA and managed by Corporate Center – Group ALM, certain asset-backed securities managed by Corporate Center – Group ALM, as well as investment fund holdings and strategic and commercial equity investments.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are sold, collected or otherwise disposed of, or until any such investment is determined to be impaired (refer to item 3i in this Note). Upon disposal, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* Interest and dividend income are recognized in the income statement in accordance with item 3c in this Note. Refer to item 13 in this Note for information on the treatment of foreign exchange translation gains and losses.
Held to maturity	Non-derivative financial assets with fixed or determinable payments and fixed maturities for which UBS AG has the positive intention and ability to hold to maturity. This classification mainly includes debt securities held as HQLA and managed by Corporate Center – Group ALM.	Measured at amortized cost using the effective interest rate method less allowances for credit losses (refer to items 3c and 3g in this Note).

Financial liabilities classification	Significant items included	Measurement and presentation
Held for trading	– Obligations to deliver financial instruments, such as debt and equity instruments, that UBS AG has sold to third parties, but does not own (short positions). – All derivatives with a negative replacement value, except those that are designated and effective hedging instruments.	Measurement of trading liabilities follows the same principles as for held for trading assets, and measurement of liabilities designated at fair value through profit or loss follows the same principles as for assets designated at fair value through profit or loss. Presented as *Trading portfolio liabilities* and *Financial liabilities designated at fair value,* respectively. Derivative liabilities are generally presented as *Negative replacement values.* Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to item 3k in this Note for more information). Amounts due under unit-linked investment contracts are presented as *Other liabilities.*
Designated at fair value through profit or loss	UBS AG designated at fair value through profit or loss the following financial liabilities: – Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes. – Issued debt instruments managed on a fair value basis. – Loan commitments that are hedged predominantly with credit derivatives and hence eliminate an accounting mismatch.	
Amortized cost	This classification includes: – Demand and time deposits, retail savings / deposits, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit, covered bonds. – Cash collateral payables on derivative instruments.	Measured at amortized cost using the effective interest rate method. Amortized cost liabilities are presented on the balance sheet primarily as *Due to banks, Due to customers, Cash collateral on securities lent, Repurchase agreements, Cash collateral payables on derivative instruments* and *Debt issued.* Amounts arising from ETD and certain OTC derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to items 3d and 3j of this Note) are presented within *Cash collateral payables on derivative instruments.*

Note 1 Summary of significant accounting policies (continued)

c. Interest income and expense

Interest income or expense is determined by reference to a financial instrument's amortized-cost basis calculated using the effective interest rate (EIR) method. UBS AG also uses this method to determine the interest income and expense for financial instruments (excluding derivatives) measured at fair value through profit or loss. Interest income or expense on financial instruments measured at amortized cost, debt instruments measured at fair value through profit or loss and available-for-sale financial assets are presented within *Net interest income*. In addition, *Net interest income* includes the interest income and expense on derivatives designated as hedging instruments in effective hedge relationships and forward points on certain short duration foreign exchange contracts.

Upfront fees, including loan commitment fees where a loan is expected to be issued, and direct costs are included within the initial measurement of a financial instrument measured at amortized cost or classified as available for sale. Such fees and costs are therefore recognized over the expected life of the instrument as part of its EIR.

Fees related to loan commitments where no loan is expected to be issued, as well as loan syndication fees where UBS AG does not retain a portion of the syndicated loan or where UBS AG does retain a portion of the syndicated loan at the same effective yield for comparable risk as other participants, are included in *Net fee and commission income*.

Interest income on financial assets, excluding derivatives, is included in *Interest income* when positive and in *Interest expense* when negative, because negative interest income arising on a financial asset does not meet the definition of revenue. Similarly, interest expense on financial liabilities, excluding derivatives, is included in *Interest expense,* except when interest rates are negative, in which case it is included in *Interest income*. Dividend income on all financial assets is included in *Interest income*.

→ **Refer to item 3k in this Note and Note 3 for more information**

d. Derecognition

Financial assets

UBS AG derecognizes a financial asset, or a portion of a financial asset, from its balance sheet where the contractual rights to cash flows from the asset have expired, or have been transferred, usually by sale, thus exposing the purchaser to either substantially all the risks and rewards of the asset or a significant part of the risks and rewards combined with a practical ability to sell or pledge the asset.

A financial asset is considered to have been transferred when UBS AG (i) transfers the contractual rights to receive the cash flows of the financial asset or (ii) retains the contractual rights to receive the cash flows of that asset, but assumes a contractual obligation to pay the cash flows to one or more entities.

Where financial assets have been pledged as collateral or in similar arrangements, they are considered to have been transferred if the counterparty has received the contractual right to the cash flows of the pledged assets, as may be evidenced, for example, by the counterparty's right to sell or repledge the assets. Where the counterparty to the pledged financial assets has not received the contractual right to the cash flows, UBS AG does not consider this to be a transfer for the purposes of derecognition.

UBS AG enters into certain transactions where it transfers financial assets recognized on its balance sheet but retains either all or a portion of the risks and rewards of the transferred financial assets. If all or substantially all of the risks and rewards are retained, the transferred financial assets are not derecognized from the balance sheet; for example, securities lending and repurchase transactions or where financial assets are sold to a third party with a total return swap resulting in UBS AG retaining all or substantially all of the risks and rewards of the transferred assets. These types of transactions are accounted for as secured financing transactions as described in item 3e of this Note.

In transactions where substantially all of the risks and rewards of ownership of a financial asset are neither retained nor transferred, UBS AG derecognizes the financial asset if control over the asset is surrendered, and the rights and obligations retained following the transfer are recognized separately as assets and liabilities, respectively. In transfers where control over the financial asset is retained, UBS AG continues to recognize the asset to the extent of its continuing involvement, determined by the extent to which it is exposed to changes in the value of the transferred asset following the transfer.

Certain over-the-counter (OTC) derivative contracts and most exchange-traded futures and options contracts cleared through central clearing counterparties are considered to be settled on a daily basis through the daily margining process, as the payment or receipt of the variation margin represents legal or economic settlement of a derivative contract, which results in derecognition of the associated positive and negative replacement values.

→ **Refer to Note 24 for more information**

Note 1 Summary of significant accounting policies (continued)

Financial liabilities

UBS AG derecognizes a financial liability from its balance sheet when it is extinguished, that is, when the obligation specified in the contract is discharged, canceled or has expired. When an existing financial liability is exchanged for a new one from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification results in derecognition of the original liability and the recognition of a new liability with any difference in the respective carrying amounts being recognized in the income statement.

e. Securities borrowing / lending and repurchase / reverse repurchase transactions

Securities borrowing / lending and repurchase / reverse repurchase transactions are generally entered into on a collateralized basis. In such transactions, UBS AG typically borrows or lends equity and debt securities in exchange for securities or cash collateral.

These transactions are treated as collateralized financing transactions where the securities transferred / received are not derecognized or recognized on balance sheet. Securities transferred / received with the right to resell or repledge are disclosed separately.

In reverse repurchase and securities borrowing agreements, the cash delivered is derecognized and a corresponding receivable, including accrued interest, is recorded in the balance sheet lines *Reverse repurchase agreements* and *Cash collateral on securities borrowed,* respectively, representing UBS AG's right to receive the cash. Similarly, in repurchase and securities lending agreements, the cash received is recognized and a corresponding obligation, including accrued interest, is recorded in the balance sheet lines *Repurchase agreements* and *Cash collateral on securities lent,* respectively. Additionally, the sale of securities that is settled by delivering securities received in reverse repurchase or securities borrowing transactions triggers the recognition of a trading liability.

Repurchase and reverse repurchase transactions with the same counterparty, maturity, currency and central securities depository (CSD) are generally presented net, subject to meeting the netting requirements described in item 3j of this Note.

→ **Refer to Notes 23 and 24 for more information**

f. Fair value of financial instruments

UBS AG accounts for a significant portion of its assets and liabilities at fair value. Fair value is the price on the measurement date that would be received for the sale of an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market, or in the most advantageous market in the absence of a principal market.

All financial instruments measured at fair value are categorized into one of three fair value hierarchy levels. Level 1 financial instruments are those for which fair values can be derived from quoted prices in active markets. Level 2 financial instruments are those for which fair values must be derived using valuation techniques for which all significant inputs are, or are based on, observable market data. Level 3 financial instruments are those for which fair values can only be derived on the basis of valuation techniques for which significant inputs are not based on observable market data.

Critical accounting estimates and judgments

The use of valuation techniques, modeling assumptions and estimates of unobservable market inputs require significant judgment and could affect the amount of gain or loss recorded for a particular position. Valuation techniques that rely more heavily on unobservable inputs require a higher level of judgment to calculate a fair value than those entirely based on observable inputs.

Valuation techniques, including models, that are used to determine fair values are periodically reviewed and validated by qualified personnel, independent of those who created them. Models are calibrated to ensure that outputs reflect observable market data, to the extent possible. Also, models prioritize the use of observable inputs, when available, over unobservable inputs. Judgment is required in selecting appropriate models as well as inputs for which observable data is less readily or not available.

UBS AG's valuation techniques may not fully reflect all the factors relevant to the fair value of financial instruments held. Valuations are therefore adjusted, where appropriate, to allow for additional factors, including credit risk, model risk and liquidity risk.

UBS AG's governance framework over fair value measurement is described in Note 22b.

The level of subjectivity and the degree of management judgment involved in the development of estimates and the selection of assumptions are more significant for instruments valued using specialized and sophisticated models and where some or all of the parameter inputs are less observable (Level 3 instruments) and may require adjustment to reflect factors that market participants would consider in estimating fair value, such as close-out costs, credit exposure, model-driven valuation uncertainty, funding costs and benefits, trading restrictions and other factors, which are presented in Note 22d. UBS AG provides a sensitivity analysis of the estimated effects arising from changing significant unobservable inputs in Level 3 financial instruments to reasonably possible alternative assumptions within Note 22g.

→ **Refer to Note 22 for more information**

Note 1 Summary of significant accounting policies (continued)

g. Allowances and provisions for credit losses

A claim is impaired and an allowance or provision for credit losses is recognized when objective evidence demonstrates that a loss event has occurred after the initial recognition and that the loss event has an impact on the future cash flows that can be reliably estimated (incurred loss approach). UBS AG considers a claim to be impaired if it will be unable to collect all amounts due on it based on the original contractual terms due to credit deterioration of the issuer or counterparty. A claim can be a loan or receivable carried at amortized cost, or a commitment, such as a letter of credit, a guarantee or a similar instrument.

An allowance for credit losses is reported as a decrease in the carrying value of a financial asset. For an off-balance sheet item, such as a commitment, a provision for credit loss is reported in *Provisions*. Changes to allowances and provisions for credit losses are recognized in *Credit loss expense / recovery*.

→ **Refer to Notes 10 and 11 for more information**

Critical accounting estimates and judgments

Allowances and provisions for credit losses are evaluated at both a counterparty-specific level and collectively. Judgment is used in making assumptions about the timing and amount of impairment losses.

Counterparty-specific allowances and provisions

Loans are evaluated individually for impairment if objective evidence indicates that a loan may be impaired. Individual credit exposures are evaluated on the basis of the borrower's overall financial condition, resources and payment record, the prospects of support from contractual guarantors and, where applicable, the realizable value of any collateral. The impairment loss for a loan is the excess of the carrying value of the financial asset over the estimated recoverable amount. The estimated recoverable amount is the present value, calculated using the loan's original effective interest rate, of expected future cash flows, including amounts that may result from restructuring or the liquidation of collateral. If a loan has a variable interest rate, the discount rate for calculating the recoverable amount is the current effective interest rate. Upon impairment, interest income is accrued by applying the original effective interest rate to the impaired carrying value of the loan.

All impaired loans are reviewed and analyzed at least annually. Any subsequent changes to the amounts and timing of the expected future cash flows compared with prior estimates result in a change in the allowance for credit losses and are charged or credited to *Credit loss expense / recovery*. An allowance for impairment is reversed only when the credit quality has improved to such an extent that there is reasonable assurance of timely collection of principal and interest in accordance with the original contractual terms of the instrument, or the equivalent value thereof. A write-off is made when all or part of a financial asset is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are credited to *Credit loss expense / recovery*.

Collective allowances and provisions

Collective allowances and provisions are calculated for portfolios with similar credit risk characteristics, taking into account historical loss experience and current conditions. The methodology and assumptions used are reviewed regularly to reduce any differences between estimated and actual loss experience. For all of its portfolios, UBS AG also assesses whether there have been any unforeseen developments that might result in impairments that are not immediately observable at a counterparty level. To determine whether an event-driven collective allowance for credit losses is required, UBS AG considers global economic drivers to assess the most vulnerable countries and industries. As the allowance cannot be allocated to individual loans, the loans are not considered to be impaired and interest is accrued on each loan according to its contractual terms. If objective evidence becomes available that indicates that an individual financial asset is impaired, it is removed from the group of financial assets assessed for impairment on a collective basis and is assessed separately as counterparty-specific.

h. Restructured loans

A renegotiated or restructured loan is a loan for which the terms have been modified or for which additional collateral has been requested that was not contemplated in the original contract.

Typical key features of terms and conditions granted through restructuring to avoid default include special interest rates, postponement of interest or principal payments, debt / equity swaps, modification of the schedule of repayments, subordination or amendment of loan maturity. There is no change in the EIR following a renegotiation.

If a loan is restructured with preferential conditions (i.e., new or modified terms and conditions are agreed upon that do not meet the normal market criteria for the quality of the obligor and the type of loan), it is classified as defaulted. It will remain so until the loan is collected, written off or non-preferential conditions are granted that supersede the preferential conditions.

Concessions granted where there is no evidence of financial difficulty, or where any changes to terms and conditions are within UBS AG's usual risk appetite, are not deemed restructured.

A restructuring of a loan could lead to a fundamental change in the terms, resulting in the original loan being derecognized and a new loan being recognized.

If a loan is derecognized in these circumstances, the new loan is measured at fair value at initial recognition. Any allowance taken to date against the original loan is derecognized and is not attributed to the new loan. Consequently, the new loan is assessed for impairment on an individual basis. If the loan is not impaired, the loan is included within the general collective loan assessment for the purpose of measuring credit losses.

i. Impairment of financial assets classified as available for sale

At each balance sheet date, UBS AG assesses whether indicators of impairment are present. Available-for-sale debt instruments are impaired when there is objective evidence, using the same criteria described in item 3g, that, as a result of one or more events that occurred after the initial recognition of the asset, the estimated future cash flows have decreased.

Objective evidence that there has been an impairment of an available-for-sale equity instrument is a significant or prolonged decline in the fair value of the asset. UBS AG uses a rebuttable presumption that such instruments are impaired where there has been a decline in fair value of more than 20% below its original cost or fair value has been below original cost for more than six months.

To the extent a financial asset classified as available for sale is determined to be impaired, the related cumulative net unrealized loss previously recognized in *Other comprehensive income* is reclassified to the income statement within *Other income*. For equity instruments, any further loss is recognized directly in the income statement, whereas for debt instruments, any further loss is recognized in the income statement only if there is additional objective evidence of impairment. After the recognition of an impairment on a financial asset classified as available for sale, increases in the fair value of equity instruments are reported in *Other comprehensive income*. For debt instruments, such increases in the fair value, up to amortized cost in the transaction currency, are recognized in *Other income,* provided that the fair value increase is related to an event occurring after the impairment loss was recorded. Increases in excess of that amount are reported in *Other comprehensive income*.

j. Netting

UBS AG nets financial assets and liabilities on its balance sheet if (i) it has the unconditional and legally enforceable right to set off the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS AG and its counterparties, and (ii) intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. Netted positions include, for example, certain derivatives and repurchase and reverse repurchase transactions with various counterparties, exchanges and clearing houses.

In assessing whether UBS AG intends to either settle on a net basis, or to realize the asset and settle the liability simultaneously, emphasis is placed on the effectiveness of operational settlement mechanics in eliminating substantially all credit and liquidity exposure between the counterparties. This condition precludes offsetting on the balance sheet for substantial amounts of UBS AG's financial assets and liabilities, even though they may be subject to enforceable netting arrangements. For OTC derivative contracts, balance sheet offsetting is generally only permitted in circumstances in which a market settlement mechanism exists via an exchange or central clearing counterparty that effectively accomplishes net settlement through a daily exchange of collateral via a cash margining process. For repurchase arrangements and securities financing transactions, balance sheet offsetting may be permitted only to the extent that the settlement mechanism eliminates, or results in insignificant, credit and liquidity risk, and processes the receivables and payables in a single settlement process or cycle.

→ **Refer to Note 24 for more information**

k. Hedge accounting

UBS AG uses derivative and non-derivative instruments to manage exposures to interest rate and foreign currency risks, including exposures arising from forecast transactions. Qualifying instruments may be designated as hedging instruments in (i) hedges of the change in fair value of recognized assets or liabilities (fair value hedges), (ii) hedges of the variability in future cash flows attributable to a recognized asset or liability or highly probable forecast transactions (cash flow hedges) or (iii) hedges of a net investment in a foreign operation (net investment hedges).

Note 1 Summary of significant accounting policies (continued)

At the time a financial instrument is designated in a hedge relationship, UBS AG formally documents the relationship between the hedging instrument(s) and hedged item(s), including the risk management objectives and strategy in undertaking the hedge transaction and the methods that will be used to assess the effectiveness of the hedging relationship. Accordingly, UBS AG assesses, both at the inception of the hedge and on an ongoing basis, whether the hedging instruments, primarily derivatives, have been "highly effective" in offsetting changes in the fair value or cash flows associated with the designated risk of the hedged items. A hedge is considered highly effective if the following criteria are met: (i) at inception of the hedge and throughout its life, the hedge is expected to be highly effective in achieving offsetting changes in fair value or cash flows attributable to the hedged risk and (ii) actual results of the hedge are within a range of 80–125%. In the case of hedging forecast transactions, the transaction must have a high probability of occurring and must present an exposure to variations in cash flows that could ultimately affect the reported net profit or loss. UBS AG discontinues hedge accounting when (i) it determines that a hedging instrument is not, or has ceased to be, highly effective as a hedge, (ii) the derivative expires or is sold, terminated or exercised, (iii) the hedged item matures, is sold or repaid or (iv) forecast transactions are no longer deemed highly probable. UBS AG may also discontinue hedge accounting voluntarily.

Hedge ineffectiveness represents the amount by which the changes in the fair value of the hedging instrument differ from changes in the fair value of the hedged item attributable to the hedged risk, or the amount by which changes in the present value of future cash flows of the hedging instrument exceed changes in the present value of expected cash flows of the hedged item. Such ineffectiveness is recorded in current period earnings in *Net trading income*.

Interest from derivatives designated as hedging instruments in effective fair value hedge relationships is presented within *Interest income from loans and deposits* and *Interest expense on debt issued*, within *Net interest income*. Interest from derivatives designated as hedging instruments in effective cash flow hedge relationships that is reclassified from other comprehensive income when the hedged transaction affects profit or loss is presented within *Interest income from derivative instruments designated as cash flow hedges*.

→ **Refer to Note 3 for more information**

Fair value hedges

For qualifying fair value hedges, the change in the fair value of the hedging instrument is recognized in the income statement along with the change in the fair value of the hedged item that is attributable to the hedged risk. In fair value hedges of interest rate risk, the fair value change of the hedged item attributable to the hedged risk is reflected as an adjustment to the carrying value of the hedged item. If the hedge accounting relationship is terminated for reasons other than the derecognition of the hedged item, the adjustment to the carrying value is amortized to the income statement over the remaining term to maturity of the hedged item using the effective interest rate method. For a portfolio hedge of interest rate risk, the equivalent change in fair value is reflected within *Other assets* or *Other liabilities*. If the portfolio hedge relationship is terminated for reasons other than the derecognition of the hedged item, the amount included in *Other assets* or *Other liabilities* is amortized to the income statement over the remaining term to maturity of the hedged items using the straight-line method.

Cash flow hedges

Fair value gains or losses associated with the effective portion of derivatives designated as cash flow hedges for cash flow repricing risk are recognized initially in *Other comprehensive income* within *Equity*. When the hedged forecast cash flows affect profit or loss, the associated gains or losses on the hedging derivatives are reclassified from *Equity* to the income statement.

If a cash flow hedge of forecast transactions is no longer considered effective, or if the hedge relationship is terminated, the cumulative gains or losses on the hedging derivatives previously reported in *Equity* remain there until the committed or forecast transactions occur and affect profit or loss. If the forecast transactions are no longer expected to occur, the deferred gains or losses are reclassified immediately to the income statement.

Hedges of net investments in foreign operations

Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges. Gains or losses on the hedging instrument relating to the effective portion of the hedge are recognized directly in *Equity* (and presented in the statement of changes in equity and statement of comprehensive income under *Foreign currency translation*), while any gains or losses relating to the ineffective and / or undesignated portion (for example, the interest element of a forward contract) are recognized in the income statement. Upon disposal or partial disposal of the foreign operation, the cumulative value of any such gains or losses recognized in *Equity* associated with the entity is reclassified to the income statement.

Economic hedges that do not qualify for hedge accounting

Derivative instruments that are transacted as economic hedges, but do not qualify for hedge accounting, are treated in the same way as derivative instruments used for trading purposes (i.e., realized and unrealized gains and losses are recognized in *Net trading income*), except for the forward points on certain short duration foreign exchange contracts, which are reported in *Net interest income*.

→ **Refer to Note 12 for more information**

Note 1 Summary of significant accounting policies (continued)

l. Embedded derivatives

Derivatives may be embedded in other financial instruments (host contracts). For example, they could be represented by the conversion feature embedded in a convertible bond. Such hybrid instruments arise predominantly from the issuance of certain structured debt instruments. An embedded derivative is generally required to be separated from the host contract and accounted for as a standalone derivative instrument at fair value through profit or loss if (i) the host contract is not carried at fair value with changes in fair value reported in the income statement, (ii) the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host contract and (iii) the terms of the embedded derivative would meet the definition of a standalone derivative, were they contained in a separate contract.

Typically, UBS AG applies the fair value option to hybrid instruments (refer to item 3b in this Note for more information), in which case bifurcation of an embedded derivative component is not required.

m. Financial liabilities

Debt issued

Debt issued is carried at amortized cost, including contingent capital instruments that contain contractual provisions under which the principal amounts would be written down upon either a specified CET1 ratio breach or a determination by FINMA that a viability event has occurred. Such contractual provisions are not derivatives as the underlying is deemed to be a non-financial variable specific to a party to the contract. Where there is a legal bail-in mechanism for write-down or conversion into equity (as is the case, for instance, with senior unsecured debt issued by UBS AG that is subject to write-down or conversion under resolution authority granted to FINMA under Swiss law), such mechanism does not form part of the contractual terms and, therefore, also does not affect the amortized cost accounting treatment applied to these instruments. If the debt were to be written down or converted into equity in a future period, this would result in the full or partial derecognition of the financial liabilities, with the difference between the carrying value of the debt written down or converted into equity and the fair value of any equity shares issued recognized in the income statement.

In cases where, as part of UBS AG's risk management activity, fair value hedge accounting is applied to fixed-rate debt instruments carried at amortized cost, their carrying amount is adjusted for changes in fair value related to the hedged exposure. Refer to item 3k for more information on hedge accounting.

Obligations of UBS AG arising from funding it has received from UBS Group AG or its subsidiaries, which are not within the UBS AG scope of consolidation, are presented as *Due to customers*.

Debt issued and subsequently repurchased in relation to market-making or other activities is treated as redeemed. A gain or loss on redemption (depending on whether the repurchase price of the bond is lower or higher than its carrying value) is recorded in *Other income*. A subsequent sale of own bonds in the market is treated as a reissuance of debt.

Financial liabilities designated at fair value

UBS AG uses the fair value option to designate certain issued debt instruments as financial liabilities designated at fair value through profit or loss, on the basis that such financial instruments include embedded derivatives and / or are managed on a fair value basis (refer to item 3b in this Note for more information).

n. Own credit

From 1 January 2016 onward, changes in the fair value of financial liabilities designated at fair value through profit or loss related to own credit are recognized in *Other comprehensive income* directly within *Retained earnings* and will not be reclassified to the income statement in future periods.

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS AG at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS AG once the commitments are communicated to the beneficiary or which are revocable only due to automatic cancelation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) *derivative loan commitments* measured at fair value through profit or loss, (ii) *loan commitments designated at fair value through profit or loss* or (iii) *other loan commitments*. Other loan commitments are not recorded on the balance sheet, but a provision is recognized through profit or loss if it is probable that a loss has been incurred and a reliable estimate of the amount of the obligation can be made. Any change in the liability relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is classified as a (i) *trading asset*, consistent with the associated *derivative loan commitment*, (ii) *financial asset designated at fair value through profit or loss*, consistent with the *loan commitment designated at fair value through profit or loss* or as a (iii) *loan*, when the associated loan commitment is accounted for as *other loan commitment*.

Note 1 Summary of significant accounting policies (continued)

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS AG issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss.

Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of the amount initially recognized less cumulative amortization and, to the extent a payment under the guarantee has become probable, the present value of the expected payment. Any change in the liability relating to probable expected payments resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

4) Fee income

UBS AG earns fee income from a diverse range of services it provides to its clients. Fee income can be divided into two broad categories: (i) fees earned from services that are provided over a certain period of time, such as portfolio management and advisory fees, and (ii) fees earned from providing transaction-type services, such as underwriting fees, corporate finance fees and brokerage fees.

Fees earned from services that are provided over a certain period of time are recognized ratably over the service period, with the exception of performance-linked fees or fee components with specific performance criteria. Such fees are recognized when, as of the reporting date, the performance benchmark has been met and when collectibility is reasonably assured.

Fees earned from providing transaction-type services are recognized when the service has been completed and the fee is fixed or determinable, i.e., not subject to refund or adjustment.

Fee income generated from providing a service that does not result in the recognition of a financial instrument is presented within *Net fee and commission income*. Fees generated from the acquisition, issue or disposal of a financial instrument are presented in the income statement in line with the balance sheet classification of that financial instrument.

→ **Refer to Note 4 for more information**

5) Cash and cash equivalents

For the purposes of the statement of cash flows, cash and cash equivalents comprise balances with an original maturity of three months or less, including cash, money market paper and balances with central and other banks.

6) Share-based and other deferred compensation plans

UBS Group AG is the grantor of and maintains the obligation to settle share-based compensation plans that are awarded to employees of UBS AG. UBS AG recognizes the fair value of awards granted to its employees. These awards are generally subject to conditions that require employees to complete a specified period of service and, for performance shares, to satisfy specified performance conditions. Compensation expense is recognized, on a per tranche basis, over the service period based on an estimate of the number of instruments expected to vest and is adjusted to reflect actual outcomes. Where the service period is shortened, for example in the case of employees affected by restructuring programs or mutually agreed termination provisions, recognition of expense is accelerated to the termination date.

Where no future service is required, such as for employees who are retirement eligible or who have met certain age and length-of-service criteria, the services are presumed to have been received and compensation expense is recognized immediately on, or prior to, the date of grant. Such awards may remain forfeitable until the legal vesting date if certain non-vesting conditions are not met. For equity-settled awards, forfeiture events resulting from breach of a non-vesting condition do not result in an adjustment to expense.

UBS AG has no obligation to settle the awards and therefore awards over UBS Group AG shares are classified as equity-settled share-based payment transactions. Compensation expense is measured by reference to the fair value of UBS Group AG equity instruments on the date of grant adjusted, when relevant, to take into account the terms and conditions inherent in the award, including dividend rights, transfer restrictions in effect beyond the vesting date, and non-vesting conditions. Fair value is determined at the date of grant and is not remeasured unless its terms are modified such that the fair value immediately after modification exceeds the fair value immediately prior to modification. Any increase in fair value resulting from a modification is recognized as compensation expense, either over the remaining service period or, for vested awards, immediately.

→ **Refer to Note 27 for more information**

Note 1 Summary of significant accounting policies (continued)

Other compensation plans

The employees of UBS AG are granted deferred compensation plans that are settled in cash or financial instruments other than UBS AG equity, the amount of which may be fixed or may vary based on the achievement of specified performance conditions or the value of specified underlying assets. Compensation expense is recognized over the period that the employee provides services to become entitled to the award. Where the service period is shortened, for example in the case of employees affected by restructuring programs or mutually agreed termination provisions, recognition of expense is accelerated to the termination date. Where no future service is required, such as for employees who are retirement eligible or who have met certain age and length-of-service criteria, the services are presumed to have been received and compensation expense is recognized immediately on, or prior to, the date of grant. The amount recognized is based on the present value of the amount expected to be paid under the plan and is remeasured at each reporting date, so that the cumulative expense recognized equals the cash or the fair value of respective financial instruments distributed.

→ **Refer to Note 27 for more information**

7) Pension and other post-employment benefit plans

UBS AG sponsors various post-employment benefit plans for its employees worldwide, which include defined benefit and defined contribution pension plans, and other post-employment benefits such as medical and life insurance benefits that are payable after the completion of employment.

→ **Refer to Note 26 for more information**

Defined benefit pension plans

Defined benefit pension plans specify an amount of benefit that an employee will receive, which usually depends on one or more factors, such as age, years of service and compensation. The defined benefit liability recognized in the balance sheet is the present value of the defined benefit obligation less the fair value of the plan assets at the balance sheet date with changes resulting from remeasurements recorded immediately in *Other comprehensive income*. If the fair value of the plan assets is higher than the present value of the defined benefit obligation, the recognition of the resulting net defined benefit asset is limited to the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. UBS AG applies the projected unit credit method to determine the present value of its defined benefit obligations, the related current service cost and, where applicable, past service cost. The projected unit credit method sees each period of service as giving rise to an additional unit of benefit entitlement and measures each unit separately to build up the final obligation. These amounts, which take into account the specific features of each plan, including risk sharing between employee and employer, are calculated periodically by independent qualified actuaries.

Critical accounting estimates and judgments

The net defined benefit liability or asset at the balance sheet date and the related personnel expense depend on the expected future benefits to be provided, determined using a number of economic and demographic assumptions. A range of assumptions could be applied, and different assumptions could significantly alter the defined benefit liability or asset and pension expense recognized. The most significant assumptions include life expectancy, the discount rate, expected salary increases, pension increases and, in addition for the Swiss plan and one of the US defined benefit pension plans, interest credits on retirement savings account balances. Life expectancy is determined by reference to published mortality tables. The discount rate is determined by reference to the rates of return on high-quality fixed-income investments of appropriate currency and term at the measurement date. The assumption for salary increases reflects the long-term expectations for salary growth and takes into account historical salary development by age groups, expected inflation and expected supply and demand in the labor market. A sensitivity analysis for reasonable possible movements in each significant assumption for UBS AG's post-employment obligations is provided within Note 26.

Note 1 Summary of significant accounting policies (continued)

Defined contribution plans

A defined contribution plan is a pension plan under which UBS AG pays fixed contributions into a separate entity from which post-employment and other benefits are paid. UBS AG has no legal or constructive obligation to pay further contributions if the plan does not hold sufficient assets to pay employees the benefits relating to employee service in the current and prior periods. UBS AG's contributions are expensed when the employees have rendered services in exchange for such contributions. This is generally in the year of contribution. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available.

Other post-employment benefits

UBS AG also provides post-employment medical insurance benefits to certain retirees in the US and the UK. The expected costs of these benefits are recognized over the period of employment using the same accounting methodology used for defined benefit pension plans.

8) Income taxes

UBS AG is subject to the income tax laws of Switzerland and those of the non-Swiss jurisdictions in which UBS AG has business operations.

UBS AG's provision for income taxes is composed of current and deferred taxes. Current income taxes represent taxes to be paid or refunded for the current period or previous periods.

Deferred taxes are recognized for temporary differences between the carrying amounts and tax bases of assets and liabilities that will result in taxable or deductible amounts in future periods and are measured using the applicable tax rates and laws that have been enacted or substantively enacted by the end of the reporting period and which will be in effect when such differences are expected to reverse.

Deferred tax assets arise from a variety of sources, the most significant being: (i) tax losses that can be carried forward to be used against profits in future years and (ii) expenses recognized in UBS AG's income statement that are not deductible until the associated cash flows occur. Deferred tax assets are recognized only to the extent that it is probable that sufficient taxable profits will be available against which these differences can be used. When an entity or tax group has a history of recent losses, deferred tax assets are only recognized to the extent there are sufficient taxable temporary differences or there is convincing other evidence that sufficient taxable profit will be available against which the unused tax losses can be utilized.

Deferred tax liabilities are recognized for temporary differences between the carrying amounts of assets and liabilities in the balance sheet that reflect the expectation that certain items will give rise to taxable income in future periods.

Deferred and current tax assets and liabilities are offset when (i) they arise in the same tax reporting group, (ii) they relate to the same tax authority, (iii) the legal right to offset exists and (iv) they are intended to be settled net or realized simultaneously.

Current and deferred taxes are recognized as income tax benefit or expense in the income statement except for current and deferred taxes recognized (i) upon the acquisition of a subsidiary, (ii) for unrealized gains or losses on financial instruments that are classified as available for sale, (iii) for changes in fair value of derivative instruments designated as cash flow hedges, (iv) for remeasurements of defined benefit plans, (v) for certain foreign currency translations of foreign operations and (vi) for gains and losses on the sale of treasury shares. Amounts relating to points (ii), (iii), (iv) and (v) are recognized in *Other comprehensive income* within *Equity*.

Critical accounting estimates and judgments

Tax laws are complex and judgment and interpretations about the application of such laws are required when accounting for income taxes. UBS AG considers the performance of its businesses and the accuracy of historical forecasts and other factors in evaluating the recoverability of its deferred tax assets, including the remaining tax loss carry-forward period, and its assessment of expected future taxable profits in the forecast period used for recognizing deferred tax assets. Estimating future profitability is inherently subjective and is particularly sensitive to future economic, market and other conditions, which are difficult to predict.

Note 1 Summary of significant accounting policies (continued)

The level of deferred tax asset recognition is influenced by management's assessment of UBS AG's future profitability based on relevant business plan forecasts. Existing assessments are reviewed and, if necessary, revised to reflect changed circumstances. This review is conducted annually, in the second half of each year, but adjustments may be made at other times, if required. In a situation where recent losses have been incurred, convincing evidence that there will be sufficient future profitability is required.

If profit forecast assumptions in future periods deviate from the current outlook, the value of UBS AG's deferred tax assets may be affected. Any increase or decrease in the carrying amount of deferred tax assets would primarily be recognized through the income statement but would not affect cash flows.

Judgment is also required to forecast the expected outcome of uncertain tax positions that may require the interpretation of tax laws and the resolution of any income tax-related appeals or litigation that are incorporated into the estimate of income and deferred tax.

→ **Refer to Note 8 for more information**

9) Investment in associates

Entities where UBS AG has significant influence over the financial and operating policies of the entity, but does not have control, are classified as investments in associates and accounted for under the equity method of accounting. Typically, UBS AG has significant influence when it holds or has the ability to hold between 20% and 50% of a company's voting rights. Investments in associates are initially recognized at cost, and the carrying amount is increased or decreased after the date of acquisition to recognize UBS AG's share of the investee's comprehensive income and any impairment losses.

The net investment in an associate is impaired if there is objective evidence of a loss event and the carrying value of the investment in the associate is below its recoverable amount.

→ **Refer to Note 28 for more information**

10) Property, equipment and software

Property, equipment and software includes own-used properties, leasehold improvements, information technology hardware, externally purchased and internally generated software, as well as communication and other similar equipment. Property, equipment and software is carried at cost less accumulated depreciation and impairment losses and is reviewed at each reporting date for indication for impairment. Software development costs are capitalized only when the costs can be measured reliably and it is probable that future economic benefits will arise. Depreciation of property, equipment and software begins when they are available for use, that is, when they are in the location and condition necessary for them to be capable of operating in the manner intended by management. Depreciation is calculated on a straight-line basis over an asset's estimated useful life. The estimated useful economic lives of UBS AG's property, equipment and software are:

- properties, excluding land: ≤ 67 years
- IT hardware and communication equipment: ≤ 7 years
- other machines and equipment: ≤ 10 years
- software: ≤ 10 years
- leasehold improvements: shorter of the lease term or the economic life of asset (typically ≤ 20 years)

→ **Refer to Note 14 for more information**

11) Goodwill and intangible assets

Goodwill represents the excess of the cost of an acquisition over the fair value of UBS AG's share of net identifiable assets of the acquired entity at the date of the acquisition. Goodwill is not amortized, but at the end of each reporting period or when indicators of impairment exist, UBS AG assesses whether there is any indication that goodwill is impaired. If such indicators exist, UBS AG is required to test the goodwill for impairment. Irrespective of whether there is any indication of impairment, UBS AG tests goodwill for impairment annually. UBS AG considers the segments, as reported in Note 2a, as separate cash-generating units, since this is the level at which the performance of investments is reviewed and assessed by management. The impairment test is performed for each segment to which goodwill is allocated by comparing the recoverable amount, based on its value-in-use, to the carrying amount of the respective segment. An impairment charge is recognized if the carrying amount exceeds the recoverable amount.

Note 1 Summary of significant accounting policies (continued)

If the estimated earnings and other assumptions in future periods deviate from the current outlook, the value of UBS AG's goodwill may become impaired in the future, giving rise to losses in the income statement. Recognition of any impairment of goodwill would reduce net profit and equity, but would not affect cash flows.

Intangible assets are comprised of separately identifiable intangible items arising from business combinations and certain purchased trademarks and similar items. Intangible assets are recognized at cost. The cost of an intangible asset acquired in a business combination is its fair value at the date of acquisition. Intangible assets with a finite useful life are amortized using the straight-line method over their estimated useful life, generally not exceeding 20 years. In rare cases, intangible assets can have an indefinite useful life, in which case they are not amortized. At each reporting date, intangible assets are reviewed for indications of impairment. If such indications exist, the intangible assets are analyzed to assess whether their carrying amount is fully recoverable. An impairment loss is recognized if the carrying amount exceeds the recoverable amount.

Critical accounting estimates and judgments

UBS AG's methodology for goodwill impairment testing is based on a model that is most sensitive to the following key assumptions: (i) forecasts of earnings available to shareholders in years one to three, (ii) changes in the discount rates and (iii) changes in the long-term growth rate. Key assumptions used to determine the recoverable amounts of each segment are tested for sensitivity by applying a reasonably possible change to those assumptions. Refer to Note 15 for the discussion of how the reasonably possible changes in those key assumptions may affect the results delivered by UBS AG's model for goodwill impairment testing.

→ **Refer to Notes 2 and 15 for more information**

12) Provisions and contingent liabilities

Provisions are liabilities of uncertain timing or amount, and are recognized when (i) UBS AG has a present obligation as a result of a past event, (ii) it is probable that an outflow of resources will be required to settle the obligation and (iii) a reliable estimate of the amount of the obligation can be made.

The majority of UBS AG's provisions relate to litigation, regulatory and similar matters, restructuring, employee benefits, real estate and loan commitments and guarantees.

UBS AG recognizes provisions for litigation, regulatory and similar matters when, in the opinion of management after seeking legal advice, it is more likely than not that UBS AG has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS AG, but are nevertheless expected to be, based on UBS AG's experience with similar asserted claims.

Restructuring provisions are recognized when a detailed and formal restructuring plan has been approved and a valid expectation has been raised that the restructuring will be carried out, either through commencement of the plan or announcements to affected employees.

Provisions are recognized for lease contracts if the unavoidable costs of a contract exceed the benefits expected to be received under it (onerous lease contracts). For example, this may occur when a significant portion of a leased property is expected to be vacant for an extended period.

Provisions for employee benefits are recognized mainly in respect of service anniversaries and sabbatical leave.

Provisions are recognized at the best estimate of the consideration required to settle the present obligation at the balance sheet date. Such estimates are based on all available information and are revised over time as more information becomes available. If the effect of the time value of money is material, provisions are discounted and measured at the present value of the expenditure expected to settle or discharge the obligation, using a rate that reflects the current market assessments of the time value of money and the risks specific to the obligation.

Provisions that are similar in nature are aggregated to form a class, while the remaining provisions, including those of less significant amounts, are presented under *Other provisions*. Provisions are presented separately on the balance sheet and, when they are no longer considered uncertain in timing or amount, are reclassified to *Other liabilities – Other*.

When all conditions required to recognize a provision are not met, a contingent liability is disclosed, unless the likelihood of an outflow of resources is remote, in which case no provision is recognized and no contingent liability is reported. Contingent liabilities are also disclosed for possible obligations that arise from past events whose existence will be confirmed only by uncertain future events not wholly within the control of UBS AG. Such disclosures are not made if it is not practicable to do so.

Note 1 Summary of significant accounting policies (continued)

Critical accounting estimates and judgments

Recognition of provisions often involves significant judgment in assessing the existence of an obligation that results from past events and in estimating the probability, timing and amount of any outflows of resources. This is particularly the case for litigation, regulatory and similar matters, which, due to their nature, are subject to many uncertainties making their outcome difficult to predict. Such matters may involve unique fact patterns or novel legal theories, proceedings that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Determining whether an obligation exists as a result of a past event and estimating the probability, timing and amount of any potential outflows is based on a variety of assumptions, variables, and known and unknown uncertainties.

The amount of any provision recognized is sensitive to the assumptions used and there could be a wide range of possible outcomes for any particular matter.

Statistical or other quantitative analytical tools are of limited use in determining whether to establish or determine the amount of provisions in the case of litigation, regulatory or similar matters. Furthermore, information currently available to management may be incomplete or inaccurate, increasing the risk of erroneous assumptions with regard to the future development of such matters. Management regularly reviews all the available information regarding such matters, including legal advice, which is a significant consideration, to assess whether the recognition criteria for provisions have been satisfied and to determine the timing and amount of any potential outflows.

→ **Refer to Note 20 for more information**

13) Foreign currency translation

Transactions denominated in a foreign currency are translated into the functional currency of the reporting entity at the spot exchange rate on the date of the transaction. At the balance sheet date, all monetary assets and liabilities denominated in foreign currency are translated into the functional currency using the closing exchange rate. Non-monetary items measured at historical cost are translated at the exchange rate on the date of the transaction. Foreign currency translation differences on non-monetary financial assets classified as available for sale are generally recorded directly in *Equity* until the asset is sold or becomes impaired. However, translation differences on available-for-sale monetary financial assets are reported in *Net trading income* on an amortized-cost basis, along with all other foreign currency translation differences on monetary assets and liabilities.

Upon consolidation, assets and liabilities of foreign operations are translated into Swiss francs (CHF), UBS AG's presentation currency, at the closing exchange rate on the balance sheet date, and income and expense items are translated at the average rate for the period. The resulting foreign currency translation differences attributable to shareholders are recognized directly in *Foreign currency translation* within *Equity,* which forms part of *Total equity attributable to shareholders*, whereas the foreign currency translation differences attributable to non-controlling interests are shown within *Equity attributable to non-controlling interests*.

When a foreign operation is disposed or partially disposed of and UBS AG loses control over the foreign operation, the cumulative amount of foreign currency translation differences within *Total equity attributable to shareholders* and *Equity attributable to non-controlling interests* related to that foreign operation is reclassified to the income statement as part of the gain or loss on disposal. When UBS AG disposes of a portion of its interest in a subsidiary that includes a foreign operation but retains control, the related portion of the cumulative currency translation balance is reclassified to *Equity attributable to non-controlling interests*.

→ **Refer to Note 34 for more information**

14) Non-controlling interests and preferred noteholders

Net profit is split into *Net profit attributable to shareholders, Net profit attributable to non-controlling interests* and *Net profit attributable to preferred noteholders.* Similarly, *Equity* is split into *Equity attributable to shareholders, Equity attributable to non-controlling interests* and *Equity attributable to preferred noteholders.*

Note 1 Summary of significant accounting policies (continued)

15) Leasing

UBS AG enters into lease contracts, or contracts that include lease components, predominantly of premises and equipment, and primarily as lessee. Leases that transfer substantially all the risks and rewards, but not necessarily legal title in the underlying assets, are classified as finance leases. All other leases are classified as operating leases. UBS AG is not a lessee in any material finance leases.

Lease contracts classified as operating leases where UBS AG is the lessee include non-cancelable long-term leases of office buildings in most UBS AG locations. Operating lease rentals payable are recognized as an expense on a straight-line basis over the lease term, which commences with control of the physical use of the property. Lease incentives are treated as a reduction of rental expense and are recognized on a consistent basis over the lease term.

Where UBS AG acts as lessor under a finance lease, a receivable is recognized in *Loans* at an amount equal to the present value of the aggregate of the minimum lease payments plus any unguaranteed residual value that UBS AG expects to recover at the end of the lease term. Initial direct costs are also included in the initial measurement of the lease receivable. Lease payments received during the lease term are allocated to repayment of the outstanding receivable and interest income to reflect a constant periodic rate of return on UBS AG's net investment using the interest rate implicit in the lease. UBS AG reviews the estimated unguaranteed residual value annually, and if the estimated residual value to be realized is less than the amount assumed at lease inception, a loss is recognized for the expected shortfall.

Certain arrangements do not take the legal form of a lease but convey a right to use an asset in return for a payment or series of payments. For such arrangements, UBS AG determines at the inception of the arrangement whether the fulfillment of the arrangement is dependent on the use of a specific asset or assets, and if so, the arrangement is accounted for as a lease.

→ **Refer to Notes 10 and 31 for more information**

b) Changes in accounting policies, comparability and other adjustments

Presentation of interest income and expense on derivatives designated as hedging instruments

Effective 1 January 2017, UBS AG refined the presentation of interest income and interest expense on derivatives designated as hedging instruments in effective hedge relationships to align the presentation with interest arising from designated hedged items. As a result of this presentation change:

- *Interest income from loans and deposits* was CHF 530 million lower, while *Interest expense on debt issued* and *Interest expense on loans and deposits* for the year ended 31 December 2017 were lower by CHF 382 million and CHF 148 million, respectively, with no change to *Net interest income.*
- Interest income from derivative instruments designated as cash flow hedges, previously included within *Interest income from loans and deposits,* is now separately disclosed within Note 3.

Prior-period information has not been restated, as the effect was not material.

→ **Refer to Note 3 for more information**

Amendments to IAS 7, Statement of Cash Flows

UBS AG adopted amendments to IAS 7, *Statement of Cash Flows,* in 2017 and now separately discloses the drivers of changes in financial liabilities arising from financing activities, including changes arising from cash flows and non-cash changes, in its statement of cash flows.

→ **Refer to the statement of cash flows for more information**

→ **Refer to the "Balance sheet, liquidity and funding management" section of this report for information on liabilities and funding management**

Amendments to IAS 12, Income Taxes

In 2017, UBS AG adopted amendments to IAS 12, *Income Taxes*, that clarify how to account for deferred tax assets related to debt instruments measured at fair value. The adoption of these amendments did not have a material impact on UBS AG's financial statements.

Note 1 Summary of significant accounting policies (continued)

c) International Financial Reporting Standards and Interpretations to be adopted in 2018 and later and other changes

Effective from 2018

Changes in segment reporting

Effective 1 February 2018, UBS AG integrated its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division, which is managed on an integrated basis, with a single set of key performance indicators, performance targets, operating plan and management structure. Consistent with this, the operating results of Global Wealth Management will be presented and assessed on an integrated basis in internal reporting to management. Consequently, beginning from the first quarter of 2018, Global Wealth Management qualifies as an operating and reportable segment for the purposes of segment reporting and will be presented alongside Personal & Corporate Banking, Asset Management, the Investment Bank, and Corporate Center (with its units Services, Group Asset and Liability Management (Group ALM) and Non-core and Legacy Portfolio).

IFRS 9, Financial Instruments

IFRS 9, *Financial Instruments* is effective from 1 January 2018 and will be applicable from UBS AG's first quarter 2018 reporting. IFRS 9 reflects the classification and measurement, impairment and hedge accounting phases of the IASB's project to replace IAS 39, *Financial Instruments: Recognition and Measurement*. In addition, UBS AG will early adopt the Amendment to IFRS 9, *Prepayment Features with Negative Compensation*, issued in October 2017, which allows it to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs.

Classification and measurement

IFRS 9 requires all financial assets, except equity instruments, to be classified at amortized cost, at fair value through other comprehensive income (OCI) or at fair value through profit or loss, based on the business model for managing the respective financial assets and their contractual cash flow characteristics. If a financial asset meets the criteria to be measured at amortized cost or at fair value through OCI, it can be designated at fair value through profit or loss if doing so would significantly reduce or eliminate an accounting mismatch. Equity instruments that are not held for trading may be accounted for at fair value through OCI, with no subsequent reclassification of realized gains or losses to the income statement under any circumstances, while all other equity instruments will be accounted for at fair value through profit or loss.

For UBS AG, the most significant IFRS 9 classification and measurement changes on transition are due to the following:

- financial assets that will no longer qualify for amortized cost accounting under IFRS 9 will be classified at fair value through profit or loss because their cash flow characteristics do not satisfy the solely payments of principal and interest criteria (e.g., auction rate securities and certain brokerage receivables);
- lending arrangements that no longer qualify for amortized cost accounting under IFRS 9 will be classified at fair value through profit or loss because the business model within which they are managed does not have an objective to hold financial assets in order to collect the contractual cash flows (e.g., certain Investment Bank lending arrangements);
- equity instruments classified as available for sale under IAS 39 will be classified at fair value through profit or loss under IFRS 9; and
- financial liabilities will be newly designated under IFRS 9 at fair value through profit or loss, from amortized cost accounting, to align with conclusions reached for associated financial assets that will be measured at fair value through profit or loss (e.g., brokerage payables).

IFRS 9 classification and measurement requirements for financial liabilities are unchanged from IAS 39, except that any gain or loss arising on a financial liability designated at fair value through profit or loss that is attributable to changes in the issuer's own credit risk (own credit) is presented in OCI and not recognized in the income statement. UBS AG early adopted the own credit presentation change from 1 January 2016.

Expected credit losses

IFRS 9 introduces an approach for determining impairment based on forward-looking expected credit losses (ECLs), which is intended to result in an earlier recognition of credit losses compared with the existing incurred-loss impairment approach for financial instruments in IAS 39, and the loss-provisioning approach for financial guarantees and loan commitments in IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*. The new impairment model applies to financial assets measured at amortized cost, debt instruments measured at fair value through OCI, lease receivables, and financial guarantee contracts and loan commitments that are not measured at fair value through profit or loss.

Note 1 Summary of significant accounting policies (continued)

Expected credit losses will be recognized on the following basis:
- A maximum of 12-month ECLs are required to be recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that will result if a default occurs in the 12 months after the reporting date (or a shorter period if the expected life is less), weighted by the risk of that default occurring. Respective instruments are referred to as instruments in stage 1.
- Lifetime ECLs are required to be recognized if a significant increase in credit risk (SICR) is detected subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that will result from all possible default events over the expected life of a financial instrument, weighted by the risk of default occurring. Respective instruments are referred to as instruments in stage 2. Where an SICR is no longer observed, the instrument will move back to stage 1.
- Lifetime ECLs are always recognized for credit-impaired financial instruments, referred to as instruments in stage 3. The IFRS 9 determination of whether an instrument is credit impaired will follow substantially the same principles used to determine whether an instrument is impaired under IAS 39, i.e., is based on the occurrence of one or more loss events. However, the ECL for credit-impaired financial instruments under IFRS 9 may differ mainly due to additional forward-looking considerations required under IFRS 9. Credit-impaired exposures may include positions for which no loss has occurred or no allowance has been recognized, for example because they are expected to be fully recoverable through the collateral held. Instruments that are no longer credit impaired move back to stage 2 or stage 1.
- Changes in lifetime ECLs since initial recognition are also recognized for instruments that are purchased or originated credit impaired.

The methodology applied will calculate an individual probability-weighted unbiased ECL in line with the complexity, structure and risk profile of relevant portfolios. The following principal factors will be applied: probability of default (PD), loss given default (LGD), exposure at default (EAD) and discounting of cash flows to the reporting date, alongside an evaluation of a range of possible outcomes, forecasts of future economic conditions and information on past events and current conditions.

PDs and LGDs used in the ECL calculation will be point in time (PIT) based and consider a range of scenarios (upside, baseline, mild downside, downside) to capture material non-linearity and asymmetries, and scenario weights will be applied to reflect a likelihood of their occurrence.

UBS AG will measure ECL over the maximum contractual period it is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For certain credit card facilities without a defined contractual end date, which are callable on demand and where the drawn and undrawn portions are managed as one unit, the period over which UBS AG is exposed to credit risk exceeds the contractual notice period and therefore this longer period is used within the ECL calculation.

Qualitative and quantitative criteria are used to determine whether the credit risk on a particular instrument has significantly increased from its initial recognition. UBS AG will assess changes in an instrument's risk of default primarily based on a comparison of the annualized forward-looking and scenario-weighted lifetime PIT-based PDs at inception of the instrument and the reporting date. Additional qualitative information is considered, including internal indicators of credit risk such as days-past-due information, external market indicators of credit risk and general economic conditions, to detect significant increases in credit risk.

IFRS 9 does not provide an explicit definition of default. For the purpose of measuring expected credit losses, UBS AG will apply a definition of default that is consistent with the definition used in capital calculations and by internal credit risk management.

Overall, the level of credit losses is expected to increase under IFRS 9 alongside additional income statement volatility due to the use of forward-looking assumptions and the application of the SICR approach.

Hedge accounting

IFRS 9 also includes an optional revised hedge accounting model, which further aligns the accounting treatment with the risk management practices. As permitted by the standard, UBS AG will not adopt the optional IFRS 9 hedge accounting requirements pending completion of the International Accounting Standards Board's project on macro hedge accounting strategies.

However, new mandatory hedge accounting disclosures will be adopted on 1 January 2018 as required, providing additional information on UBS AG's hedging strategies by hedged risk and hedge type.

Transition

In line with transitional provisions in IFRS 9, UBS will recognize an estimated pre-tax transition impact of CHF 0.7 billion, as well as a tax credit of CHF 0.1 billion, resulting in a net reduction of CHF 0.6 billion in UBS's IFRS consolidated equity. Approximately half of this amount is attributable to the classification and measurement changes, arising predominantly from the change in measurement basis of certain financial assets that no longer qualify for amortized cost accounting due to their cash flow characteristics. The remainder of the reduction results from recognizing expected credit losses on all in-scope transactions, with the majority of the impact driven by the private and commercial mortgage portfolio in Switzerland within the Personal & Corporate Banking division. As permitted by IFRS 9, UBS AG will not restate prior-period data.

Note 1 Summary of significant accounting policies (continued)

Presentation

Presentation of interest income: In line with consequential amendments to IAS 1, *Presentation of Financial Statements,* from 1 January 2018, UBS AG will present interest income calculated using the effective interest method on assets that are subsequently measured at amortized cost and debt instruments that are measured at fair value through OCI separately in the income statement.

Presentation of balance sheet: Effective with UBS AG's first quarter 2018 reporting, UBS AG will make a series of presentational changes to the IFRS balance sheet reflecting the implementation of IFRS 9, alongside consequential changes to improve comparability with prior periods. The primary changes include:

- IAS 39-specific asset categories such as "Financial assets held to maturity" and "Financial assets available for sale" will be superseded by the new categories "Financial assets measured at amortized cost" and "Financial assets measured at fair value through other comprehensive income (FVOCI)."
- A new category "Financial assets at fair value not held for trading" will be created to accommodate in particular financial assets previously designated at fair value, all of which are to be mandatorily classified at fair value through profit or loss given the assets are managed on a fair value basis.
- *Brokerage receivables* and *Brokerage payables designated at fair value* will be presented as separate line items, whereas they are presented within *Other assets* and *Other liabilities*, respectively, as of 31 December 2017.
- *Other assets* and *Other liabilities* will be split between measured at amortized cost, measured at fair value through profit or loss and other non-financial assets and liabilities.
- *Cash collateral on securities borrowed* and *Reverse repurchase agreements* will be combined into a single line, "Receivables from securities financing transactions". Similarly, *Cash collateral on securities lent* and *Repurchase agreements* will be combined into a single line, "Payables from securities financing transactions".
- Financial liabilities designated at fair value will be split into two lines, "Debt issued designated at fair value" and "Other financial liabilities designated at fair value".

The table on the next page illustrates the new balance sheet presentation of assets and liabilities in comparison with our current presentation. The presentation of the components of equity will not change, and therefore for illustration purposes total liabilities and equity are presented in a single line in the table on the next page. To support comparability, we will present prior-period information for periods ending before 1 January 2018 in this revised structure, beginning with the first quarter 2018 financial report. This table does not reflect any of the effects of adoption from the classification and measurement requirements of IFRS 9, *Financial Instruments*, which are only applicable for the periods ending after 1 January 2018. As permitted by the standard, we will not restate prior periods for classification and measurement or ECL changes with the adoption of IFRS 9.

Note 1 Summary of significant accounting policies (continued)

2018 balance sheet presentation changes

CHF million	31.12.17 Presentation in the 2017 financial statements	31.12.17 Revised presentation applicable beginning 2018
Assets		
Cash and balances at central banks	87,775	87,775
Loans and advances to banks (formerly: Due from banks)	13,693	13,693
Receivables from securities financing transactions (new line)		89,633
Cash collateral on securities borrowed (newly included in Receivables from securities financing transactions)	12,393	
Reverse repurchase agreements (newly included in Receivables from securities financing transactions)	77,240	
Cash collateral receivables on derivative instruments	23,434	23,434
Loans and advances to customers (formerly: Loans)	321,718	320,659
Financial assets held to maturity (superseded)	9,166	
Other financial assets measured at amortized cost (new line)		36,935
Total financial assets measured at amortized cost		572,129
Financial assets at fair value held for trading (formerly: Trading portfolio assets)	130,807	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties	*35,363*	*35,363*
Derivative financial instruments (formerly: Positive replacement values)	118,229	118,229
Brokerage receivables (new line, formerly included within Other assets)	n/a	n/a
Financial assets at fair value not held for trading (new line)		58,556
Financial assets designated at fair value	58,556	
Total financial assets measured at fair value through profit or loss		303,028
Financial assets available for sale (superseded)	8,665	
Financial assets measured at fair value through other comprehensive income (new line)[1]		8,665
Investments in associates	1,018	1,018
Property, equipment and software	7,985	7,985
Goodwill and intangible assets	6,398	6,398
Deferred tax assets	9,783	9,783
Other non-financial assets (new line)		7,358
Total non-financial assets		32,541
Other assets (superseded)	29,505	
Total assets	916,363	916,363
Liabilities		
Amounts due to banks	7,533	7,533
Payables from securities financing transactions (new line)		17,044
Cash collateral on securities lent (newly included in Payables from securities financing transactions)	1,789	
Repurchase agreements (newly included in Payables from securities financing transactions)	15,255	
Cash collateral payables on derivative instruments	30,247	30,247
Customer deposits (formerly: Due to customers)	447,141	447,141
Debt issued measured at amortized cost	104,749	104,749
Other financial liabilities measured at amortized cost (new line)		37,133
Total financial liabilities measured at amortized cost		643,847
Financial liabilities at fair value held for trading (formerly: Trading portfolio liabilities)	30,463	30,463
Derivative financial instruments (formerly: Negative replacement values)	116,134	116,134
Brokerage payables designated at fair value (new line, formerly included within Other liabilities)	n/a	n/a
Financial liabilities designated at fair value (superseded)	54,202	
Debt issued designated at fair value (new line)		49,502
Other financial liabilities designated at fair value (new line)		16,223
Total financial liabilities measured at fair value through profit or loss		212,323
Provisions	3,084	3,084
Other non-financial liabilities (new line)		6,335
Total non-financial liabilities		9,419
Other liabilities (superseded)	54,990	
Total liabilities	865,588	865,588
Total liabilities and equity	916,363	916,363

1 Consists of debt instruments.

Note 1 Summary of significant accounting policies (continued)

IFRS 15, Revenue from Contracts with Customers

UBS AG will adopt IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue* for periods beginning on 1 January 2018. IFRS 15 establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied. In particular, the standard now specifies that variable consideration is only recognized to the extent that it is highly probable that a significant reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

IFRS 15 also provides guidance on when revenues and expenses should be presented on a gross or net basis and establishes a cohesive set of disclosure requirements for information on the nature, amount, timing and uncertainty of revenue and cash flows from contracts with customers.

UBS AG will adopt the standard on a modified retrospective basis that does not require comparatives to be restated. Instead, the cumulative effect of initially applying the standard will be recognized as an adjustment to the opening balance of retained earnings. The transition adjustment will not be material.

IFRS 15 will result in a deferral of some performance-based fees in Asset Management and research revenues in the Investment Bank. However, the impact on UBS AG's revenues is not expected to be material.

UBS AG will also present certain fee and commission income and expense on a gross basis, rather than net basis, if UBS AG is acting as a principal. *Fee and commission income* will be reported in the income statement separately from *Fee and commission expense*. The supporting note disclosure for fee and commission income will be enhanced to provide more information on the nature, amount, timing and uncertainty of revenues and cash flows from contracts with customers.

IAS 28, Investments in Associates and Joint Ventures

In October 2017, the IASB issued an amendment to IAS 28, *Investments in Associates and Joint Ventures* that clarified that IFRS 9 must be applied when accounting for long-term interests in an associate or joint venture to which the equity method of accounting is not applied. The amendment is mandatorily effective for accounting periods beginning on or after 1 January 2019. However, UBS AG will early adopt this amendment from 1 January 2018 to align with the mandatory application date of IFRS 9, and expects that it will have no material impact on its financial statements.

Amendments to IFRS 2, Share-based Payment

In June 2016, the IASB issued amendments to IFRS 2, *Share-based Payment*, which are mandatorily effective as of 1 January 2018. The amendments clarify that the approach used to account for vesting and non-vesting conditions when measuring cash-settled share-based payments is consistent with that used for equity-settled share-based payments. The amendments also clarify the classification of share-based payments settled net of withholding tax as well as the accounting consequences resulting from a modification of share-based payments from cash-settled to equity-settled. The adoption of these amendments will not have a material impact on UBS AG's financial statements.

IFRIC 22, Foreign Currency Transactions and Advance Consideration

In December 2016, the IFRS Interpretations Committee of the IASB issued IFRIC Interpretation 22, *Foreign Currency Transactions and Advance Consideration* (IFRIC 22), which clarifies that in circumstances when an advance consideration is received or paid before recognizing an associated asset, expense or income, the exchange rate to be used on initial recognition of the related asset, expense or income is the rate determined as of the date of transaction – i.e., the date of initial recognition of the non-monetary asset or non-monetary liability arising from the receipt or payment of advance consideration. UBS AG is required to apply IFRIC 22 from 1 January 2018. The adoption of this IFRS Interpretation will not have a material impact on UBS AG's financial statements.

Effective from 2019

IFRS 16, Leases

In January 2016, the IASB issued IFRS 16, *Leases,* which replaces IAS 17, *Leases* and is mandatorily effective as of 1 January 2019. The standard substantially changes how lessees must account for operating lease commitments, requiring a lease liability with a corresponding right-of-use asset to be recognized on the balance sheet, compared with the current off-balance sheet treatment of such leases. UBS AG expects to report an increase in assets and liabilities from adoption as of 1 January 2019 in line with its disclosure of undiscounted operating lease commitments as set out in Note 31.

Note 1 Summary of significant accounting policies (continued)

IFRIC 23, Uncertainty over Income Tax Treatments

In June 2017, the IASB issued IFRIC Interpretation 23, *Uncertainty over Income Tax Treatments* (IFRIC 23), which addresses how uncertain tax positions should be accounted for under IFRS. Under this interpretation, IFRIC 23 requires that, where acceptance of the tax treatment by the relevant tax authority is considered probable, it should be assumed as an accounting recognition matter that treatment of the item will ultimately be accepted. Therefore, no tax provision would be required in such cases. However, if acceptance of the tax treatment is not considered probable, the entity is required to reflect that uncertainty using an expected value (i.e., a probability-weighted approach) or the single most likely amount. IFRIC 23 is mandatorily effective for accounting periods beginning on or after 1 January 2019 and any resulting change to the tax provisions should be recognized in retained earnings. UBS AG is in the process of assessing the impact of this interpretation, which is not expected to have a material effect on its financial statements.

Amendments to IAS 19, Employee Benefits

In February 2018, the IASB issued amendments to IAS 19, *Employee Benefits*, which address the accounting when a plan amendment, curtailment or settlement occurs during the reporting period. The amendments require entities to use the updated actuarial assumption to determine current service cost and net interest for the remainder of the annual reporting period after such an event. The amendments also clarify how the requirements for accounting for a plan amendment, curtailment or settlement affect the asset ceiling requirements. The amendments are effective prospectively for plan amendments, curtailments or settlements that occur on or after 1 January 2019, with earlier application permitted. UBS AG does not intend to early adopt this amendment.

Annual Improvements to IFRS Standards 2015–2017 Cycle

In December 2017, the IASB issued *Annual Improvements to IFRS Standards 2015–2017 Cycle*, which resulted in amendments to IFRS 3, *Business Combinations*, IFRS 11, *Joint Arrangements*, IAS 12, *Income Taxes* and IAS 23, *Borrowing Costs*. The amendments are mandatorily effective as of 1 January 2019. UBS AG expects that the adoption of these amendments will not have a material impact on its financial statements.

Note 2a Segment reporting

The operational structure of UBS AG as of 31 December 2017 was comprised of Corporate Center and five business divisions: Wealth Management, Wealth Management Americas, Personal & Corporate Banking, Asset Management and the Investment Bank.

Wealth Management

Wealth Management provides comprehensive advice and tailored financial services to wealthy private clients around the world, except those served by Wealth Management Americas. Its clients benefit from the full spectrum of resources that UBS AG as a global firm can offer, including banking and lending solutions, wealth planning, investment management solutions and corporate finance advice. Wealth Management's guided architecture model gives clients access to a wide range of products from the world's leading third-party institutions that complement its own products.

Wealth Management Americas

Wealth Management Americas provides advice-based solutions through financial advisors who deliver a fully integrated set of products and services specifically designed to address the needs of their clients. Its business is primarily domestic US but includes Canada and international clients booked in the US.

Personal & Corporate Banking

Personal & Corporate Banking provides comprehensive financial products and services to private, corporate and institutional clients in Switzerland and is among the leading players in the private and corporate loan market in Switzerland, with a well-collateralized and conservatively managed lending portfolio.

Its business is central to UBS AG's universal bank delivery model in Switzerland. Personal & Corporate Banking works with the wealth management, investment bank and asset management businesses to help clients receive the best products and solutions for their specific financial needs. Personal & Corporate Banking is also an important source of growth for the other business divisions in Switzerland through client referrals. In addition, Personal & Corporate Banking manages a substantial part of UBS AG's Swiss infrastructure and banking products platform, both of which are leveraged across UBS AG.

Asset Management

Asset Management is a large-scale and diversified asset manager, with an onshore presence in 23 countries. It offers investment capabilities and investment styles across all major traditional and alternative asset classes, as well as platform solutions and advisory support, to institutions, wholesale intermediaries and wealth management clients around the world.

Investment Bank

The Investment Bank provides investment advice, financial solutions and capital market access in over 35 countries, with principal offices in all major financial centers. It serves corporate, institutional and wealth management clients across the globe and partners with UBS AG's wealth management, personal and corporate banking and asset management businesses.

The business division is organized into Corporate Client Solutions and Investor Client Services and also includes UBS AG Securities Research.

Corporate Center

Corporate Center provides services to the Group through the reporting units Corporate Center – Services and Group Asset and Liability Management (Group ALM). Corporate Center also includes the Non-core and Legacy Portfolio unit.

Services consists of the Group Chief Operating Officer area (Group Corporate Services, Group Human Resources, Group Operations, Group Sourcing and Group Technology), Group Finance (excluding Group ALM), Group Legal, Group Risk Control, Group Communications & Branding, Group Regulatory & Governance, and UBS and Society.

Group ALM manages the structural risks of UBS AG's balance sheet, including interest rate risk in the banking book, currency risk and collateral risk, as well as the risks associated with UBS AG's liquidity and funding portfolios. Group ALM also seeks to optimize UBS AG's financial performance by matching assets and liabilities within the context of UBS AG's liquidity, funding and capital targets and constraints. Group ALM serves all business divisions and other Corporate Center units through three main risk management areas, and its risk management is fully integrated into UBS AG's risk governance framework.

Non-core and Legacy Portfolio manages legacy positions from businesses exited by the Investment Bank, and is overseen by a committee chaired by the Group Chief Risk Officer.

Note 2a Segment reporting (continued)

CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
						Services	Group ALM	Non-core and Legacy Portfolio	
For the year ended 31 December 2017									
Net interest income	2,088	1,562	1,916	(32)	1,194	(354)	83	23	6,480
Non-interest income	5,286	6,676	1,772	2,058	6,891	464	(68)	48	23,127
Allocations from CC – Group ALM	256	115	181	18	(344)	120	(264)	(83)	0
Income[1]	7,629	8,353	3,869	2,044	7,741	231	(249)	(11)	29,606
Credit loss (expense) / recovery	(4)	(4)	(19)	0	(90)	0	0	(11)	(128)
Total operating income	7,626	8,349	3,850	2,044	7,651	231	(249)	(22)	29,479
Personnel expenses	2,355	5,177	833	716	2,950	2,565	34	43	14,673
General and administrative expenses	605	677	294	234	715	6,147	26	113	8,811
Services (to) / from CC and other BDs	2,372	1,281	1,131	512	2,767	(8,274)	(13)	224	0
of which: services from CC – Services	*2,294*	*1,262*	*1,224*	*549*	*2,674*	*(8,338)*	*142*	*194*	*0*
Depreciation and impairment of property, equipment and software	3	2	13	1	10	899	0	0	928
Amortization and impairment of intangible assets[2]	7	41	0	3	12	7	0	0	70
Total operating expenses[3]	5,342	7,178	2,271	1,466	6,453	1,344	47	380	24,481
Operating profit / (loss) before tax	**2,284**	**1,171**	**1,579**	**578**	**1,198**	**(1,113)**	**(296)**	**(403)**	**4,998**
Tax expense / (benefit)									4,077
Net profit / (loss)									**921**
Additional Information									
Total assets	123,003	67,071	135,587	14,270	263,046	19,447	247,739	46,200	916,363
Additions to non-current assets	89	27	15	1	3	1,478	0	0	1,612

1 Impairments of financial assets available for sale for the year ended 31 December 2017 totaled CHF 15 million, of which CHF 13 million was recorded in Asset Management. 2 Refer to Note 15 for more information. 3 Refer to Note 30 for information on restructuring expenses.

Note 2a Segment reporting (continued)

CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
						Services	Group ALM	Non-core and Legacy Portfolio	
For the year ended 31 December 2016									
Net interest income	1,932	1,347	1,892	(33)	1,006	(322)	559	3	6,383
Non-interest income	4,975	6,320	1,768	1,957	6,951	250	(229)	84	22,075
Allocations from CC – Group ALM	389	118	332	7	(260)	36	(512)	(110)	0
Income[1]	7,296	7,785	3,990	1,931	7,697	(36)	(183)	(23)	28,458
Credit loss (expense) / recovery	(5)	(3)	(6)	0	(11)	0	0	(13)	(37)
Total operating income	7,291	7,782	3,984	1,931	7,686	(36)	(183)	(36)	28,421
Personnel expenses	2,348	4,819	843	727	3,081	3,674	31	66	15,591
General and administrative expenses	653	597	286	242	852	4,312	17	731	7,690
Services (to) / from CC and other BDs	2,348	1,235	1,079	505	2,757	(8,156)	(49)	280	0
of which: services from CC – Services	*2,256*	*1,221*	*1,186*	*530*	*2,667*	*(8,196)*	*110*	*225*	*0*
Depreciation and impairment of property, equipment and software	2	2	15	1	21	938	0	0	980
Amortization and impairment of intangible assets[2]	4	50	0	4	12	21	0	0	91
Total operating expenses[3]	5,355	6,702	2,224	1,480	6,724	790	(1)	1,077	24,352
Operating profit / (loss) before tax	**1,936**	**1,081**	**1,761**	**451**	**962**	**(826)**	**(182)**	**(1,113)**	**4,069**
Tax expense / (benefit)									781
Net profit / (loss)									**3,288**
Additional Information									
Total assets	115,539	65,882	139,945	12,026	242,388	23,813	267,275	68,485	935,353
Additions to non-current assets	26	4	23	1	3	1,741	0	0	1,798

1 Impairments of financial assets available for sale for the year ended 31 December 2016 totaled CHF 5 million, of which CHF 3 million was recorded in Asset Management. 2 Refer to Note 15 for more information. 3 Refer to Note 30 for information on restructuring expenses.

Note 2a Segment reporting (continued)

CHF million	Wealth Management	Wealth Management Americas	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
						Services	Group ALM	Non-core and Legacy Portfolio	
For the year ended 31 December 2015									
Net interest income	1,825	1,067	1,890	(34)	1,573	(337)	724	21	6,729
Non-interest income	5,859	6,213	1,603	2,077	7,525	434	383	(101)	23,993
Allocations from CC – Group ALM	471	104	421	15	(211)	145	(832)	(114)	0
Income[1]	8,155	7,384	3,913	2,057	8,889	243	275	(195)	30,721
Credit loss (expense) / recovery	0	(4)	(37)	0	(68)	0	0	(8)	(117)
Total operating income	8,155	7,381	3,876	2,057	8,821	243	275	(203)	30,605
Personnel expenses	2,532	4,579	873	729	3,220	3,875	30	116	15,954
General and administrative expenses	650	848	264	233	882	4,517	21	804	8,219
Services (to) / from CC and other BDs	2,289	1,209	1,077	502	2,816	(8,214)	(57)	379	0
of which: services from CC – Services	*2,209*	*1,193*	*1,180*	*523*	*2,730*	*(8,243)*	*96*	*313*	*0*
Depreciation and impairment of property, equipment and software	5	3	17	2	26	866	0	0	918
Amortization and impairment of intangible assets[2]	3	51	0	8	24	21	0	0	107
Total operating expenses[3]	5,478	6,689	2,231	1,475	6,969	1,065	(6)	1,298	25,198
Operating profit / (loss) before tax	**2,676**	**692**	**1,646**	**583**	**1,852**	**(822)**	**281**	**(1,501)**	**5,407**
Tax expense / (benefit)									(908)
Net profit / (loss)									**6,314**
Additional Information									
Total assets	119,850	60,993	141,174	12,874	253,571	22,866	237,560	94,369	943,256
Additions to non-current assets	6	4	14	1	18	1,844	0	1	1,888

1 Impairments of financial assets available for sale for the year ended 31 December 2015 totaled CHF 1 million, all in Wealth Management. 2 Refer to Note 15 for more information. 3 Refer to Note 30 for information on restructuring expenses.

Note 2b Segment reporting by geographic location

The operating regions shown in the table below correspond to the regional management structure of UBS AG. The allocation of operating income to these regions reflects, and is consistent with, the basis on which the business is managed and its performance is evaluated. These allocations involve assumptions and judgments that management considers to be reasonable, and may be refined to reflect changes in estimates or management structure. The main principles of the allocation methodology are that client revenues are attributed to the domicile of the client and trading and portfolio management revenues are attributed to the country where the risk is managed. This revenue attribution is consistent with the mandate of the regional Presidents. Certain revenues, such as those related to Corporate Center – Non-core and Legacy Portfolio, are managed at a global level. These revenues are included in the *Global* line.

The geographic analysis of non-current assets is based on the location of the entity in which the assets are recorded.

For the year ended 31 December 2017

	Total operating income		Total non-current assets	
	CHF billion	Share %	CHF billion	Share %
Americas	12.0	41	7.2	47
of which: USA	*11.4*	*39*	*6.7*	*44*
Asia Pacific	4.7	16	0.7	5
Europe, Middle East and Africa	6.0	20	1.6	10
Switzerland	6.9	23	5.9	38
Global	0.0	0	0.0	0
Total	29.5	100	15.4	100

For the year ended 31 December 2016

	Total operating income[1]		Total non-current assets	
	CHF billion	Share %	CHF billion	Share %
Americas	11.5	40	7.4	47
of which: USA	*11.0*	*39*	*7.0*	*44*
Asia Pacific	4.2	15	0.6	4
Europe, Middle East and Africa	6.1	21	1.8	11
Switzerland	6.9	24	6.0	38
Global	(0.3)	(1)	0.0	0
Total	28.4	100	15.8	100

For the year ended 31 December 2015

	Total operating income[1]		Total non-current assets	
	CHF billion	Share %	CHF billion	Share %
Americas	11.2	37	7.1	47
of which: USA	*10.5*	*34*	*6.7*	*44*
Asia Pacific	5.1	17	0.5	3
Europe, Middle East and Africa	6.8	22	1.7	11
Switzerland	7.2	24	5.9	39
Global	0.4	1	0.0	0
Total	30.6	100	15.2	100

1 The geographical allocation of Total operating income has been restated to reflect a refinement in the allocation methodology.

Income statement notes

Note 3 Net interest and trading income

CHF million	For the year ended 31.12.17	31.12.16	31.12.15
Net interest and trading income[1]			
Net interest income	6,480	6,383	6,729
of which: Wealth Management	*2,344*	*2,331*	*2,326*
of which: Wealth Management Americas	*1,680*	*1,467*	*1,174*
of which: Personal & Corporate Banking	*2,086*	*2,199*	*2,270*
of which: Asset Management	*(14)*	*(24)*	*(17)*
Net trading income	4,974	4,943	5,696
of which: Wealth Management	*694*	*667*	*708*
of which: Wealth Management Americas	*332*	*372*	*362*
of which: Personal & Corporate Banking	*375*	*333*	*343*
of which: Asset Management	*(10)*	*(5)*	*12*
Total net interest and trading income	11,454	11,326	12,425
of which: Investment Bank	*4,283*	*4,275*	*5,186*
of which: Corporate Client Solutions	*1,065*	*822*	*1,001*
of which: Investor Client Services	*3,218*	*3,453*	*4,185*
of which: Corporate Center	*(316)*	*(289)*	*61*
of which: Services	*(47)*	*(92)*	*(1)*
of which: Group ALM	*(199)*	*(134)*	*375*
of which: own credit on financial liabilities designated at fair value			*553*
of which: Non-core and Legacy Portfolio	*(71)*	*(62)*	*(313)*
Net interest income			
Interest income			
Interest income from loans and deposits[2,3,4]	8,475	9,566	8,626
Interest income from securities financing transactions[5]	1,542	1,136	896
Interest income from trading portfolio[6]	2,565	2,465	3,071
Interest income from financial assets and liabilities designated at fair value	548	361	194
Interest income from financial assets available for sale and held to maturity[6]	260	253	391
Interest income from derivative instruments designated as cash flow hedges[2]	818		
Total	14,208	13,782	13,178
Interest expense			
Interest expense on loans and deposits[2,7]	2,464	1,664	774
Interest expense on securities financing transactions[8]	1,444	1,233	976
Interest expense on trading portfolio[9]	1,506	1,614	1,670
Interest expense on financial assets and liabilities designated at fair value	864	841	730
Interest expense on debt issued[2]	1,451	2,046	2,299
Total	7,728	7,399	6,449
Net interest income	6,480	6,383	6,729
Net trading income			
Investment Bank Corporate Client Solutions	597	188	321
Investment Bank Investor Client Services	2,813	3,330	3,494
Other business divisions and Corporate Center	1,564	1,425	1,882
Net trading income	4,974	4,943	5,696
of which: net gains / (losses) from financial assets designated at fair value	*2,527*	*(186)*	*(119)*
of which: net gains / (losses) from financial liabilities designated at fair value[10]	*(3,920)*	*(1,362)*	*3,701*

1 Net interest and trading income presented for business divisions and Corporate Center units includes allocations from Corporate Center – Group ALM. 2 Effective 1 January 2017, the presentation of interest income and interest expense on derivatives designated as hedging instruments in effective hedge relationships was refined. Refer to Note 1b for more information. 3 Includes interest income on impaired loans and advances of CHF 12 million for 2017, CHF 21 million for 2016 and CHF 16 million for 2015. 4 Consists of interest income from balances with central banks, amounts due from banks and loans, and negative interest on amounts due to banks and customers. 5 Includes interest income on securities borrowed and reverse repurchase agreements and negative interest, including fees, on securities lent and repurchase agreements. 6 Includes dividend income. 7 Consists of interest expense on amounts due to banks and customers, and negative interest on balances with central banks, amounts due from banks and loans. 8 Includes interest expense on securities lent and repurchase agreements and negative interest, including fees, on securities borrowed and reverse repurchase agreements. 9 Includes expense related to dividend payment obligations on trading liabilities. 10 Excludes fair value changes of hedges related to financial liabilities designated at fair value and foreign currency translation effects arising from translating foreign currency transactions into the respective functional currency, both of which are reported within Net trading income.

Note 4 Net fee and commission income

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Underwriting fees	1,321	994	1,290
of which: equity underwriting fees	*837*	*516*	*836*
of which: debt underwriting fees	*484*	*478*	*455*
M&A and corporate finance fees	683	733	737
Brokerage fees	3,441	3,544	3,930
Investment fund fees	3,219	3,155	3,567
Portfolio management and advisory fees	8,542	8,035	7,858
Other	1,811	1,747	1,678
Total fee and commission income	19,018	18,207	19,060
Brokerage fees paid	660	757	869
Other	1,144	1,003	1,007
Total fee and commission expense	1,804	1,760	1,876
Net fee and commission income	17,214	16,447	17,184
of which: net brokerage fees	*2,780*	*2,786*	*3,060*

Note 5 Other income

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Associates, joint ventures and subsidiaries			
Net gains / (losses) from disposals of subsidiaries[1]	37[2]	(150)	264
Share of net profits of associates and joint ventures	75	106	169
Impairment charges related to associates	(7)		
Total	105	(44)	433
Financial assets available for sale			
Net gains / (losses) from disposals	193	346	252
Impairment charges	(15)	(5)	(1)
Total	178	342	251
Net income from properties (excluding net gains / (losses) from disposals)[3]	23	25	28
Net gains / (losses) from disposals of properties held for sale	0	125	378
Net gains / (losses) from disposals of loans and receivables	15	(3)	26
Income from shared services provided to UBS Group AG or its subsidiaries	385[4]	48	0
Other	234[2]	192	(5)
Total other income	939	685	1,112

1 Includes foreign exchange gains / (losses) reclassified from Other comprehensive income related to disposed foreign subsidiaries and branches. 2 Net gains / (losses) from disposals of subsidiaries and Other include a net gain on sale of subsidiaries and businesses of CHF 153 million in Asset Management. Refer to Note 30 for more information. 3 Includes net rent received from third parties and net operating expenses. 4 The increase in 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. Refer to Note 30 for more information.

Note 6 Personnel expenses

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Salaries[1]	5,323	6,136	6,260
Variable compensation – performance awards[2]	2,996	2,963	3,209
of which: guarantees for new hires	*36*	*30*	*38*
Variable compensation – other[2]	227	418	346
of which: replacement payments[3]	*69*	*86*	*76*
of which: forfeiture credits	*(104)*	*(73)*	*(86)*
of which: severance payments[4]	*93*	*217*	*157*
of which: retention plan and other payments[5]	*169*	*188*	*198*
Wealth Management Americas: Financial advisor compensation[2,6]	3,986	3,697	3,552
Contractors	313	420	365
Social security	717	734	817
Pension and other post-employment benefit plans[7]	591	669	807
Other personnel expenses	521	554	597
Total personnel expenses[8]	14,673[9]	15,591	15,954

1 Includes role-based allowances. 2 Refer to Note 27 for more information. 3 Replacement payments are payments made to compensate employees for deferred awards forfeited as a result of joining UBS. 4 Includes legally obligated and standard severance payments. 5 Includes interest expense related to Deferred Contingent Capital Plan awards. 6 Financial advisor compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated based on financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 7 Refer to Note 26 for more information. 8 Includes net restructuring expenses of CHF 362 million, CHF 731 million and CHF 458 million for the years ended 31 December 2017, 31 December 2016 and 31 December 2015, respectively. Refer to Note 30 for more information. 9 The decrease in 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. Refer to Note 30 for more information.

Note 7 General and administrative expenses

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Occupancy	848	921	928
Rent and maintenance of IT and other equipment	415	511	510
Communication and market data services	534	624	610
Administration[1]	3,560	1,069	855
of which: shared services costs charged by UBS Group AG or its subsidiaries	*2,974[2]*	*365*	*223*
Marketing and public relations	332	465	484
Travel and entertainment	374	411	456
Professional fees	1,064	1,225	1,351
Outsourcing of IT and other services	1,147	1,592	1,742
Provisions for litigation, regulatory and similar matters[3]	420	795	1,087
Other	116	78	195
Total general and administrative expenses[4]	8,811[2]	7,690	8,219

1 Administration costs include net expenses related to the UK bank levy of CHF 17 million, CHF 123 million and CHF 166 million for the years ended 31 December 2017, 31 December 2016 and 31 December 2015, respectively. 2017 included a CHF 82 million credit related to prior years. 2 The increase in 2017 in shared services costs charged by UBS Group AG or its subsidiaries and the associated decrease in certain direct cost lines were mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. Refer to Note 30 for more information. 3 Reflects the net increase in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 20 for more information. Also includes recoveries from third parties of CHF 53 million, CHF 13 million and CHF 10 million for the years ended 31 December 2017, 31 December 2016 and 31 December 2015, respectively. 4 Includes net restructuring expenses of CHF 818 million, CHF 700 million and CHF 760 million for the years ended 31 December 2017, 31 December 2016 and 31 December 2015, respectively. Refer to Note 30 for more information.

Note 8 Income taxes

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Tax expense / (benefit)			
Swiss			
Current	402	429	230
Deferred	21	635	329
Non-Swiss			
Current	427	350	476
Deferred	3,227	(633)	(1,943)
Total income tax expense / (benefit) recognized in the income statement	4,077	781	(908)

Income tax recognized in the income statement

An income tax expense of CHF 4,077 million was recognized for UBS AG in 2017, which included a net Swiss tax expense of CHF 423 million and a net non-Swiss tax expense of CHF 3,654 million.

The Swiss tax expense included a current tax expense of CHF 402 million related to taxable profits earned by Swiss subsidiaries, against which no losses were available to offset. In addition, it included a deferred tax expense of CHF 21 million, which reflected a net decrease in deferred tax assets (DTAs) previously recognized in relation to tax losses carried forward and temporary differences.

The non-Swiss tax expense included a current tax expense of CHF 427 million related to taxable profits earned by non-Swiss subsidiaries and branches, against which no losses were available to offset. In addition, it included a deferred tax expense of CHF 3,227 million, which reflected a net decrease in DTAs previously recognized in relation to tax losses carried forward and temporary differences and mainly related to the write-down of US DTAs resulting from the reduction in the federal corporate tax rate to 21% from 35% after the enactment of the Tax Cuts and Jobs Act (TCJA) during the fourth quarter of 2017.

UBS AG considers the performance of its businesses and the accuracy of historical forecasts and other factors in evaluating the recoverability of its DTAs, including the remaining tax loss carry-forward period, and its assessment of expected future taxable profits in the forecast period used for recognizing DTAs. Estimating future profitability is inherently subjective and is particularly sensitive to future economic, market and other conditions, which are difficult to predict.

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Operating profit / (loss) before tax	4,998	4,069	5,407
of which: Swiss	*1,878*	*2,607*	*3,665*
of which: non-Swiss	*3,120*	*1,462*	*1,742*
Income taxes at Swiss tax rate of 21%	1,050	854	1,135
Increase / (decrease) resulting from:			
Non-Swiss tax rates differing from Swiss tax rate	224	71	(69)
Tax effects of losses not recognized	168	185	107
Previously unrecognized tax losses now utilized	(358)	(39)	(107)
Non-taxable and lower taxed income	(298)	(343)	(273)
Non-deductible expenses and additional taxable income	573	914	519
Adjustments related to prior years – current tax	(13)	22	29
Adjustments related to prior years – deferred tax	5	2	(48)
Change in deferred tax valuation allowances	(161)	(978)	(2,419)
Adjustments to deferred tax balances arising from changes in tax rates	2,824	19	191
Other items	63	72	26
Income tax expense / (benefit)	4,077	781	(908)

Note 8 Income taxes (continued)

The tax expense of CHF 4,077 million for 2017 was higher than the tax expense of CHF 781 million in 2016, mainly as 2017 included a net write-down of DTAs of CHF 2,865 million resulting from the aforementioned reduction in the US federal corporate tax rate.

The components of operating profit before tax, and the differences between income tax expense reflected in the financial statements and the amounts calculated at the Swiss tax rate, are provided in the table on the previous page and explained below.

Non-Swiss tax rates differing from Swiss tax rate

To the extent that UBS AG profits or losses arise outside Switzerland, the applicable local tax rate may differ from the Swiss tax rate. This item reflects, for such profits or losses, an adjustment from the tax expense / benefit that would arise at the Swiss tax rate and the tax expense / benefit that would arise at the applicable local tax rate. If an entity generates a profit, a tax expense arises where the local tax rate is in excess of the Swiss tax rate and a tax benefit arises where the local tax rate is below the Swiss tax rate. Conversely, if an entity incurs a loss, a tax benefit arises where the local tax rate is in excess of the Swiss tax rate and a tax expense arises where the local tax rate is less than the Swiss tax rate.

Tax effects of losses not recognized

This item relates to tax losses of entities arising in the year, which are not recognized as DTAs. Consequently, no tax benefit arises in relation to those losses. Therefore, the tax benefit calculated by applying the local tax rate to those losses as described above is reversed.

Previously unrecognized tax losses now utilized

This item relates to taxable profits of the year, which are offset by tax losses of previous years, for which no DTAs were previously recorded. Consequently, no current tax or deferred tax expense arises in relation to those taxable profits. Therefore, the tax expense calculated by applying the local rate on those profits is reversed.

Non-taxable and lower taxed income

This item relates to profits for the year, which are either permanently not taxable or are taxable, but at a lower rate of tax than the local tax rate. It also includes any permanent deductions made for tax purposes, which are not reflected in the accounts.

Non-deductible expenses and additional taxable income

This item mainly relates to income for the year, which is imputed for tax purposes for an entity, but is not included in its operating profit. In addition, it includes expenses for the year that are permanently non-deductible.

Adjustments related to prior years – current tax

This item relates to adjustments to current tax expense for prior years, for example, if the tax payable for a year agreed with the tax authorities is expected to differ from the amount previously reflected in the financial statements.

Adjustments related to prior years – deferred tax

This item relates to adjustments to deferred tax positions recognized in prior years, for example, if a tax loss for a year is fully recognized and the amount of the tax loss agreed with the tax authorities is expected to differ from the amount previously recognized as DTAs in the accounts.

Note 8 Income taxes (continued)

Change in deferred tax valuation allowances

This item includes revaluations of DTAs previously recognized resulting from reassessments of expected future taxable profits. It also includes changes in temporary differences in the year, for which deferred tax is not recognized. The amount in the year mainly relates to the upward revaluation of DTAs.

Adjustments to deferred tax balances arising from changes in tax rates

This item relates to remeasurements of DTAs and liabilities recognized due to changes in tax rates. These have the effect of changing the future tax saving that is expected from tax losses or deductible tax differences and therefore the amount of DTAs recognized or, alternatively, changing the tax cost of additional taxable income from taxable temporary differences and therefore the deferred tax liability. This item primarily relates to the net write-down of DTAs following a reduction in the US federal corporate tax rate to 21% from 35% after the enactment of the TCJA during the fourth quarter of 2017.

Other items

Other items include other differences between profits or losses at the local tax rate and the actual local tax expense or benefit, including increases in provisions for uncertain positions in relation to the current year and other items.

Income tax recognized directly in equity

Certain tax expenses and benefits were recognized directly in equity, which included the following items:

- a net tax benefit of CHF 354 million recognized in other comprehensive income (OCI), which included a tax benefit of CHF 160 million related to cash flow hedges (2016: benefit of CHF 170 million), a tax expense of CHF 7 million related to financial assets classified as available for sale (2016: benefit of CHF 28 million), a tax benefit of CHF 196 million related to foreign currency translation gains and losses (2016: expense of CHF 84 million), a tax benefit of CHF 6 million related to defined benefit plans (2016: benefit of CHF 52 million) and a tax expense of CHF 1 million (2016: benefit of CHF 5 million) related to own credit
- a tax benefit of CHF 16 million recognized in share premium (2016: benefit of CHF 25 million)
- the effects of exchange rate changes on tax assets and liabilities denominated in currencies other than Swiss francs, which are included in foreign currency translation movements in OCI.

Deferred tax assets and liabilities

UBS AG has DTAs related to tax loss carry-forwards and other items as shown in the table below. As of 31 December 2017, DTAs of CHF 1,185 million (31 December 2016: CHF 1,689 million) were recognized by entities that incurred losses in either the current or preceding year based on projections of future taxable profits. The valuation allowance reflects DTAs that were not recognized because it was not considered probable that future taxable profits will be available to utilize the related tax loss carry-forwards and deductible temporary differences.

CHF million	31.12.17			31.12.16		
Deferred tax assets[1]	Gross	Valuation allowance	Recognized	Gross	Valuation allowance	Recognized
Tax loss carry-forwards	16,934	(11,191)	5,743	24,627	(16,430)	8,197
Temporary differences	5,016	(975)	4,040	6,335	(1,388)	4,947
of which: related to compensation and benefits	*1,133*	*(222)*	*911*	*1,419*	*(208)*	*1,211*
of which: related to trading assets	*473*	*(58)*	*414*	*935*	*(118)*	*817*
of which: related to investments in subsidiaries and goodwill	*2,327*	*0*	*2,327*	*2,059*	*0*	*2,059*
of which: other	*1,083*	*(695)*	*388*	*1,922*	*(1,062)*	*859*
Total deferred tax assets	21,949	(12,166)	9,783	30,962	(17,818)	13,144

Deferred tax liabilities		
Goodwill and intangible assets	18	24
Other	31	20
Total deferred tax liabilities	49	44

1 Less deferred tax liabilities as applicable.

Note 8 Income taxes (continued)

As of 31 December 2017, tax loss carry-forwards totaling CHF 46,232 million (31 December 2016: CHF 49,477 million), which are not recognized as DTAs, were available to be offset against future taxable profits. These tax losses expire as outlined in the table below.

Unrecognized tax loss carry-forwards

CHF million	31.12.17	31.12.16
Within 1 year	167	0
From 2 to 5 years	103	66
From 6 to 10 years	3,185	909
From 11 to 20 years	26,015	32,603
No expiry	16,762	15,899
Total	46,232	49,477

In general, Swiss tax losses can be carried forward for seven years, US federal tax losses incurred before 31 December 2017 for 20 years and US federal tax losses incurred after 31 December 2017 and also UK and Jersey tax losses for an unlimited period.

UBS AG recognizes deferred tax liabilities on undistributed earnings of subsidiaries, except to the extent that those earnings are indefinitely invested. As of 31 December 2017, no such earnings were considered indefinitely invested.

The Financial Statements have been prepared on the basis that UBS Limited is able to offset part of its taxable profits against losses transferred from UBS AG. During 2016, the UK tax authorities indicated that they do not agree with this tax return filing position, but the authorities have now advised UBS that they accept that a transfer can occur and have also accepted UBS's proposed methods to calculate the amount of losses to be transferred as adopted on the tax return filing position.

Note 9 Earnings per share (EPS) and shares outstanding

In 2015, UBS AG shares were delisted from the SIX Swiss Exchange and the New York Stock Exchange. As of 31 December 2017, 100% of UBS AG's issued shares were held by UBS Group AG and therefore were not publicly traded. Accordingly, earnings per share information is not provided for UBS AG.

Balance sheet notes: assets

Note 10 Due from banks and loans (held at amortized cost)

CHF million	31.12.17	31.12.16
By type of exposure		
Due from banks, gross	13,695	13,128
Allowance for credit losses	(3)	(3)
Due from banks, net	13,693	13,125
Loans, gross		
Residential mortgages	144,431	142,197
Commercial mortgages	18,717	19,765
Lombard loans	115,059	104,999
Other loans[1]	40,987	37,160
Finance lease receivables[2]	1,069	986
Securities	2,113	2,494
Subtotal	322,376	307,601
Allowance for credit losses	(658)	(596)
Loans, net	321,718	307,004
Total due from banks and loans, net[3]	335,411	320,129

1 Includes corporate loans. 2 Refer to Note 31 for more information. 3 Refer to Note 25b for more information on collateral and credit enhancements.

Note 11 Allowances and provisions for credit losses

CHF million

By movement	Specific allowances	Collective allowances	Total allowances – due from banks and loans	Allowances – other assets	Provisions[1]	Total 31.12.17	Total 31.12.16
Balance at the beginning of the year	587	12	599	0	54	653	727
Write-offs / usage of provisions	(115)	(2)	(117)	0	0	(117)	(145)
Recoveries	19	1	19	0	0	20	22
Increase / (decrease) recognized in the income statement	145	3	148	0	(21)	128	37
Foreign currency translation	(7)	0	(7)	0	0	(7)	0
Other	19	0	19	18	0	37	12
Balance at the end of the year	648	13	661	19	33	713	653

1 Represents provisions for loan commitments and guarantees. Refer to Note 20 for more information. Refer to the "Treasury management" section of this report for the maximum irrevocable amount of loan commitments and guarantees.

By balance sheet line	Specific allowances	Collective allowances	Total allowances	Allowances – other assets	Provisions[1]	Total 31.12.17	Total 31.12.16
Due from banks	3	0	3			3	3
Loans	645	13	658			658	596
Other assets				19		19	0
Provisions					33	33	54
Balance at the end of the year	648	13	661	19	33	713	653

1 Represents provisions for loan commitments and guarantees.

Note 12 Derivative instruments and hedge accounting

Derivatives: overview

A derivative is a financial instrument for which the value is derived from one or more variables (underlyings). Underlyings may be indices, foreign currency exchange or interest rates, or the value of shares, commodities, bonds or other financial instruments. A derivative commonly requires little or no initial net investment by either counterparty to the trade.

The majority of derivative contracts are negotiated with respect to notional amounts, tenor, price and settlement mechanisms, as is customary with other financial instruments.

Over-the-counter (OTC) derivative contracts are usually traded under a standardized International Swaps and Derivatives Association (ISDA) master agreement between UBS and its counterparties. Terms are negotiated directly with counterparties and the contracts have industry-standard settlement mechanisms prescribed by ISDA. Recent rules, introduced by regulators in various jurisdictions, require or will soon require the payment and collection of initial and variation margin on certain OTC derivative contracts, which may have a bearing on their price and other relevant terms.

The industry continues to promote the use of central counterparties (CCPs) to clear OTC trades. The trend toward CCP clearing and settlement will generally facilitate the reduction of systemic credit exposures.

Other derivative contracts are standardized in terms of their amounts and settlement dates, and are bought and sold on regulated exchanges. These are commonly referred to as exchange-traded derivatives (ETD) contracts. Exchanges offer the benefits of pricing transparency, standardized daily settlement of changes in value and consequently reduced credit risk.

For presentation purposes, UBS AG's derivative contracts are subject to IFRS netting provisions. Derivative instruments are measured at fair value and generally classified as *Positive replacement values* and *Negative replacement values* on the balance sheet. However, ETD that are economically settled on a daily basis and OTC derivatives that are either legally settled or in substance net settled on a daily basis are classified as *Cash collateral receivables on derivative instruments* or *Cash collateral payables on derivative instruments*. Changes in the replacement values of derivatives are recorded in *Net trading income,* except for interest on derivatives designated as hedging instruments in effective hedge accounting relationships and forward points on certain short duration foreign exchange contracts that are recorded in *Net interest income*.

→ **Refer to Note 1a items 3j and 3k for more information**

→ **Refer to Note 24 for more information on the values of positive and negative replacement values after consideration of netting potential allowed under enforceable netting arrangements**

UBS AG uses various derivative instruments for both trading and hedging purposes. Derivative product types as well as valuation principles and techniques applied by UBS AG are described in Note 22. *Positive replacement values* represent the estimated amount UBS AG would receive if the derivative contract were sold on the balance sheet date. *Negative replacement values* indicate the estimated amount UBS AG would pay to transfer its obligations in respect of the underlying contract were it required or entitled to do so on the balance sheet date.

Derivatives embedded in other financial instruments are not included in the "Derivative instruments" table within this Note. Bifurcated embedded derivatives are presented on the same balance sheet line as the host contract. In cases where UBS applies the fair value option to hybrid instruments, bifurcation of an embedded derivative component is not required and as such this component is also not included in the "Derivative instruments" table.

→ **Refer to Notes 18 and 22 for more information**

Risks of derivative instruments

Derivative instruments are transacted in many trading portfolios, which generally include several types of instruments, not just derivatives. The market risk of derivatives is predominantly managed and controlled as an integral part of the market risk of these portfolios. UBS AG's approach to market risk is described in the audited portions of "Market risk" in the "Risk management and control" section of this report.

Derivative instruments are also transacted with many different counterparties, most of whom are also counterparties for other types of business. The credit risk of derivatives is managed and controlled in the context of UBS AG's overall credit exposure to its counterparties. UBS AG's approach to credit risk is described in the audited portions of "Credit risk" in the "Risk management and control" section of this report. It should be noted that, although the positive replacement values shown on the balance sheet can be an important component of UBS AG's credit exposure, the positive replacement values related to a respective counterparty are rarely an adequate reflection of UBS AG's credit exposure in its derivatives business with that counterparty. This is generally the case because, on the one hand, replacement values can increase over time (potential future exposure), while on the other hand, exposure may be mitigated by entering into master netting agreements and bilateral collateral arrangements. Both the exposure measures used internally by UBS AG to control credit risk and the capital requirements imposed by regulators reflect these additional factors.

→ **Refer to Note 24 for more information on the values of positive and negative replacement values after consideration of netting potential allowed under enforceable netting arrangements**

Note 12 Derivative instruments and hedge accounting (continued)

Derivative instruments[1]

	31.12.17					31.12.16				
CHF billion	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3,5]	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3,5]
Interest rate contracts										
Over-the-counter (OTC) contracts										
Forward contracts[6]	0.1	22.1	0.3	8.2	2,321.1	0.1	29.6	0.1	21.9	2,242.8
Swaps	35.4	539.2	28.2	453.7	7,530.2	45.2	599.3	38.3	552.6	7,064.2
Options	8.5	558.1	9.8	547.2		12.6	478.1	13.9	480.6	
Exchange-traded contracts										
Futures					455.6					326.4
Options	0.0	22.7	0.0	34.4	155.4	0.0	45.4	0.0	4.5	96.2
Agency transactions[7]	0.0		0.0			0.2		0.2		
Total	44.0	1,142.1	38.4	1,043.6	10,462.2	58.0	1,152.4	52.5	1,059.6	9,729.6
Credit derivative contracts										
Over-the-counter (OTC) contracts										
Credit default swaps	2.7	85.2	3.0	94.4	1.2	3.7	116.9	3.9	135.2	
Total return swaps	0.2	2.2	0.8	3.9		0.2	3.3	0.9	4.3	
Options and warrants	0.0	4.3	0.0	0.1		0.0	2.9	0.0	0.1	
Total	2.8	91.8	3.8	98.3	1.2	3.9	123.1	4.8	139.6	
Foreign exchange contracts										
Over-the-counter (OTC) contracts										
Forward contracts	17.2	681.4	17.8	691.6		21.8	715.6	19.0	650.9	
Interest and currency swaps	23.8	1,275.5	21.8	1,098.4		43.2	1,220.8	42.0	1,115.0	
Options	6.1	427.0	5.8	397.6		11.1	530.3	11.0	513.7	
Exchange-traded contracts										
Futures					0.4					6.1
Options	0.0	4.7	0.1	5.6		0.0	2.9	0.1	6.0	
Agency transactions[7]	0.0		0.0			0.0		0.0		
Total	47.1	2,388.5	45.5	2,193.3	0.4	76.1	2,469.6	72.1	2,285.6	6.1
Equity / index contracts										
Over-the-counter (OTC) contracts										
Forward contracts	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Swaps	3.4	71.2	5.5	100.4		3.6	76.5	4.8	69.0	
Options	5.8	76.6	8.2	125.0		3.7	49.6	5.8	92.8	
Exchange-traded contracts										
Futures					51.9					33.0
Options	6.9	232.6	6.9	261.2	31.0	3.8	142.5	4.6	155.8	21.6
Agency transactions[7]	6.2		6.1			6.9		6.9		
Total	22.2	380.3	26.7	486.6	82.9	18.0	268.6	22.1	317.6	54.5

Table continues on the next page.

Note 12 Derivative instruments and hedge accounting (continued)

Derivative instruments[1] (continued)

Table continued from the previous page.

Derivative instruments (continued)[1]

	31.12.17					31.12.16				
CHF billion	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3,5]	PRV[2]	Notional values related to PRV[3]	NRV[4]	Notional values related to NRV[3]	Other notional values[3,5]
Commodity contracts										
Over-the-counter (OTC) contracts										
Forward contracts	0.1	2.9	0.1	3.8		0.3	4.8	0.1	2.7	
Swaps	0.2	8.5	0.4	12.8		0.4	10.9	0.5	13.4	
Options	0.3	11.3	0.1	7.9		0.5	14.1	0.2	9.9	
Exchange-traded contracts										
Futures					8.2					9.1
Forward contracts	0.2	9.4	0.0	7.9		0.1	5.9	0.0	4.6	
Options	0.0	1.0	0.1	4.4	0.3	0.0	3.2	0.1	5.3	0.0
Agency transactions[7]	0.9		0.9			0.9		0.9		
Total	1.7	33.1	1.6	36.9	8.4	2.3	39.0	2.0	35.9	9.1
Unsettled purchases of non-derivative financial instruments[8]	0.1	12.0	0.1	10.9		0.1	18.4	0.1	9.7	
Unsettled sales of non-derivative financial instruments[8]	0.1	14.8	0.1	8.7		0.1	13.0	0.2	11.5	
Total derivative instruments, based on IFRS netting[9]	118.2	4,062.6	116.1	3,878.3	10,555.0	158.4	4,084.0	153.8	3,859.6	9,799.3

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The replacement values and related notional values of these derivatives were not material for the periods presented. 2 PRV: positive replacement value. 3 In cases where replacement values are presented on a net basis on the balance sheet, the respective notional values of the netted replacement values are still presented on a gross basis. 4 NRV: negative replacement value. 5 Other notional values relate to derivatives that are cleared through either a central clearing counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for the periods presented. 6 Negative replacement values as of 31 December 2017 include CHF 0.0 billion related to derivative loan commitments (31 December 2016: CHF 0.1 billion). No notional amounts related to these replacement values are included in the table. The maximum irrevocable amount related to these commitments was CHF 5.3 billion as of 31 December 2017 (31 December 2016: CHF 14.3 billion). 7 Notional values of exchange-traded agency transactions and OTC-cleared transactions entered into on behalf of clients are not disclosed due to their significantly different risk profile. 8 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as replacement values. 9 Refer to Note 24 for more information on netting arrangements.

The notional amount of a derivative is generally the quantity of the underlying instrument on which the derivative contract is based and is the reference against which changes in the value of the derivative are measured. Notional values in themselves are generally not a direct indication of the values that are exchanged between parties, and are therefore not a direct measure of risk or financial exposure but are viewed as an indication of the scale of the different types of derivatives entered into by UBS AG.

On a notional value basis, approximately 54% of OTC interest rate contracts held as of 31 December 2017 (31 December 2016: 52%) mature within one year, 28% (31 December 2016: 29%) within one to five years and 18% (31 December 2016: 19%) after five years. Notional values of interest rate contracts cleared with a clearing house that qualify for IFRS balance sheet netting or are legally settled on a daily basis are presented under *Other notional values* and are categorized into maturity buckets on the basis of contractual maturities of the cleared underlying derivative contracts.

Derivatives transacted for trading purposes

Most of UBS AG's derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to take, transfer, modify or reduce current or expected risks. Trading activities include market-making to directly support the facilitation and execution of client activity. Market-making involves quoting bid and offer prices to other market participants with the intention of generating revenues based on spread and volume.

Credit derivatives

UBS is an active dealer in the fixed income market, including credit default swaps (CDS) and related products, with respect to a large number of issuers' securities. The primary objectives of these activities are market-making, primarily on behalf of clients, and ongoing hedging of trading book exposures.

Note 12 Derivative instruments and hedge accounting (continued)

Market-making activity, which is undertaken within the Investment Bank, consists of buying and selling single-name CDS, index CDS, loan CDS and related referenced cash instruments to facilitate client trading activity. UBS also actively utilizes CDS to economically hedge specific counterparty credit risks in its accrual and traded loan portfolios (including off-balance sheet loan commitments) with the aim of reducing concentrations in individual names, sectors or specific portfolios.

In addition, UBS actively utilizes CDS to economically hedge specific counterparty credit risks in its OTC derivative portfolios, including financial instruments that are designated at fair value through profit or loss.

The tables below provide more information on credit protection bought and sold, including replacement and notional value information by instrument type and counterparty type. The value of protection bought and sold is not, in isolation, a measure of UBS's credit risk. Counterparty relationships are viewed in terms of the total outstanding credit risk, which relates to other instruments in addition to CDS, and in connection with collateral arrangements in place. On a notional value basis, approximately 23% of credit protection bought and sold as of 31 December 2017 matures within one year (31 December 2016: 29%), approximately 65% within one to five years (31 December 2016: 61%) and approximately 12% after five years (31 December 2016: 10%).

Credit derivatives by type of instrument

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Single-name credit default swaps	0.6	1.1	61.3	1.1	0.6	55.7
Multi-name index-linked credit default swaps	0.2	0.9	31.8	0.9	0.2	31.9
Multi-name other credit default swaps	0.0	0.0	0.1	0.0	0.0	0.0
Total rate of return swaps	0.0	0.8	4.4	0.1	0.0	1.7
Options and warrants	0.0	0.0	4.3	0.0	0.0	0.1
Total 31 December 2017	0.8	2.9	101.9	2.0	0.9	89.4
of which: credit derivatives related to economic hedges	*0.7*	*2.4*	*81.5*	*1.6*	*0.8*	*70.5*
of which: credit derivatives related to market-making	*0.0*	*0.5*	*20.3*	*0.5*	*0.0*	*18.9*

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Single-name credit default swaps	1.6	1.3	91.4	1.3	1.4	81.3
Multi-name index-linked credit default swaps	0.2	0.8	38.4	0.5	0.4	38.3
Multi-name other credit default swaps	0.0	0.0	1.5	0.0	0.0	1.1
Total rate of return swaps	0.1	0.7	5.5	0.0	0.2	2.1
Options and warrants	0.0	0.0	2.9	0.0	0.0	0.1
Total 31 December 2016	2.0	2.8	139.7	1.9	2.0	122.9
of which: credit derivatives related to economic hedges	*1.4*	*2.4*	*111.7*	*1.5*	*1.5*	*96.2*
of which: credit derivatives related to market-making	*0.5*	*0.3*	*28.0*	*0.4*	*0.5*	*26.7*

Note 12 Derivative instruments and hedge accounting (continued)

Credit derivatives by counterparty

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Broker-dealers	0.2	0.2	16.2	0.2	0.1	12.3
Banks	0.3	0.7	37.0	0.5	0.4	31.6
Central clearing counterparties	0.1	1.1	41.5	1.0	0.1	40.6
Other	0.3	0.9	7.2	0.3	0.2	4.9
Total 31 December 2017	0.8	2.9	101.9	2.0	0.9	89.4

	Protection bought			Protection sold		
CHF billion	PRV	NRV	Notional values	PRV	NRV	Notional values
Broker-dealers	0.4	0.2	20.9	0.2	0.3	16.1
Banks	0.9	1.0	60.8	0.8	1.0	52.6
Central clearing counterparties	0.3	0.9	47.2	0.8	0.4	47.1
Other	0.4	0.8	10.9	0.2	0.3	7.1
Total 31 December 2016	2.0	2.8	139.7	1.9	2.0	122.9

UBS's CDS trades are documented using industry standard forms of documentation or equivalent terms documented in a bespoke agreement. The agreements that govern CDS generally do not contain recourse provisions that would enable UBS to recover from third parties any amounts paid out by UBS.

The types of credit events that would require UBS to perform under a CDS contract are subject to agreement between the parties at the time of the transaction. However, nearly all transactions are traded with reference to credit events that are applicable under certain market conventions based on the type of reference entity to which the transaction relates. Applicable credit events according to market conventions include bankruptcy, failure to pay, restructuring, obligation acceleration and repudiation / moratorium.

Contingent collateral features of derivative liabilities

Certain derivative instruments contain contingent collateral or termination features triggered upon a downgrade of the published credit ratings of UBS AG in the normal course of business. Based on UBS's credit ratings as of 31 December 2017, CHF 0.1 billion, CHF 0.3 billion and CHF 1.2 billion would have been required for contractual obligations related to OTC derivatives in the event of a one-notch, two-notch and three-notch reduction in long-term credit ratings, respectively. In evaluating UBS's liquidity requirements, UBS considers additional collateral or termination payments that would be required in the event of a reduction in UBS's long-term credit ratings, and a corresponding reduction in UBS's short-term ratings.

Derivatives transacted for hedging purposes

UBS AG enters into derivative transactions for the purposes of hedging risks inherent in assets, liabilities and forecast transactions. The accounting treatment of hedge transactions varies according to the nature of the instrument hedged and whether the hedge qualifies as such for accounting purposes.

Derivative transactions that qualify and are designated as hedges for accounting purposes are described under the corresponding headings in this Note (fair value hedges, cash flow hedges and hedges of net investments in foreign operations).

UBS AG has also executed various hedging strategies utilizing derivatives for which hedge accounting has not been applied. These economic hedges include interest rate swaps and other interest rate derivatives (e.g., futures) for day-to-day economic interest rate risk management purposes. In addition, UBS AG has used equity futures, options and, to a lesser extent, swaps in a variety of equity trading strategies to offset underlying equity and equity volatility exposure. UBS AG has also entered into CDS that provide economic hedges for credit risk exposures (refer to "Credit derivatives" in this Note).

UBS AG's accounting policies for derivatives designated and accounted for as hedging instruments or economic hedges that do not qualify for hedge accounting are described in Note 1a item 3k, where terms used in the following sections are explained.

Note 12 Derivative instruments and hedge accounting (continued)

Fair value hedges: interest rate risk related to debt instruments

UBS AG's fair value hedges principally consist of interest rate swaps that are used to protect against changes in the fair value of fixed-rate debt instruments, such as non-structured fixed-rate bonds, covered bonds and subordinated debt, due to movements in market interest rates. The fair values of outstanding interest rate derivatives designated as fair value hedges were assets of CHF 47 million and liabilities of CHF 2 million as of 31 December 2017 and assets of CHF 152 million and liabilities of CHF 1 million as of 31 December 2016.

Fair value hedges of interest rate risk

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Gains / (losses) on hedging instruments	(20)	140	554
Gains / (losses) on hedged items attributable to the hedged risk	1	(144)	(552)
Net gains / (losses) representing ineffective portions of fair value hedges	(19)	(4)	2

Fair value hedges: portfolio interest rate risk related to loans

UBS AG also applies fair value hedge accounting to mortgage loan portfolio interest rate risk. The change in fair value of the hedged items is recorded separately from the hedged item and is included within *Other assets* on the balance sheet. The fair values of outstanding interest rate derivatives designated for these hedges as of 31 December 2017 were liabilities of CHF 32 million (31 December 2016: liabilities of CHF 44 million).

Fair value hedges of portfolio interest rate risk

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Gains / (losses) on hedging instruments	(11)	(128)	(176)
Gains / (losses) on hedged items attributable to the hedged risk	4	116	147
Net gains / (losses) representing ineffective portions of fair value hedges	(7)	(12)	(29)

Cash flow hedges of forecast transactions

UBS AG is exposed to variability in future interest cash flows on non-trading financial assets and liabilities that bear interest at variable rates or are expected to be refinanced or reinvested in the future. The amounts and timing of future cash flows, representing both principal and interest flows, are projected on the basis of contractual terms and other relevant factors, including estimates of prepayments and defaults. The aggregate principal balances and interest cash flows across all portfolios over time form the basis for identifying the non-trading interest rate risk of UBS AG, which is hedged with interest rate swaps, the maximum maturity of which is 11 years. The table on the following page shows forecast principal balances on which expected interest cash flows arise as of 31 December 2017. Amounts shown represent, by time bucket, average assets and liabilities subject to forecast cash flows designated as hedged items in cash flow hedge accounting relationships.

As of 31 December 2017, the fair values of outstanding derivatives designated as cash flow hedges of forecast transactions were CHF 30 million assets and CHF 2 million liabilities (31 December 2016: CHF 68 million assets and CHF 5 million liabilities).

Other comprehensive income from cash flow hedges, net of tax was negative CHF 621 million, compared with negative CHF 666 million in 2016 and negative CHF 518 million in 2015. This result included the reclassification of a pre-tax net gain from *Other comprehensive income* to the income statement of CHF 826 million in 2017, compared with a pre-tax net gain of CHF 1,082 million in 2016 and a pre-tax net gain of CHF 1,199 million in 2015, partly offset by a pre-tax net fair value gain associated with the effective portion of derivative instruments designated as cash flow hedges recognized in comprehensive income of CHF 45 million in 2017, compared with a pre-tax net gain of CHF 246 million in 2016 and a pre-tax net gain of CHF 550 million in 2015.

As of 31 December 2017, the cumulative net gains associated with the effective portion of derivative instruments designated as cash flow hedges reported in *Equity* were CHF 351 million (31 December 2016: CHF 972 million).

In 2017, a gain of CHF 8 million was recognized in *Net trading income* due to hedge ineffectiveness, compared with a gain of CHF 11 million in 2016 and a gain of CHF 150 million in 2015.

Note 12 Derivative instruments and hedge accounting (continued)

Principal balances subject to cash flow forecasts

CHF billion	Within 1 year	1–3 years	3–5 years	5–10 years	Over 10 years
Assets	52	74	49	49	0
Liabilities	3	4	2	2	0
Net balance	**50**	**70**	**47**	**47**	**0**

Hedges of net investments in foreign operations

UBS AG applies hedge accounting for certain net investments in foreign operations. As of 31 December 2017, the positive replacement values and negative replacement values of foreign exchange (FX) derivatives (mainly FX swaps) designated as hedging instruments in net investment hedge accounting relationships were CHF 78 million and CHF 130 million, respectively (31 December 2016: positive replacement values of CHF 122 million and negative replacement values of CHF 79 million). As of 31 December 2017, the underlying hedged structural exposures in several currencies amounted to CHF 8.2 billion (31 December 2016: CHF 7.5 billion).

Hedges of structural FX exposures in currencies other than the US dollar may be comprised of two jointly designated derivatives as the foreign currency risk may be hedged against the US dollar first and then converted into Swiss francs, the presentation currency of UBS AG, as part of a separate FX derivative transaction. The aggregated notional amount of designated hedging derivatives as of 31 December 2017 was CHF 13 billion in total (31 December 2016: CHF 12.5 billion), including CHF 8.1 billion notional values related to US dollar versus Swiss franc swaps and CHF 5.0 billion notional values related to derivatives hedging foreign currencies (other than the US dollar) versus the US dollar. The effective portion of gains and losses of these FX swaps is transferred directly to OCI to offset foreign currency translation (FCT) gains and losses on the net investments in foreign branches and subsidiaries. As such, these FX swaps hedge the structural FX exposure resulting in the accumulation of FCT on the level of individual foreign branches and subsidiaries and hence on the total FCT OCI of UBS AG.

UBS designates certain non-derivative foreign currency financial assets and liabilities of foreign branches or subsidiaries as hedging instruments in net investment hedge accounting arrangements. The FX translation difference recorded in FCT OCI of the non-derivative hedging instrument of one foreign entity offsets the structural FX exposure of another foreign entity. Therefore, the aggregated FCT OCI of UBS AG is unchanged from this hedge designation. As of 31 December 2017, the nominal amount of non-derivative financial assets and liabilities designated as hedging instruments in such net investment hedges was CHF 1.4 billion and CHF 1.4 billion, respectively (31 December 2016: CHF 1.5 billion non-derivative financial assets and CHF 1.5 billion non-derivative financial liabilities).

Ineffectiveness of hedges of net investments in foreign operations was not material in 2017, 2016 and 2015.

Undiscounted cash flows

The table below provides undiscounted cash flow information for derivative instruments designated in hedge accounting relationships.

Derivatives designated in hedge accounting relationships (undiscounted cash flows)

CHF billion	On demand	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Interest rate swaps[1]							
FX swaps / forwards							
Cash inflows	0	8	4	0	0	0	12
Cash outflows	0	8	4	0	0	0	12
Net cash flows	**0**	**0**	**0**	**0**	**0**	**0**	**0**

1 Undiscounted cash inflows and cash outflows of interest rate swaps as of 31 December 2017 were not material as the majority of interest rate swaps designated in hedge accounting relationships are legally settled on a daily basis.

Note 13 Financial assets available for sale and held to maturity

a) Financial assets available for sale

CHF million	31.12.17	31.12.16
Financial assets available for sale by issuer type[1]		
Debt instruments		
Government and government agencies	7,000	11,650
of which: USA	*6,569*	*7,779*
Banks	299	1,845
Corporates and other	821	1,554
Total debt instruments	8,120	15,048
Equity instruments	546	628
Total financial assets available for sale	8,665	15,676
Unrealized gains – before tax	216	309
Unrealized (losses) – before tax	(105)	(117)
Net unrealized gains / (losses) – before tax	111	193
Net unrealized gains / (losses) – after tax	8	96

1 Refer to Note 22c for more information on product type and fair value hierarchy categorization.

b) Financial assets held to maturity

CHF million	31.12.17	31.12.16
Financial assets held to maturity by issuer type		
Debt instruments		
Government and government agencies	7,476	7,416
of which: USA	*4,833*	*4,688*
of which: Germany	*1,682*	*1,708*
of which: France	*669*	*867*
Banks	1,689	1,873
Total financial assets held to maturity	9,166	9,289

Note 14 Property, equipment and software

At historical cost less accumulated depreciation

CHF million	Own-used properties	Leasehold improvements	IT hardware and communication	Internally generated software	Purchased software	Other machines and equipment	Projects in progress	31.12.17	31.12.16
Historical cost									
Balance at the beginning of the year	7,732	3,440	1,512	3,037	408	853	1,123	18,106	17,823
Additions	44	15	101	1	43	13	1,291	1,508	1,770
Disposals / write-offs[1]	(672)	(303)	(645)	(355)	(174)	(59)	(32)	(2,239)	(1,102)
Reclassifications	(17)	117	46	1,196	(5)	22	(1,406)	(46)[6]	(214)
Foreign currency translation	(2)	(43)	3	(12)	1	(15)	(1)	(70)	(171)
Balance at the end of the year	7,085	3,226	1,018	3,867	272	815	975	17,259	18,106
Accumulated depreciation									
Balance at the beginning of the year	4,300	2,124	1,021	1,542	233	589	0	9,809	10,140
Depreciation	153	191	133	328	48	59	0	912	954
Impairment[2]	(2)	8	2	6	1	1	0	15	26
Disposals / write-offs[1]	(373)	(298)	(432)	(155)	(100)	(55)	0	(1,413)	(1,090)
Reclassifications	(9)	4	0	0	(1)	0	0	(7)[6]	(147)
Foreign currency translation	(2)	(36)	5	(3)	3	(10)	0	(43)	(74)
Balance at the end of the year	4,066	1,993	729	1,719	183	583	0	9,274	9,809
Net book value									
Net book value at the beginning of the year	3,432	1,316	492	1,495	175	264	1,123	8,297	7,683
Net book value at the end of the year[3,4]	**3,019**	**1,233**	**289**	**2,148**	**89**	**232**	**975[5]**	**7,985**	**8,297**

1 Mainly comprises CHF 819 million of assets on a net book value basis relating to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. Refer to Note 30 for more information. Also includes write-offs of fully depreciated assets. 2 Impairment charges recorded in 2017 relate to assets for which the recoverable amount was determined based on value-in-use. Recoverable amounts for these impaired assets were not material as of 31 December 2017. 3 As of 31 December 2017, contractual commitments to purchase property in the future amounted to approximately CHF 0.3 billion (31 December 2016: approximately CHF 0.3 billion). 4 Includes CHF 22 million related to leased assets, mainly IT hardware and communication. 5 Consists of CHF 754 million related to Internally generated software, CHF 188 million related to Own-used properties and CHF 33 million related to Leasehold improvements. 6 Reflects reclassifications to Properties held for sale (CHF 40 million on a net basis) of properties sold in 2017.

Note 15 Goodwill and intangible assets

Introduction

UBS AG performs an impairment test on its goodwill assets on an annual basis or when indicators of impairment exist. UBS AG considers the segments, as reported in Note 2a, as separate cash-generating units (CGUs). The impairment test is performed for each segment to which goodwill is allocated by comparing the recoverable amount, based on its value-in-use, with the carrying amount of the respective segment. An impairment charge is recognized if the carrying amount exceeds the recoverable amount. As of 31 December 2017, total goodwill recognized on the balance sheet was CHF 6.2 billion, of which CHF 1.3 billion, CHF 3.4 billion and CHF 1.4 billion was carried by Wealth Management, Wealth Management Americas and Asset Management, respectively. Based on the impairment testing methodology described below, UBS AG concluded that the goodwill balances as of 31 December 2017 allocated to these segments remain recoverable and thus were not impaired.

Methodology for goodwill impairment testing

The recoverable amounts are determined using a discounted cash flow model, which has been adapted to use inputs that consider features of the banking business and its regulatory environment. The recoverable amount of a segment is the sum of the discounted earnings attributable to shareholders from the first three forecast years and the terminal value, adjusted for the effect of the capital assumed to be needed over the next three years and to support the perpetual growth implied by the long-term growth rate. The terminal value, which covers all periods beyond the third year, is calculated on the basis of the forecast of third-year profit, the discount rate and the long-term growth rate, as well as the implied perpetual capital growth.

The carrying amount for each segment is determined by reference to the Group's equity attribution framework. Within this framework, which is described in the "Capital management" section of this report, we attribute equity to the businesses on the basis of their risk-weighted assets and leverage ratio denominator, their goodwill and intangible assets as well as equity directly associated with activity that Group ALM manages centrally on behalf of the business divisions. The framework is primarily used for purposes of measuring the performance of the businesses and includes certain management assumptions. Attributed equity equals the capital that a segment requires to conduct its business and is considered an appropriate starting point from which to determine the carrying value of the segments. The attributed equity methodology is aligned with the business planning process, the inputs from which are used in calculating the recoverable amounts of the respective CGU.

→ **Refer to the "Capital management" section of this report for more information on the equity attribution framework**

Assumptions

Valuation parameters used within UBS AG's impairment test model are linked to external market information, where applicable. The model used to determine the recoverable amount is most sensitive to changes in the forecast earnings available to shareholders in years one to three, to changes in the discount rates and to changes in the long-term growth rate. The applied long-term growth rate is based on long-term economic growth rates for different regions worldwide. Earnings available to shareholders are estimated on the basis of forecast results, which are part of the business plan approved by the BoD.

The discount rates are determined by applying a capital asset pricing model-based approach, as well as considering quantitative and qualitative inputs from both internal and external analysts and the view of management. The discount rates were unchanged between 2016 and 2017.

Key assumptions used to determine the recoverable amounts of each segment are tested for sensitivity by applying a reasonably possible change to those assumptions. Forecast earnings available to shareholders were changed by 20%, the discount rates were changed by 1.5 percentage points and the long-term growth rates were changed by 0.75 percentage points. Under all scenarios, reasonably possible changes in key assumptions did not result in an impairment of goodwill or intangible assets that would be material to the consolidated financial statements or to the reported financial performance of any of the business divisions.

If the estimated earnings and other assumptions in future periods deviate from the current outlook, the value of goodwill may become impaired in the future, giving rise to losses in the income statement. Recognition of any impairment of goodwill would reduce IFRS equity and net profit. It would not affect cash flows and, as goodwill is required to be deducted from capital under the Basel III capital framework, no effect would be expected on UBS AG's total capital ratios.

Note 15 Goodwill and intangible assets (continued)

Discount and growth rates

	Discount rates		Growth rates	
In %	31.12.17	31.12.16	31.12.17	31.12.16
Wealth Management	9.0	9.0	1.7	1.7
Wealth Management Americas	9.0	9.0	2.4	2.4
Asset Management	9.0	9.0	2.4	2.4
Investment Bank	11.0	11.0	2.4	2.4

	Goodwill	Intangible assets				
CHF million	Total	Infrastructure	Customer relationships, contractual rights and other	Total	31.12.17	31.12.16
Historical cost						
Balance at the beginning of the year	6,311	773	739	1,512	7,823	7,821
Additions	37		64	64	101	24
Disposals	(27)		(34)	(34)	(61)	(3)
Write-offs				0	0	(75)
Foreign currency translation	(139)	(33)	(2)	(35)	(174)	57
Balance at the end of the year	6,182	741	766	1,507	7,689	7,823
Accumulated amortization and impairment						
Balance at the beginning of the year		626	641	1,267	1,267	1,253
Amortization		37	32	70	70	91
Impairment[1]			0	0	0	0
Disposals			(15)	(15)	(15)	(1)
Write-offs				0	0	(75)
Foreign currency translation		(27)	(3)	(29)	(29)	(1)
Balance at the end of the year		637	655	1,292	1,292	1,267
Net book value at the end of the year	6,182	104	111	215	6,398	6,556

1 Impairment charges recorded in 2017 and 2016 relate to assets for which the recoverable amount was determined based on value-in-use (recoverable amount of the impaired assets: CHF 0 million for 2017 and CHF 3 million for 2016).

The table below presents goodwill and intangible assets by segment for the year ended 31 December 2017.

CHF million	Wealth Management	Wealth Management Americas	Investment Bank	Asset Management	Corporate Center – Services	Total
Goodwill						
Balance at the beginning of the year	1,303	3,571	36	1,401		6,311
Additions	37					37
Disposals	(2)			(25)		(27)
Foreign currency translation	8	(151)	(2)	6		(139)
Balance at the end of the year	1,346	3,420	34	1,382		6,182
Intangible assets						
Balance at the beginning of the year	40	152	41	4	9	245
Additions / transfers	47	17				64
Disposals	(19)					(19)
Amortization	(7)	(41)	(12)	(3)	(7)	(70)
Impairment		0				0
Foreign currency translation	2	(6)	(1)	0		(5)
Balance at the end of the year	63	121	28	1	2	215

Note 15 Goodwill and intangible assets (continued)

The table below presents estimated, aggregated amortization expenses for intangible assets.

CHF million	Intangible assets
Estimated, aggregated amortization expenses for:	
2018	63
2019	49
2020	42
2021	11
2022	11
Thereafter	35
Not amortized due to indefinite useful life	5
Total	215

Note 16 Other assets

CHF million	31.12.17	31.12.16
Prime brokerage receivables[1]	19,080	9,828
Recruitment loans to financial advisors	2,553	3,087
Other loans to financial advisors	565	471
Bail deposit[2]	1,337	1,213
Accrued interest income	578	526
Accrued income – other	781	822
Prepaid expenses	819	1,008
Settlement and clearing accounts	716	516
VAT and other tax receivables	292	261
Properties and other non-current assets held for sale	95	111
Assets of disposal group held for sale[3]	0	5,137
Other	2,688	2,433
Total other assets	29,505	25,412

1 Prime brokerage services include clearance, settlement, custody, financing and portfolio reporting services for corporate clients trading across multiple asset classes. Prime brokerage receivables are mainly comprised of margin lending receivables. 2 Refer to Note 20b item 1 for more information. 3 Refer to Note 30 for more information.

Balance sheet notes: liabilities

Note 17 Due to banks and customers

CHF million	31.12.17	31.12.16
Due to banks	7,533	10,645
Due to customers	447,141	450,199
of which: demand deposits	*190,341*	*195,756*
of which: retail savings / deposits	*161,828*	*170,729*
of which: time deposits[1]	*83,773*	*77,531*
of which: fiduciary deposits	*11,200*	*6,184*
Total due to banks and customers	454,675	460,844

1 Includes Group-internal funding obtained from UBS Group AG and UBS Group Funding (Switzerland) AG of CHF 35 billion as of 31 December 2017 (31 December 2016: CHF 25 billion).

Note 18 Financial liabilities designated at fair value

CHF million	31.12.17	31.12.16
Issued debt instruments		
Equity-linked[1]	34,162	29,831
Rates-linked	5,811	10,150
Credit-linked	2,937	4,101
Fixed-rate	3,921	2,972
Other	2,671	2,875
Total issued debt instruments	49,502	49,930
of which: issued by UBS AG with original maturity greater than one year[2,3]	*37,266*	*36,347*
Over-the-counter debt instruments		
Equity-linked[1]	1,350	1,992
Other	2,967	2,671
Total over-the-counter debt instruments	4,317	4,663
of which: issued by UBS AG with original maturity greater than one year[2,4]	*3,049*	*4,210*
Repurchase agreements	375	395
Loan commitments and guarantees[5]	9	29
Total	54,202	55,017
of which: life-to-date own credit (gain) / loss	*195*	*(141)*

1 Includes investment fund unit-linked instruments issued. 2 Issued by the legal entity UBS AG. Based on original contractual maturity without considering any early redemption features. 3 More than 99% of the balance as of 31 December 2017 was unsecured (31 December 2016: more than 99% of the balance was unsecured). 4 More than 40% of the balance as of 31 December 2017 was unsecured (31 December 2016: more than 35% of the balance was unsecured). 5 Loan commitments recognized as Financial liabilities designated at fair value until drawn and recognized as Loans. See Note 1a item 3o for more information.

As of 31 December 2017 and 31 December 2016, the contractual redemption amount at maturity of financial liabilities designated at fair value through profit or loss was not materially different from the carrying value.

The table on the following page shows the residual contractual maturity of the carrying value of financial liabilities designated at fair value, split between fixed-rate and floating-rate instruments based on the contractual terms, and does not consider any early redemption features. Interest rate ranges for future interest payments related to these financial liabilities designated at fair value have not been included in the table on the following page as a majority of these liabilities are structured products, and therefore the future interest payments are highly dependent upon the embedded derivative and prevailing market conditions at the time each interest payment is made.

→ **Refer to Note 25d for maturity information on an undiscounted cash flow basis**

Note 18 Financial liabilities designated at fair value (continued)

Contractual maturity of carrying value

CHF million	2018	2019	2020	2021	2022	2023–2027	Thereafter	Total 31.12.17	Total 31.12.16
UBS AG[1]									
Non-subordinated debt									
Fixed-rate	3,339	1,350	872	401	571	511	3,610	10,653	9,505
Floating-rate	16,428	5,660	4,418	1,297	1,883	4,983	6,497	41,167	42,757
Subtotal	19,767	7,010	5,290	1,697	2,455	5,494	10,107	51,820	52,262
Other subsidiaries[2]									
Non-subordinated debt									
Fixed-rate	90	797	52	74	7	345	136	1,502	1,768
Floating-rate	330	18	194	0	48	27	263	879	987
Subtotal	420	816	246	74	55	372	399	2,382	2,755
Total	20,187	7,826	5,536	1,772	2,510	5,866	10,506	54,202	55,017

1 Comprises instruments issued by the legal entity UBS AG. 2 Comprises instruments issued by subsidiaries of UBS AG.

Note 19 Debt issued held at amortized cost

CHF million	31.12.17	31.12.16
Certificates of deposit	23,831	20,207
Commercial paper	23,532	1,653
Other short-term debt	3,590	4,318
Short-term debt[1]	50,953	26,178
Senior fixed-rate bonds	32,268	27,008
of which: issued by UBS AG with original maturity greater than one year[2]	*32,256*	*26,850*
Covered bonds	4,112	5,836
Subordinated debt	8,985	11,554
of which: low-trigger loss-absorbing tier 2 capital instruments	*8,286*	*10,429*
of which: non-Basel III-compliant tier 2 capital instruments	*700*	*1,125*
Debt issued through the central bond institutions of the Swiss regional or cantonal banks	8,345	8,302
Other long-term debt	87	121
of which: issued by UBS AG with original maturity greater than one year[2]	*66*	*94*
Long-term debt[3]	53,796	52,820
Total debt issued held at amortized cost[4]	104,749	78,998

1 Debt with an original maturity of less than one year. 2 Issued by the legal entity UBS AG. Based on original contractual maturity without considering any early redemption features. 100% of the balance as of 31 December 2017 was unsecured (31 December 2016: 100% of the balance was unsecured). 3 Debt with original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 4 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

UBS AG uses interest rate and foreign exchange derivatives to manage the risks inherent in certain debt instruments held at amortized cost. In certain cases, UBS AG applies hedge accounting for interest rate risk as discussed in Note 1a item 3k and Note 12. As a result of applying hedge accounting, the life-to-date adjustment to the carrying value of debt issued was an increase of CHF 480 million as of 31 December 2017 and an increase of CHF 821 million as of 31 December 2016, reflecting changes in fair value due to interest rate movements.

Note 19 Debt issued held at amortized cost (continued)

Subordinated debt consists of unsecured debt obligations that are contractually subordinated in right of payment to all other present and future non-subordinated obligations of the respective issuing entity. All of the subordinated debt instruments outstanding as of 31 December 2017 pay a fixed rate of interest.

The table below shows the residual contractual maturity of the carrying value of debt issued, split between fixed-rate and floating-rate based on the contractual terms, and does not consider any early redemption features. The effects from interest rate swaps, which are used to hedge various fixed-rate debt issuances by changing the repricing characteristics into those similar to floating-rate debt, are also not considered in the table below.

→ **Refer to Note 25d for maturity information on an undiscounted cash flow basis**

Contractual maturity of carrying value

CHF million, except where indicated	2018	2019	2020	2021	2022	2023–2027	Thereafter	Total 31.12.17	Total 31.12.16
UBS AG[1]									
Non-subordinated debt									
Fixed-rate	38,470	3,975	7,987	4,162	1,643	0	3	56,239	42,999
Interest rates (range in %)	0–6.6	2.4–4.0	0–4.9	0.1–1.4	4.0–4.0				
Floating-rate	21,158	4,818	3,926	0	0	0	1,223	31,125	15,937
Subordinated debt									
Fixed-rate	0	0	0	0	1,912	7,073	0	8,985	11,554
Interest rates (range in %)					7.6–7.6	4.8–8.8			
Subtotal	59,628	8,793	11,913	4,162	3,555	7,073	1,225	96,349	70,490
Other subsidiaries[2]									
Non-subordinated debt									
Fixed-rate	805	747	725	1,000	835	3,384	903	8,398	8,507
Interest rates (range in %)	0.4–3.8	0.6–2.9	0.1–2.8	0.1–2.4	0.1–3.4	0.1–2.8	0.2–2.7		
Floating-rate	1	0	1	0	0	0	0	1	1
Subtotal	806	746	726	1,000	835	3,384	903	8,400	8,507
Total	60,434	9,540	12,639	5,162	4,389	10,457	2,128	104,749	78,998

1 Comprises debt issued by the legal entity UBS AG. 2 Comprises debt issued by subsidiaries of UBS AG.

Note 20 Provisions and contingent liabilities

a) Provisions

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restructuring	Loan commitments and guarantees	Real estate	Employee benefits[5]	Other	Total 31.12.17	Total 31.12.16
Balance at the beginning of the year	50	3,261	498	54	138	77	91	4,169	4,163
Additions from acquired companies	0	0	0	0	0	0	7	7	0
Increase in provisions recognized in the income statement	15	682	174	11	3	11	45	941	1,430
Release of provisions recognized in the income statement	(7)	(209)	(74)	(32)	(2)	(18)	(20)	(362)	(288)
Provisions used in conformity with designated purpose	(13)	(1,230)	(280)	0	(12)	(1)	(34)	(1,571)	(1,152)
Capitalized reinstatement costs	0	0	0	0	4	0	0	4	(1)
Reclassifications	0	0	(21)	0	0	(14)	0	(36)	7
Foreign currency translation / unwind of discount	(3)	(59)	(2)	0	(5)	1	1	(68)	10
Balance at the end of the year	43	2,444	294[3]	33	125[4]	55	89	3,084	4,169

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Primarily consists of personnel-related restructuring provisions of CHF 54 million as of 31 December 2017 (31 December 2016: CHF 150 million) and provisions for onerous lease contracts of CHF 235 million as of 31 December 2017 (31 December 2016: CHF 348 million). 4 Consists of reinstatement costs for leasehold improvements of CHF 86 million as of 31 December 2017 (31 December 2016: CHF 85 million) and provisions for onerous lease contracts of CHF 39 million as of 31 December 2017 (31 December 2016: CHF 53 million). 5 Includes provisions for sabbatical and anniversary awards as well as provisions for severance that are not part of restructuring provisions.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 20b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

UBS operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where UBS may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which UBS believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. UBS makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that UBS has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS, but are nevertheless expected to be, based on UBS's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

Note 20 Provisions and contingent liabilities (continued)

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 20a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of this report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Wealth Manage-ment	Wealth Manage-ment Americas	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	Total 31.12.17	Total 31.12.16
Balance at the beginning of the year	292	425	78	5	616	259	0	1,585	3,261	2,983
Increase in provisions recognized in the income statement	30	158	3	6	8	248	0	229	682	856
Release of provisions recognized in the income statement	(4)	(12)	(1)	(9)[2]	(49)	(6)	0	(129)	(209)	(48)
Provisions used in conformity with designated purpose	(135)	(207)	(2)	(1)	(216)	(262)	0	(406)	(1,230)	(554)
Foreign currency translation / unwind of discount	24	(17)	2	0	(15)	1	0	(55)	(59)	25
Balance at the end of the year	**207**	**348**	**79**	**1**	**345**	**240**	**0**	**1,224**	**2,444**	3,261

1 Provisions, if any, for the matters described in this Note are recorded in Wealth Management (item 3), Wealth Management Americas (item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this Note in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio. 2 In 2017, a release of CHF 5 million was recognized in Provisions for litigation, regulatory and similar matters, with a corresponding increase in Other provisions.

Note 20 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders.

Since 2013, UBS (France) S.A. and UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory and regarding the laundering of proceeds of tax fraud and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). In March 2017, the investigating judges issued the trial order ("*ordonnance de renvoi*") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and which transfers the case to court. The trial schedule has not yet been announced. In October 2017, the Investigation Chamber of the Court of Appeals decided that UBS (France) S.A. shall not be constituted as a civil party in the guilty plea proceedings against the former UBS (France) S.A. Head of Front Office. UBS (France) S.A. has appealed this decision to the French Supreme Court ("*Cour de cassation*").

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud and of banking, financial solicitation by unauthorized persons and serious tax fraud.

In 2015, UBS received inquiries from the US Attorney's Office for the Eastern District of New York and from the US Securities and Exchange Commission (SEC), which are investigating potential sales to US persons of bearer bonds and other unregistered securities in possible violation of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) and the registration requirements of the US securities laws. UBS is cooperating with the authorities in these investigations. In 2018, UBS was informed by the US Attorney's Office and the SEC that they have closed their investigations and that they will not take any action.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 31 December 2017 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action (Trustee Suit) in the US District Court for the Southern District of New York (SDNY) seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations with an original principal balance of approximately USD 2 billion. Approximately 9,000 loans were at issue in a bench trial in the SDNY in 2016, following which the court issued an order ruling on numerous legal and factual issues and applying those rulings to 20 exemplar loans. The court further ordered that a lead master be appointed to apply the court's rulings to the loans that remain at issue following the trial. In October 2017, UBS and certain holders of the RMBS in the Trustee Suit entered into an agreement under which UBS has agreed to pay an aggregate of USD 543 million into the relevant RMBS trusts, plus certain attorneys' fees. A portion of these settlement costs will be borne by other parties that indemnified UBS. The agreement is subject to the trustee for the RMBS trusts becoming a party thereto by 9 March 2018. The trustee for the RMBS trusts has evaluated the proposed settlement under the agreement between UBS and the RMBS holders and UBS has been in discussions with the trustee about the terms on which it would become a party to a settlement. Giving effect to a settlement of the Trustee Suit, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS has also received and responded to subpoenas from the New York State Attorney General (NYAG) and other state attorneys general relating to UBS's RMBS business. In 2017, the NYAG identified a number of transactions that are the focus of its inquiry. In addition, UBS responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the SEC relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

Our balance sheet at 31 December 2017 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

Note 20 Provisions and contingent liabilities (continued)

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed. In 2014, several claims, including a purported class action, were filed in the US by BMIS customers against UBS entities, asserting claims similar to those made by the BMIS Trustee, and seeking unspecified damages. These claims have either been voluntarily withdrawn or dismissed on the basis that the courts did not have jurisdiction to hear the claims against the UBS entities. In 2016, the plaintiff in one of those claims appealed the dismissal. In February 2018, the United States Court of Appeals for the Second Circuit affirmed the dismissal of the plaintiff's claim.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.4 billion, of which claims with aggregate claimed damages of USD 1.4 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims are filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans. A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied. Defendants' requests for permission to appeal that ruling were denied by the Puerto Rico Court of Appeals and the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In 2016, defendants' motion to dismiss was granted in part and denied in part. In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA in December 2013 based on plaintiffs' allegation that the loans are not valid. The trial court denied defendant's motion for summary judgment based on a forum selection clause in the loan agreements. The Puerto Rico Supreme Court reversed that decision and remanded the case back to the trial court for reconsideration. On reconsideration the trial court granted defendant's motion and dismissed the action.

In 2014, UBS reached a settlement with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI) in connection with OCFI's examination of UBS's operations from January 2006 through September 2013, pursuant to which UBS is paying up to an aggregate of USD 7.7 million in investor education contributions and restitution.

In 2015, the SEC and the Financial Industry Regulatory Authority (FINRA) announced settlements with UBS PR of their separate investigations stemming from the 2013 market events. Without admitting or denying the findings in either matter, UBS PR agreed in the SEC settlement to pay USD 15 million and USD 18.5 million in the FINRA matter. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Beginning in 2012, two federal class action complaints, which were subsequently consolidated, were filed against various UBS entities, certain closed-end funds and certain members of UBS PR senior management, seeking damages for investor losses in the funds during the period from January 2008 through May 2012. In 2016, the court denied plaintiffs' motion for class certification. In March 2017, the US Court of Appeals for the First Circuit denied plaintiffs' petition seeking permission to bring an interlocutory appeal challenging the denial of their motion for class certification.

Beginning in 2015, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments, in 2016, the Commonwealth defaulted on payments on its general obligation debt (GO Bonds), and in 2017 the Commonwealth defaulted on payments on its debt backed by the Commonwealth's Sales and Use Tax (COFINA Bonds) as well as on bonds issued by the Commonwealth's Employee Retirement System (ERS Bonds). The funds hold significant amounts of both COFINA and ERS Bonds and the defaults on interest payments are expected to adversely affect dividends from the funds. Executive orders of the Governor that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board is authorized to impose, and has imposed, a stay on exercise of creditors' rights. In May and June 2017, the oversight board placed the GO, COFINA and ERS Bonds, among others, into a bankruptcy-like proceeding under the supervision of a Federal District Judge as authorized by the oversight board's enabling statute. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 31 December 2017 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Following an initial media report in 2013 of widespread irregularities in the foreign exchange markets, UBS immediately commenced an internal review of its foreign exchange business, which includes our precious metals and related structured products businesses. Numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority (FCA) and the US Commodity Futures Trading Commission (CFTC) in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System (Federal Reserve Board) and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In addition, the DOJ's Criminal Division (Criminal Division) terminated the 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. In January 2018, UBS reached a settlement with the CFTC in connection with the CFTC's precious metals investigations. As part of that settlement, UBS paid a USD 15 million civil monetary penalty. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Refer to Note 20b in the "Consolidated financial statements" section of the Annual Report 2016 for more information on regulatory actions related to foreign exchange and precious metals and grants of conditional immunity or leniency. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. They allege collusion by the defendants and assert claims under the antitrust laws and for unjust enrichment. In 2015, additional putative class actions were filed in federal court in New York against UBS and other banks on behalf of a putative class of persons who entered into or held any foreign exchange futures contracts and options on foreign exchange futures contracts since 2003. The complaints assert claims under the Commodity Exchange Act (CEA) and the US antitrust laws. In 2015, a consolidated complaint was filed on behalf of both putative classes of persons covered by the US federal court class actions described above. UBS has entered into a settlement agreement that would resolve all of these US federal court class actions. The agreement, which has been preliminarily approved by the court and is subject to final court approval, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

Note 20 Provisions and contingent liabilities (continued)

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign currency exchange transactional services, exercised discretionary authority or discretionary control over management of such ERISA plan, or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. The parties filed a stipulation to dismiss the case with prejudice. The plaintiffs have appealed the dismissal. The appeals court heard oral argument in June 2017.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of a putative class of persons and businesses in the US who directly purchased foreign currency from the defendants and their co-conspirators for their own end use. That action was transferred to federal court in New York. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of a putative class of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint. In April and June 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017.

In 2015, UBS was added to putative class actions pending against other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits assert claims under the antitrust laws and the CEA, and other claims. In 2016, the court in New York granted UBS's motions to dismiss the putative class actions relating to gold and silver. Plaintiffs in those cases sought to amend their complaints to add new allegations about UBS, which the court granted. The plaintiffs filed amended complaints in June 2017. In March 2017, the court in New York granted UBS's motion to dismiss the platinum and palladium action. In May 2017, plaintiffs in the platinum and palladium action filed an amended complaint that did not allege claims against UBS.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office (SFO), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the FSA, the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission (WEKO) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Refer to Note 20b in the "Consolidated financial statements" section of the Annual Report 2016 for more information on regulatory actions relating to benchmark rates and grants of conditional immunity or leniency. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. All of the complaints allege manipulation, through various means, of various benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

In 2013, the US district court in the USD LIBOR action dismissed the federal antitrust and racketeering claims of certain USD LIBOR plaintiffs and a portion of their claims brought under the CEA and state common law. Certain plaintiffs appealed the decision to the Second Circuit, which, in 2016, vacated the district court's ruling finding no antitrust injury and remanded the case back to the district court for a further determination on whether plaintiffs have antitrust standing. In December 2016, the district court again dismissed plaintiffs' antitrust claims, this time for lack of personal jurisdiction over UBS and other foreign banks. Certain plaintiffs appealed that decision to the Second Circuit in 2017. In 2018, the district court denied certain plaintiffs' motions for class certification. In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including federal antitrust claims. In 2015, the same court dismissed plaintiff's federal racketeering claims and affirmed its previous dismissal of plaintiff's antitrust claims. In 2017, the court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR and SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR and SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants in other lawsuits have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2016, UBS entered into an agreement with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. Since 2014, putative class actions have been filed in federal court in New York and New Jersey against UBS and other financial institutions, among others, on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX. The court has given preliminary approval of a settlement agreement under which UBS would pay USD 14 million to settle the case in its entirety.

Government bonds: Putative class actions have been filed in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. The complaints generally allege that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction. They assert claims under the antitrust laws and the CEA and for unjust enrichment. The cases have been consolidated in the SDNY, and a consolidated complaint was filed in November 2017. Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 31 December 2017 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 31 December 2017 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong listed initial public offerings for 18 months. UBS intends to appeal the decision.

Note 21 Other liabilities

CHF million	31.12.17	31.12.16
Prime brokerage payables[1]	29,646	31,973
Amounts due under unit-linked investment contracts	11,523	9,286
Compensation-related liabilities	4,909	5,256
of which: accrued expenses	*2,372*	*2,367*
of which: other deferred compensation plans	*1,613*	*1,623*
of which: net defined benefit pension and post-employment liabilities[2]	*925*	*1,266*
Third-party interest in consolidated investment funds	269	751
Settlement and clearing accounts	1,380	1,011
Current and deferred tax liabilities[3]	844	911
VAT and other tax payables	378	487
Deferred income	150	168
Accrued interest expenses	1,533	1,571
Other accrued expenses	2,105	2,427
Liabilities of disposal group held for sale[4]	0	5,213
Other	2,252	1,390
Total other liabilities	54,990	60,443

1 Prime brokerage services include clearance, settlement, custody, financing and portfolio reporting services for corporate clients trading across multiple asset classes. Prime brokerage payables are mainly comprised of client securities financing and deposits. 2 Refer to Note 26 for more information. 3 Refer to Note 8 for more information. 4 Refer to Note 30 for more information.

Additional information

Note 22 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and is structured as follows:

a) Valuation principles
b) Valuation governance
c) Fair value hierarchy
d) Valuation adjustments
e) Transfers between Level 1 and Level 2
f) Level 3 instruments: valuation techniques and inputs
g) Level 3 instruments: sensitivity to changes in unobservable input assumptions
h) Level 3 instruments: movements during the period
i) Financial instruments not measured at fair value

a) Valuation principles

Fair value is defined as the price that would be received for the sale of an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market (or most advantageous market, in the absence of a principal market) as of the measurement date. In measuring fair value, UBS AG uses various valuation approaches and applies a hierarchy for prices and inputs that maximizes the use of observable market data, if available.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

– Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
– Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
– Level 3 – valuation techniques for which significant inputs are not based on observable market data.

If available, fair values are determined using quoted prices in active markets for identical assets or liabilities. An active market is one in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing data on an ongoing basis. Assets and liabilities that are quoted and traded in an active market are valued at the currently quoted price multiplied by the number of units of the instrument held.

Where the market for a financial instrument or non-financial asset or liability is not active, fair value is established using a valuation technique, including pricing models. Valuation techniques involve the use of estimates, the extent of which depends on the complexity of the instrument and the availability of market-based data. Valuation adjustments may be made to allow for additional factors, including model, liquidity, credit and funding risks, which are not explicitly captured within the valuation technique, but which would nevertheless be considered by market participants when establishing a price. The limitations inherent in a particular valuation technique are considered in the determination of an asset or liability's classification within the fair value hierarchy.

Many cash instruments and over-the-counter (OTC) derivative contracts have bid and offer prices that can be observed in the marketplace. Bid prices reflect the highest price that a party is willing to pay for an asset. Offer prices represent the lowest price that a party is willing to accept for an asset. In general, long positions are measured at a bid price and short positions at an offer price, reflecting the prices at which the instruments could be transferred under normal market conditions. Offsetting positions in the same financial instrument are marked at the mid-price within the bid-offer spread.

Generally, the unit of account for a financial instrument is the individual instrument, and UBS applies valuation adjustments at an individual instrument level, consistent with that unit of account. However, if certain conditions are met, UBS may estimate the fair value of a portfolio of financial assets and liabilities with substantially similar and offsetting risk exposures on the basis of the net open risks.

For transactions where the valuation technique used to measure fair value requires significant inputs that are not based on observable market data, the financial instrument is initially recognized at the transaction price. This initial recognition amount may differ from the fair value obtained using the valuation technique. Any such difference is deferred and not recognized in the income statement and referred to as deferred day-1 profit or loss.

→ **Refer to Note 22d for more information**

Note 22 Fair value measurement (continued)

b) Valuation governance

UBS's fair value measurement and model governance framework includes numerous controls and other procedural safeguards that are intended to maximize the quality of fair value measurements reported in the financial statements. New products and valuation techniques must be reviewed and approved by key stakeholders from risk and finance control functions. Responsibility for the ongoing measurement of financial and non-financial instruments at fair value resides with the business divisions. In carrying out their valuation responsibilities, the businesses are required to consider the availability and quality of external market data and to provide justification and rationale for their fair value estimates.

Fair value estimates are validated by risk and finance control functions, which are independent of the business divisions. Independent price verification is performed by Finance through benchmarking the business divisions' fair value estimates with observable market prices and other independent sources. Controls and a governance framework are in place and are intended to ensure the quality of third-party pricing sources where used. For instruments where valuation models are used to determine fair value, independent valuation and model control groups within Finance and Risk Control evaluate UBS's models on a regular basis, including valuation and model input parameters as well as pricing. As a result of the valuation controls employed, valuation adjustments may be made to the business divisions' estimates of fair value to align with independent market data and the relevant accounting standard.

→ **Refer to Note 22d for more information**

Note 22 Fair value measurement (continued)

c) Fair value hierarchy

The table below provides the fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value. The narrative that follows describes the different product types, valuation techniques used in measuring their fair value, including significant valuation inputs and assumptions used, and the factors determining their classification within the fair value hierarchy.

Determination of fair values from quoted market prices or valuation techniques[1]

	31.12.17				31.12.16			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets measured at fair value on a recurring basis								
Financial assets held for trading[2]	108,963	15,309	1,972	126,244	76,046	14,377	1,689	92,112
of which:								
Government bills / bonds	11,935	918	0	12,854	10,500	1,319	0	11,820
Corporate and municipal bonds	37	8,072	552	8,662	58	6,722	591	7,371
Loans	0	3,346	501	3,847	0	1,356	681	2,037
Investment fund units	7,223	1,839	571	9,632	6,114	3,521	63	9,698
Asset-backed securities	0	194	174	368	0	470	215	685
Equity instruments	79,276	186	105	79,566	50,916	397	65	51,378
Financial assets for unit-linked investment contracts	10,492	755	69	11,316	8,459	591	74	9,123
Positive replacement values	458	116,222	1,549	118,229	434	155,428	2,549	158,411
of which:								
Interest rate contracts	1	43,913	135	44,049	8	57,703	278	57,988
Credit derivative contracts	0	2,266	550	2,816	0	2,562	1,313	3,875
Foreign exchange contracts	207	46,749	189	47,145	263	75,607	222	76,092
Equity / index contracts	16	21,541	675	22,232	1	17,274	729	18,003
Commodity contracts	0	1,727	0	1,727	0	2,269	8	2,277
Financial assets designated at fair value	23,032	34,104	1,419	58,556	39,641	23,304	2,079	65,024
of which:								
Government bills / bonds	22,062	3,900	0	25,961	39,439	4,361	0	43,799
Corporate and municipal bonds	765	20,702	0	21,467	15	16,860	0	16,875
Loans (including structured loans)	0	9,385	758	10,143	0	2,043	1,195	3,238
Structured reverse repurchase and securities borrowing agreements	0	118	173	291	0	40	644	684
Other	205	0	489	694	187	0	240	427
Financial assets available for sale	3,000	5,157	507	8,665	6,299	8,891	486	15,676
of which:								
Government bills / bonds	2,733	133	0	2,866	5,444	450	0	5,894
Corporate and municipal bonds	121	1,060	9	1,189	646	4,939	12	5,596
Investment fund units	0	70	115	185	0	51	126	177
Asset-backed securities	0	3,880	0	3,880	0	3,381	0	3,381
Equity instruments	146	16	384	546	204	71	336	611
Non-financial assets								
Precious metals and other physical commodities	4,563	0	0	4,563	4,583	0	0	4,583
Assets measured at fair value on a non-recurring basis								
Other assets[3]	0	54	42	95	5,060	131	56	5,248
Total assets measured at fair value	140,017	170,848	5,489	316,353	132,064	202,132	6,860	341,056

Note 22 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	31.12.17				31.12.16			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Liabilities measured at fair value on a recurring basis								
Trading portfolio liabilities	26,037	4,309	117	30,463	18,808	3,898	119	22,825
of which:								
Government bills / bonds	*5,153*	*256*	*0*	*5,409*	*5,573*	*648*	*0*	*6,221*
Corporate and municipal bonds	*50*	*3,453*	*35*	*3,538*	*12*	*2,927*	*37*	*2,976*
Investment fund units	*541*	*263*	*16*	*820*	*484*	*91*	*20*	*595*
Equity instruments	*20,293*	*336*	*66*	*20,695*	*12,740*	*227*	*62*	*13,028*
Negative replacement values	398	112,929	2,807	116,134	539	149,255	4,016	153,810
of which:								
Interest rate contracts	*5*	*38,196*	*186*	*38,387*	*12*	*51,990*	*475*	*52,476*
Credit derivative contracts	*0*	*3,196*	*601*	*3,797*	*0*	*3,269*	*1,538*	*4,807*
Foreign exchange contracts	*213*	*45,151*	*122*	*45,486*	*274*	*71,668*	*148*	*72,089*
Equity / index contracts	*42*	*24,803*	*1,896*	*26,741*	*1*	*20,254*	*1,854*	*22,109*
Commodity contracts	*0*	*1,561*	*1*	*1,562*	*0*	*2,040*	*1*	*2,041*
Financial liabilities designated at fair value	0	41,376	12,826	54,202	2	44,007	11,008	55,017
of which:								
Issued debt instruments	*0*	*38,617*	*10,885*	*49,502*	*0*	*40,242*	*9,688*	*49,930*
Over-the-counter debt instruments	*0*	*2,385*	*1,930*	*4,315*	*2*	*3,611*	*1,050*	*4,663*
Structured repurchase agreements	*0*	*372*	*4*	*376*	*0*	*130*	*266*	*395*
Loan commitments and guarantees	*0*	*2*	*7*	*9*	*0*	*25*	*5*	*29*
Other liabilities – amounts due under unit-linked investment contracts	0	11,523	0	11,523	0	9,286	0	9,286
Liabilities measured at fair value on a non-recurring basis								
Other liabilities[3]	0	1	0	1	0	5,213	0	5,213
Total liabilities measured at fair value	26,435	170,139	15,750	212,324	19,349	211,660	15,143	246,152

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The fair value of these derivatives was not material for the periods presented. 2 Financial assets held for trading exclude precious metals and other physical commodities. 3 Other assets and other liabilities primarily consist of assets held for sale as well as assets and liabilities of a disposal group held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

Valuation techniques

Valuation techniques are used to value positions for which a market price is not available from market sources. This includes certain less liquid debt and equity instruments, certain exchange-traded derivatives and all derivatives transacted in the OTC market. UBS uses widely recognized valuation techniques for determining the fair value of financial and non-financial instruments that are not actively traded and quoted. The most frequently applied valuation techniques include discounted value of expected cash flows, relative value and option pricing methodologies.

Discounted value of expected cash flows is a valuation technique that measures fair value using estimated expected future cash flows from assets or liabilities and then discounts these cash flows using a discount rate or discount margin that reflects the credit and / or funding spreads required by the market for instruments with similar risk and liquidity profiles to produce a present value. When using such valuation techniques, expected future cash flows are estimated using an observed or implied market price for the future cash flows or by using industry standard cash flow projection models. The discount factors within the calculation are generated using industry standard yield curve modeling techniques and models.

Relative value models measure fair value based on the market prices of equivalent or comparable assets or liabilities, making adjustments for differences between the characteristics of the observed instrument and the instrument being valued.

Option pricing models incorporate assumptions regarding the behavior of future price movements of an underlying referenced asset or assets to generate a probability-weighted future expected payoff for the option. The resulting probability-weighted expected payoff is then discounted using discount factors generated from industry standard yield curve modeling techniques and models. The option pricing model may be implemented using a closed-form analytical formula or other mathematical techniques (e.g., binomial tree or Monte Carlo simulation).

Where available, valuation techniques use market-observable assumptions and inputs. If such data is not available, inputs may be derived by reference to similar assets in active markets, from recent prices for comparable transactions or from other observable market data. In such cases, the inputs selected are based on historical experience and practice for similar or analogous instruments, derivation of input levels based on similar products with observable price levels and knowledge of current market conditions and valuation approaches.

For more complex instruments and instruments not traded in an active market, fair values may be estimated using a combination of observed transaction prices, consensus pricing services and relevant quotes. Consideration is given to the nature of the quotes (e.g., indicative or firm) and the relationship of recently evidenced market activity to the prices provided by consensus pricing services. UBS also uses internally developed models, which are typically based on valuation methods and techniques recognized as standard within the industry.

Assumptions and inputs used in valuation techniques include benchmark interest rate curves, credit and funding spreads used in estimating discount rates, bond and equity prices, equity index prices, foreign exchange rates, levels of market volatility and correlation. Refer to Note 22f for more information. The discount curves used by UBS AG incorporate the funding and credit characteristics of the instruments to which they are applied.

Financial instruments excluding derivatives: product description, valuation and classification in the fair value hierarchy

Government bills and bonds

Product description: government bills and bonds include fixed-rate, floating-rate and inflation-linked bills and bonds issued by sovereign governments.

Valuation: these instruments are generally valued using prices obtained directly from the market. Instruments that cannot be priced directly using active-market data are valued using discounted cash flow valuation techniques that incorporate market data for similar government instruments.

Fair value hierarchy: government bills and bonds are generally traded in active markets with prices that can be obtained directly from these markets, resulting in classification as Level 1, while the remaining positions are classified as Level 2.

Corporate and municipal bonds

Product description: corporate bonds include senior, junior and subordinated debt issued by corporate entities. Municipal bonds are issued by state and local governments. While most instruments are standard fixed- or floating-rate securities, some may have more complex coupon or embedded option features.

Valuation: corporate and municipal bonds are generally valued using prices obtained directly from the market for the security, or similar securities, adjusted for seniority, maturity and liquidity. When prices are not available, instruments are valued using discounted cash flow valuation techniques incorporating the credit spread of the issuer or similar issuers. For convertible bonds where no directly comparable price is available, issuances may be priced using a convertible bond model.

Fair value hierarchy: corporate and municipal bonds are generally classified as Level 1 or Level 2 depending on the depth of trading activity behind price sources. Level 3 instruments have no suitable pricing information available and also cannot be referenced to other securities issued by the same issuer. Therefore, such instruments are measured based on price levels for similar issuers adjusted for relative tenor and issuer quality.

Note 22 Fair value measurement (continued)

Traded loans and loans designated at fair value

Product description: these instruments include fixed-rate loans, corporate loans, recently originated commercial real estate loans and contingent lending transactions.

Valuation: loans are valued directly using market prices that reflect recent transactions or quoted dealer prices where available. Where no market price data is available, loans are valued using relative value benchmarking using pricing derived from debt instruments in comparable entities or different products in the same entity, or by using a credit default swap valuation technique, which requires inputs for credit spreads, credit recovery rates and interest rates. Recently originated commercial real estate loans are measured using a securitization approach based on rating agency guidelines. The valuation of the contingent lending transactions is dependent on actuarial mortality levels and actuarial life insurance policy lapse rates. Mortality and lapse rate assumptions are based on external actuarial estimations for large homogeneous pools, and contingencies are derived from a range relative to the actuarially expected amount.

Fair value hierarchy: instruments with suitably deep and liquid pricing information are classified as Level 2, while any positions requiring the use of valuation techniques, or for which the price sources have insufficient trading depth, are classified as Level 3.

Investment fund units

Product description: investment fund units are pools of assets, generally equity instruments and bonds, broken down to redeemable units.

Valuation: investment fund units are predominantly exchange-traded, with readily available quoted prices in liquid markets. Where market prices are not available, fair value may be measured using net asset values (NAV), taking into account any restrictions imposed upon redemption.

Fair value hierarchy: listed units are classified as Level 1, provided there is sufficient trading activity to justify active-market classification, while other positions are classified as Level 2. Positions for which NAV is not available or that are not redeemable at the measurement date or shortly thereafter are classified as Level 3.

Asset-backed securities (ABS)

Product description: ABS include residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), other asset-backed securities (ABS) and collateralized debt obligations (CDO) and are instruments generally issued through the process of securitization of underlying interest-bearing assets.

Valuation: for liquid securities, the valuation process will use trade and price data, updated for movements in market levels between the time of trading and the time of valuation. Less liquid instruments are measured using discounted expected cash flows incorporating price data for instruments or indices with similar risk profiles. Inputs to discounted expected cash flow techniques include asset prepayment rates, discount margin or discount yields, asset default rates and asset loss on default severity.

Fair value hierarchy: RMBS, CMBS and ABS are generally classified as Level 2. However, if significant inputs are unobservable, or if market or fundamental data is not available, they are classified as Level 3.

Equity instruments

Product description: equity instruments include stocks and shares, private equity positions and units held in hedge funds.

Valuation: listed equity instruments are generally valued using prices obtained directly from the market. Unlisted equity holdings, including private equity positions, are initially marked at their transaction price and are revalued when reliable evidence of price movement becomes available or when the position is deemed to be impaired. Fair value for units held in hedge funds is measured based on their published NAV, taking into account any restrictions imposed upon redemption.

Fair value hierarchy: the majority of equity securities are actively traded on public stock exchanges where quoted prices are readily and regularly available, resulting in Level 1 classification. Units held in hedge funds are classified as Level 2, except for positions for which published NAV is not available or that are not redeemable at the measurement date or shortly thereafter, in which case such positions are classified as Level 3.

Financial assets for unit-linked investment contracts

Product description: unit-linked investment contracts allow investors to invest in a pool of assets through issued investment units.

Valuation: the majority of assets are listed on exchanges and fair values are determined using quoted prices.

Fair value hierarchy: most assets are classified as Level 1 if actively traded, or Level 2 if trading is not active. However, instruments for which prices are not readily available are classified as Level 3.

Structured (reverse) repurchase agreements

Product description: structured (reverse) repurchase agreements are securities purchased under resale agreements and securities sold under repurchase agreements.

Valuation: these instruments are valued using discounted expected cash flow techniques. The discount rate applied is based on funding curves that are specific to the collateral eligibility terms for the contract in question.

Fair value hierarchy: collateral terms for these positions are often not standard and therefore funding spread levels used for valuation purposes cannot be observed in the market. As a result, these positions are classified as Level 2 and Level 3.

Financial liabilities designated at fair value

Product description: debt instruments, primarily comprised of equity-, rates- and credit-linked issued notes, which are held at fair value under the fair value option. These instruments are tailored specifically to the holder's risk or investment appetite with structured coupons or payoffs.

Valuation: the risk management and the valuation approaches for these instruments are closely aligned with the equivalent derivatives business and the underlying risk, and the valuation techniques used for this component are the same as the relevant valuation techniques described below. For example, equity-linked notes should be referenced to equity / index contracts and credit-linked notes should be referenced to credit derivative contacts.

Fair value hierarchy: observability is closely aligned with the equivalent derivatives business and the underlying risk.

→ **Refer to Note 18 for more information on financial liabilities designated at fair value**

→ **Refer to Note 22d for more information on own credit adjustments related to financial liabilities designated at fair value**

Amounts due under unit-linked investment contracts

Product description: the financial liability represents the amounts due to unit holders.

Valuation: the fair values of investment contract liabilities are determined by reference to the fair value of the corresponding assets.

Fair value hierarchy: the liabilities themselves are not actively traded, but are mainly referenced to instruments that are actively traded and are therefore classified as Level 2.

Derivative instruments: product description, valuation and classification in the fair value hierarchy

The curves used for discounting expected cash flows in the valuation of collateralized derivatives reflect the funding terms associated with the relevant collateral arrangement for the instrument being valued. These collateral arrangements differ across counterparties with respect to the eligible currency and interest terms of the collateral. The majority of collateralized derivatives are measured using a discount curve that is based on funding rates derived from overnight interest in the cheapest eligible currency for the respective counterparty collateral agreement.

Uncollateralized and partially collateralized derivatives are discounted using the LIBOR (or equivalent) curve for the currency of the instrument. As described in Note 22d, the fair value of uncollateralized and partially collateralized derivatives is then adjusted by CVA, DVA and FVA as applicable, to reflect an estimation of the effect of counterparty credit risk, UBS's own credit risk and funding costs and benefits.

Interest rate contracts

Product description: interest rate swap contracts include interest rate swaps, basis swaps, cross-currency swaps, inflation swaps and interest rate forwards, often referred to as forward-rate agreements (FRA). Interest rate option contracts include caps and floors, swaptions, swaps with complex payoff profiles and other more complex interest rate options.

Valuation: interest rate swap contracts are valued by estimating future interest cash flows and discounting those cash flows using a rate that reflects the appropriate funding rate for the position being measured. The yield curves used to estimate future index levels and discount rates are generated using market standard yield curve models using interest rates associated with current market activity. The key inputs to the models are interest rate swap rates, FRA rates, short-term interest rate futures prices, basis swap spreads and inflation swap rates. Interest rate option contracts are valued using various market standard option models, using inputs that include interest rate yield curves, inflation curves, volatilities and correlations. The volatility and correlation inputs within the models are implied from market data based on market-observed prices for standard option instruments trading within the market. Option models used to value more exotic products have a number of model parameter inputs that require calibration to enable the exotic model to price standard option instruments to the price levels observed in the market. When the maturity of the interest rate swap or option contract exceeds the term for which standard market quotes are observable for a significant input parameter, the contracts are valued by extrapolation from the last observable point using standard assumptions or by reference to another observable comparable input parameter to represent a suitable proxy for that portion of the term.

Fair value hierarchy: the majority of interest rate swaps are classified as Level 2 as the standard market contracts that form the inputs for yield curve models are generally traded in active and observable markets. Options are generally treated as Level 2 as the calibration process enables the model output to be validated to active-market levels. Models calibrated in this way are then used to revalue the portfolio of both standard options as well as more exotic products. In most cases, there are active and observable markets for the standard market instruments that form the inputs for yield curve models as well as the financial instruments from which volatility and correlation inputs are derived. Exotic options for which appropriate volatility or correlation input levels cannot be implied from observable market data are classified as Level 3. Interest rate swap or option contracts are classified as Level 3 when the term exceeds standard market observable quotes.

Note 22 Fair value measurement (continued)

Credit derivative contracts

Product description: a credit derivative is a financial instrument that transfers credit risk related to a single underlying entity, a portfolio of underlying entities or a pool of securitized referenced assets. Credit derivative products include credit default swaps (CDS) on single names, indices, bespoke portfolios and securitized products, plus first to default swaps and certain total return swaps (TRS).

Valuation: credit derivative contracts are valued using industry standard models based primarily on market credit spreads, upfront pricing points and implied recovery rates. Where a derivative credit spread is not directly available, it may be derived from the price of the reference cash bond. Correlation is an additional input for certain portfolio credit derivatives. Asset-backed credit derivatives are valued using a similar valuation technique to the underlying security with an adjustment to reflect the funding differences between cash and synthetic form. Inputs include prepayment rates, default rates, loss severity, discount margin / rate.

Fair value hierarchy classification: single entity and portfolio credit derivative contracts are classified as Level 2 when credit spreads, recovery rates and correlations are determined from actively traded observable market data. Where the underlying reference name(s) are not actively traded and the correlation cannot be directly mapped to actively traded tranche instruments, these contracts are classified as Level 3. Asset-backed credit derivatives follow the characteristics of the underlying security and are therefore distributed across Level 2 and Level 3.

Foreign exchange contracts

Product description: this includes open spot and forward foreign exchange (FX) contracts and OTC FX option contracts. OTC FX option contracts include standard call and put options, options with multiple exercise dates, path-dependent options, options with averaging features, options with discontinuous payoff characteristics, options on a number of underlying FX rates and multi-dimensional FX option contracts, which have a dependency on multiple FX pairs.

Valuation: open spot FX contracts are valued using the FX spot rate observed in the market. Forward FX contracts are valued using the FX spot rate adjusted for forward pricing points observed from standard market-based sources. OTC FX option contracts are valued using market standard option valuation models. The models used for shorter-dated options (i.e., maturities of five years or less) tend to be different than those used for longer-dated options because the models needed for longer-dated OTC FX contracts require additional consideration of interest rate and FX rate interdependency. Inputs to the option valuation models include spot FX rates, FX forward points, FX volatilities, interest rate yield curves, interest rate volatilities and correlations. The inputs for volatility and correlation are implied through the calibration of observed prices for standard option contracts trading within the market. The valuation for multi-dimensional FX options uses a multi-local volatility model, which is calibrated to the observed FX volatilities for all relevant FX pairs.

Fair value hierarchy: the markets for both FX spot and FX forward pricing points are both actively traded and observable and therefore such FX contracts are generally classified as Level 2. A significant proportion of OTC FX option contracts are classified as Level 2 as inputs are derived mostly from standard market contracts traded in active and observable markets. OTC FX option contracts classified as Level 3 include multi-dimensional FX options and long-dated FX exotic option contracts where there is no active market from which to derive volatility or correlation inputs. The inputs used to value these OTC FX option contracts are calculated using consensus pricing services without an underlying principal market, historical asset prices or by extrapolation.

Equity / index contracts

Product description: equity / index contracts are equity forward contracts and equity option contracts. Equity option contracts include market standard single or basket stock or index call and put options as well as equity option contracts with more complex features.

Valuation: equity forward contracts have a single stock or index underlying and are valued using market standard models. The key inputs to the models are stock prices, estimated dividend rates and equity funding rates (which are implied from prices of forward contracts observed in the market). Estimated cash flows are then discounted using market standard discounted cash flow models using a rate that reflects the appropriate funding rate for that portion of the portfolio. When no market data is available for the instrument maturity, they are valued by extrapolation of available data, use of historical dividend data, or use of data for a related equity. Equity option contracts are valued using market standard models that estimate the equity forward level as described for equity forward contracts and incorporate inputs for stock volatility and for correlation between stocks within a basket. The probability-weighted expected option payoff generated is then discounted using market standard discounted cash flow models using a rate that reflects the appropriate funding rate for that portion of the portfolio. When volatility, forward or correlation inputs are not available, they are valued using extrapolation of available data, historical dividend, correlation or volatility data, or the equivalent data for a related equity.

Note 22 Fair value measurement (continued)

Fair value hierarchy: as inputs are derived mostly from standard market contracts traded in active and observable markets, a significant proportion of equity forward contracts are classified as Level 2. Equity option positions for which inputs are derived from standard market contracts traded in active and observable markets are also classified as Level 2. Level 3 positions are those for which volatility, forward or correlation inputs are not observable.

Commodity contracts

Product description: commodity derivative contracts include forward, swap and option contracts on individual commodities and on commodity indices.

Valuation: commodity forward and swap contracts are measured using market standard models that use market forward levels on standard instruments. Commodity option contracts are measured using market standard option models that estimate the commodity forward level as described for commodity forward and swap contracts, incorporating inputs for the volatility of the underlying index or commodity. For commodity options on baskets of commodities or bespoke commodity indices, the valuation technique also incorporates inputs for the correlation between different commodities or commodity indices.

Fair value hierarchy: individual commodity contracts are typically classified as Level 2 because active forward and volatility market data is available.

→ **Refer to Note 12 for more information on derivative instruments**

d) Valuation adjustments

The output of a valuation technique is always an estimate of a fair value that cannot be measured with complete certainty. As a result, valuations are adjusted, where appropriate and when such factors would be considered by market participants in estimating fair value, to reflect close-out costs, credit exposure, model-driven valuation uncertainty, funding costs and benefits, trading restrictions and other factors. Valuation adjustments are an important component of fair value for assets and liabilities that are measured using valuation techniques. Such adjustments are applied to reflect uncertainties within the fair value measurement process, to adjust for an identified model simplification or to incorporate an aspect of fair value that requires an overall portfolio assessment rather than an evaluation based on an individual instrument level characteristic.

Day-1 reserves

For new transactions where the valuation technique used to measure fair value requires significant inputs that are not based on observable market data, the financial instrument is initially recognized at the transaction price. The transaction price may differ from the fair value obtained using a valuation technique, where any such difference is deferred and not initially recognized in the income statement. These day-1 profit or loss reserves are reflected, where appropriate, as valuation adjustments.

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss related to financial instruments other than financial assets available for sale is released into *Net trading income* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

Deferred day-1 profit or loss related to financial assets available for sale is released into *Other comprehensive income* when pricing of equivalent products or the underlying parameters become observable and is released into *Other income* when the assets are sold.

Deferred day-1 profit or loss

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Balance at the beginning of the year	371	421	480
Profit / (loss) deferred on new transactions	242	254	268
(Profit) / loss recognized in the income statement	(274)	(290)	(321)
(Profit) / loss recognized in other comprehensive income		(23)	
Foreign currency translation	(10)	9	(6)
Balance at the end of the year	329	371	421

Note 22 Fair value measurement (continued)

Own credit

In addition to considering the valuation of the derivative risk component, the valuation of financial liabilities designated at fair value also requires consideration of the funded component and specifically the own credit component of fair value. Own credit risk is reflected in the valuation of UBS's fair value option liabilities where this component is considered relevant for valuation purposes by UBS's counterparties and other market participants. However, own credit risk is not reflected in the valuation of UBS's liabilities that are fully collateralized or for other obligations for which it is established market practice not to include an own credit component.

The own credit presentation requirements of IFRS 9, *Financial Instruments,* were adopted as of 1 January 2016. From this date onward, changes in the fair value of financial liabilities designated at fair value through profit or loss related to own credit have been recognized in *Other comprehensive income* directly within *Retained earnings*. As UBS AG does not hedge changes in own credit arising on financial liabilities designated at fair value, presenting own credit within *Other comprehensive income* does not create or increase an accounting mismatch in the income statement. The unrealized and any realized own credit recognized in *Other comprehensive income* will not be reclassified to the income statement in future periods. Comparative period information was not restated.

Own credit is estimated using an own credit adjustment (OCA) curve, which incorporates observable market data, including market-observed secondary prices for UBS senior debt, UBS credit default swap (CDS) spreads and senior debt curves of peers. The table below summarizes the effects of own credit adjustments related to financial liabilities designated at fair value. The change in unrealized own credit for the period ended consists of changes in fair value that are attributable to the change in UBS's credit spreads, as well as the effect of changes in fair values attributable to factors other than credit spreads, such as redemptions, effects from time decay and changes in interest and other market rates. Realized own credit is recognized when an instrument with an associated unrealized own credit adjustment is repurchased prior to the contractual maturity date. Life-to-date amounts reflect the cumulative unrealized change since initial recognition.

→ **Refer to Note 18 for more information on financial liabilities designated at fair value**

Own credit adjustments on financial liabilities designated at fair value

	For the year ended		
	Included in Other comprehensive income		Included in Net trading income
CHF million	31.12.17	31.12.16	31.12.15
Recognized during the year:			
Realized gain / (loss)	21	18	
Unrealized gain / (loss)	(333)	(138)	553
Total gain / (loss), before tax	(312)	(120)	

	As of		
CHF million	31.12.17	31.12.16	31.12.15
Recognized on the balance sheet as of the end of the year:			
Unrealized life-to-date gain / (loss)	(195)	141	287

Note 22 Fair value measurement (continued)

Credit valuation adjustments

In order to measure the fair value of OTC derivative instruments, including funded derivative instruments that are classified as *Financial assets designated at fair value,* credit valuation adjustments (CVA) are necessary to reflect the credit risk of the counterparty inherent in these instruments. This amount represents the estimated fair value of protection required to hedge the counterparty credit risk of such instruments. A CVA is determined for each counterparty, considering all exposures to that counterparty, and is dependent on the expected future value of exposures, default probabilities and recovery rates, applicable collateral or netting arrangements, break clauses and other contractual factors.

Funding valuation adjustments

Funding valuation adjustments (FVA) reflect the costs and benefits of funding associated with uncollateralized and partially collateralized derivative receivables and payables and are calculated as the valuation effect from moving the discounting of the uncollateralized derivative cash flows from LIBOR to OCA using the CVA framework.

An FVA is also applied to collateralized derivative assets in cases where the collateral cannot be sold or repledged.

Debit valuation adjustments

A debit valuation adjustment (DVA) is estimated to incorporate own credit in the valuation of derivatives, effectively consistent with the CVA framework. DVA is determined for each counterparty, considering all exposures with that counterparty and taking into account collateral netting agreements, expected future mark-to-market movements and UBS's credit default spreads.

Other valuation adjustments

Instruments that are measured as part of a portfolio of combined long and short positions are valued at mid-market levels to ensure consistent valuation of the long- and short-component risks. A liquidity valuation adjustment is then made to the overall net long or short exposure to move the fair value to bid or offer as appropriate, reflecting current levels of market liquidity. The bid-offer spreads used in the calculation of this valuation adjustment are obtained from market transactions and other relevant sources and are updated periodically.

Uncertainties associated with the use of model-based valuations are incorporated into the measurement of fair value through the use of model reserves. These reserves reflect the amounts that UBS AG estimates should be deducted from valuations produced directly by models to incorporate uncertainties in the relevant modeling assumptions, in the model and market inputs used, or in the calibration of the model output to adjust for known model deficiencies. In arriving at these estimates, UBS AG considers a range of market practices, including how it believes market participants would assess these uncertainties. Model reserves are reassessed periodically in light of data from market transactions, consensus pricing services and other relevant sources.

Valuation adjustments on financial instruments

	As of	
Life-to-date gain / (loss), CHF million	31.12.17	31.12.16
Credit valuation adjustments[1]	(113)	(216)
Funding valuation adjustments	(49)	(106)
Debit valuation adjustments	2	5
Other valuation adjustments	(715)	(713)
of which: liquidity	*(465)*	*(439)*
of which: model uncertainty	*(250)*	*(274)*

1 Amounts do not include reserves against defaulted counterparties.

e) Transfers between Level 1 and Level 2

The amounts provided below reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets totaling approximately CHF 0.8 billion, which were mainly comprised of financial assets designated at fair value, largely corporate and municipal bonds, and financial assets held for trading, predominantly investment fund units as well as corporate and municipal bonds, were transferred from Level 2 to Level 1 during 2017, generally due to increased levels of trading activity observed within the market. Transfers of financial liabilities from Level 2 to Level 1 during 2017 were not significant.

Assets totaling approximately CHF 0.3 billion, which were mainly comprised of financial assets available for sale, largely government bonds, and financial assets held for trading, predominantly investment fund units and equity instruments, were transferred from Level 1 to Level 2 during 2017, generally due to diminished levels of trading activity observed within the market. Transfers of financial liabilities from Level 1 to Level 2 during 2017 were not significant.

Note 22 Fair value measurement (continued)

f) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs. Several inputs disclosed in prior periods are not disclosed in the table below because they are not considered significant to the respective valuation technique as of 31 December 2017.

The range of values represents the highest- and lowest-level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Further, the ranges of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				31.12.17			31.12.16			
CHF billion	31.12.17	31.12.16	31.12.17	31.12.16	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets held for trading / Trading portfolio liabilities, Financial assets / liabilities designated at fair value and Financial assets available for sale													
Corporate and municipal bonds	0.6	0.6	0.0	0.0	Relative value to market comparable	Bond price equivalent	0	133	92	0	128	88	points
Traded loans, loans designated at fair value, loan commitments and guarantees	1.7	2.0	0.0	0.0	Relative value to market comparable	Loan price equivalent	50	102	98	39	103	94	points
					Discounted expected cash flows	Credit spread	23	124		71	554		basis points
					Market comparable and securitization model	Discount margin	0	14	2	0	16	2	%
Investment fund units[3]	0.7	0.2	0.0	0.0	Relative value to market comparable	Net asset value							
Equity instruments[3]	0.5	0.4	0.1	0.1	Relative value to market comparable	Price							
Structured (reverse) repurchase agreements	0.2	0.6	0.0	0.3	Discounted expected cash flows	Funding spread	15	195		15	195		basis points
Issued and over-the-counter debt instruments[4]			12.8	10.7									
Replacement values													
Interest rate contracts	0.1	0.3	0.2	0.5	Option model	Volatility of interest rates	26	229		26	176		%
Credit derivative contracts	0.5	1.3	0.6	1.5	Discounted expected cash flows	Credit spreads	6	550		0	791		basis points
						Bond price equivalent	2	102		3	100		points
Equity / index contracts	0.7	0.7	1.9	1.9	Option model	Equity dividend yields	0	13		0	15		%
						Volatility of equity stocks, equity and other indices	0	172		0	150		%
						Equity-to-FX correlation	(39)	70		(45)	82		%
						Equity-to-equity correlation	(50)	97		12	98		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 The range of inputs is not disclosed due to the dispersion of values given the diverse nature of the investments. 4 Valuation techniques, significant unobservable inputs and the respective input ranges for issued debt instruments and over-the-counter debt instruments are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table.

Significant unobservable inputs in Level 3 positions

This section discusses the significant unobservable inputs used in the valuation of Level 3 instruments and assesses the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown. Relationships between observable and unobservable inputs have not been included in the summary below.

Bond price equivalent

Where market prices are not available for a bond, fair value is measured by comparison with observable pricing data from similar instruments. Factors considered when selecting comparable instruments include credit quality, maturity and industry of the issuer. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield (either as an outright yield or as a spread to LIBOR). Bond prices are expressed as points of the nominal, where 100 represents a fair value equal to the nominal value (i.e., par).

For corporate and municipal bonds, the range represents the range of prices from reference issuances used in determining fair value. Bonds priced at 0 are distressed to the point that no recovery is expected, while prices significantly in excess of 100 or par relate to inflation-linked or structured issuances that pay a coupon in excess of the market benchmark as of the measurement date.

For credit derivatives, the bond price range represents the range of prices used for reference instruments that are typically converted to an equivalent yield or credit spread as part of the valuation process.

Loan price equivalent

Where market prices are not available for a traded loan, fair value is measured by comparison with observable pricing data for similar instruments. Factors considered when selecting comparable instruments include industry segment, collateral quality, maturity and issuer-specific covenants. Fair value may be measured either by a direct price comparison or by conversion of an instrument price into a yield. The range represents the range of prices derived from reference issuances of a similar credit quality used in measuring fair value for loans classified as Level 3. Loans priced at 0 are distressed to the point that no recovery is expected, while a current price of 100 represents a loan that is expected to be repaid in full.

Credit spread

Valuation models for many credit derivatives require an input for the credit spread, which is a reflection of the credit quality of the associated referenced underlying. The credit spread of a particular security is quoted in relation to the yield on a benchmark security or reference rate, typically either US Treasury or LIBOR, and is generally expressed in terms of basis points. An increase / (decrease) in credit spread will increase / (decrease) the value of credit protection offered by CDS and other credit derivative products. The income statement effect from such changes depends on the nature and direction of the positions held. Credit spreads may be negative where the asset is more creditworthy than the benchmark against which the spread is calculated. A wider credit spread represents decreasing creditworthiness. The range represents a diverse set of underlyings, with the lower end of the range representing credits of the highest quality (e.g., approximating the risk of LIBOR) and the upper end of the range representing greater levels of credit risk.

Discount margin (DM)

The DM spread represents the discount rates used to present value cash flows of an asset to reflect the market return required for uncertainty in the estimated cash flows. DM spreads are a rate or rates applied on top of a floating index (e.g., LIBOR) to discount expected cash flows. Generally, a decrease / (increase) in the DM in isolation would result in a higher / (lower) fair value.

The high end of the range relates to securities that are priced low within the market relative to the expected cash flow schedule. This indicates that the market is pricing an increased risk of credit loss into the security that is greater than what is being captured by the expected cash flow generation process. The low ends of the ranges are typical of funding rates on better-quality instruments.

Funding spread

Structured financing transactions are valued using synthetic funding curves that best represent the assets that are pledged as collateral for the transactions. They are not representative of where UBS can fund itself on an unsecured basis, but provide an estimate of where UBS can source and deploy secured funding with counterparties for a given type of collateral. The funding spreads are expressed in terms of basis points over or under LIBOR, and if funding spreads widen, this increases the effect of discounting.

A small proportion of structured debt instruments and non-structured fixed-rate bonds within financial liabilities designated at fair value had an exposure to funding spreads that was longer in duration than the actively traded market.

Note 22 Fair value measurement (continued)

Volatility

Volatility measures the variability of future prices for a particular instrument and is generally expressed as a percentage, where a higher number reflects a more volatile instrument for which future price movements are more likely to occur. The minimum level of volatility is 0% and there is no theoretical maximum. Volatility is a key input into option models, where it is used to derive a probability-based distribution of future prices for the underlying instrument. The effect of volatility on individual positions within the portfolio is driven primarily by whether the option contract is a long or short position. In most cases, the fair value of an option increases as a result of an increase in volatility and is reduced by a decrease in volatility. Generally, volatility used in the measurement of fair value is derived from active-market option prices (referred to as implied volatility). A key feature of implied volatility is the volatility "smile" or "skew," which represents the effect of pricing options of different option strikes at different implied volatility levels.

The volatility of interest rates reflects the range of unobservable volatilities across different currencies and related underlying interest rate levels. Volatilities of low interest rates tend to be much higher than volatilities of high interest rates. In addition, different currencies may have significantly different implied volatilities. The volatility of equity stocks, equity and other indices reflects the range of underlying stock volatilities.

Correlation

Correlation measures the inter relationship between the movements of two variables. It is expressed as a percentage between –100% and +100%, where +100% represents perfectly correlated variables (meaning a movement of one variable is associated with a movement of the other variable in the same direction), and –100% implies the variables are inversely correlated (meaning a movement of one variable is associated with a movement of the other variable in the opposite direction). The effect of correlation on the measurement of fair value depends on the specific terms of the instruments being valued, due to the range of different payoff features within such instruments.

Equity-to-FX correlation is important for equity options based on a currency different than the currency of the underlying stock. Equity-to-equity correlation is particularly important for complex options that incorporate, in some manner, different equities in the projected payoff. The closer the correlation is to 100%, the more related one equity is to another. For example, equities with a very high correlation could be from different parts of the same corporate structure.

Equity dividend yields

The derivation of a forward price for an individual stock or index is important for measuring fair value for forward or swap contracts and for measuring fair value using option pricing models. The relationship between the current stock price and the forward price is based on a combination of expected future dividend levels and payment timings, and, to a lesser extent, the relevant funding rates applicable to the stock in question. Dividend yields are generally expressed as an annualized percentage of the share price with the lowest limit of 0% representing a stock that is not expected to pay any dividend. The dividend yield and timing represents the most significant parameter in determining fair value for instruments that are sensitive to an equity forward price.

g) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and do not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Further, direct inter relationships between the Level 3 parameters discussed below are not a significant element of the valuation uncertainty.

Sensitivity data are estimated using a number of techniques, including the estimation of price dispersion among different market participants, variation in modeling approaches and reasonably possible changes to assumptions used within the fair value measurement process. The sensitivity ranges are not always symmetrical around the fair values as the inputs used in valuations are not always precisely in the middle of the favorable and unfavorable range.

Note 22 Fair value measurement (continued)

Sensitivity data are determined at a product or parameter level and then aggregated assuming no diversification benefit. The calculated sensitivity is applied to both the outright position and any related Level 3 hedge. The main interdependencies across different Level 3 products to a single unobservable input parameter have been included in the basis of netting exposures within the calculation. Aggregation without allowing for diversification involves the simple summation of individual results with the total sensitivity, therefore representing the effect of all unobservable inputs that, if moved to a reasonably possible favorable or unfavorable level at the same time, would result in a significant change in the valuation. Diversification would incorporate estimated correlations across different sensitivity results and, as such, would result in an overall sensitivity that would be less than the sum of the individual component sensitivities. UBS AG believes that, while there are diversification benefits within the portfolios representing these sensitivity numbers, they are not significant to this analysis.

Sensitivity of fair value measurements to changes in unobservable input assumptions[1]

	31.12.17		31.12.16	
CHF million	Favorable changes[2]	Unfavorable changes[2]	Favorable changes[2]	Unfavorable changes[2]
Traded loans, loans designated at fair value, loan commitments and guarantees	79	(11)	80	(8)
Asset-backed securities	19	(15)	23	(29)
Equity instruments	79	(53)	85	(66)
Interest rate derivative contracts, net	13	(26)	30	(30)
Credit derivative contracts, net	64	(99)	128	(174)
Foreign exchange derivative contracts, net	12	(6)	18	(9)
Equity / index derivative contracts, net	190	(193)	142	(143)
Structured (reverse) repurchase agreements	34	(34)	43	(46)
Other	13	(13)	12	(12)
Total	502	(450)	560	(517)

1 Effective 31 December 2017, the sensitivity of issued and over-the-counter debt instruments is reported with the equivalent derivative or structured financing instrument. Prior-period information has been restated to reflect this change in presentation. 2 Of the total favorable changes, CHF 78 million as of 31 December 2017 (31 December 2016: CHF 75 million) related to financial assets available for sale. Of the total unfavorable changes, CHF 51 million as of 31 December 2017 (31 December 2016: CHF 55 million) related to financial assets available for sale.

h) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into and out of Level 3 totaled CHF 1.4 billion and CHF 1.1 billion, respectively. Transfers into Level 3 were primarily comprised of investment fund units and equity / index contracts, due to decreased observability of the respective net asset value and equity volatility inputs. Transfers out of Level 3 were primarily comprised of credit derivative and equity / index contracts, reflecting increased observability of the respective credit spread and equity volatility inputs.

Liabilities transferred into and out of Level 3 totaled CHF 1.8 billion and CHF 3.2 billion, respectively. Transfers into Level 3 were primarily comprised of equity-linked issued debt instruments and equity / index contracts, due to decreased observability of the respective equity volatility inputs used to determine the fair value of the options embedded in these structures. Transfers out of Level 3 were primarily comprised of equity-linked issued debt instruments and credit derivative contracts resulting from changes in the availability of the observable equity volatility and credit spread inputs used to determine the fair value of the options embedded in these structures.

Note 22 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2015	Total gains / (losses) included in comprehensive income: Net interest income, net trading income and other income	Total gains / (losses) included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation
Financial assets held for trading	**2.1**	**0.1**	***0.0***	**0.9**	**(6.8)**	**4.1**	**0.0**	**1.7**	**(0.3)**	**(0.1)**
of which:										
Corporate and municipal bonds	*0.7*	*0.2*	*0.1*	*0.6*	*(0.8)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*(0.1)*
Loans	*0.8*	*(0.1)*	*(0.1)*	*0.1*	*(5.2)*	*4.1*	*0.0*	*1.1*	*(0.2)*	*0.0*
Other	*0.6*	*0.0*	*0.0*	*0.2*	*(0.8)*	*0.0*	*0.0*	*0.5*	*0.0*	*0.0*
Financial assets designated at fair value	**3.3**	**(0.4)**	***(0.1)***	**0.1**	**0.0**	**0.7**	**(1.9)**	**0.5**	**(0.1)**	**0.0**
of which:										
Loans (including structured loans)	*1.7*	*(0.4)*	*(0.1)*	*0.0*	*0.0*	*0.6*	*(1.0)*	*0.4*	*(0.1)*	*0.0*
Structured reverse repurchase and securities borrowing agreements	*1.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.9)*	*0.0*	*0.0*	*0.0*
Other	*0.1*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Financial assets available for sale	**0.7**	**0.0**	***0.0***	**0.1**	**(0.1)**	**0.0**	**0.0**	**0.0**	**(0.1)**	**0.0**
Positive replacement values	**2.9**	**(0.4)**	***(0.5)***	**0.0**	**0.0**	**1.0**	**(1.9)**	**1.3**	**(0.4)**	**0.0**
of which:										
Credit derivative contracts	*1.3*	*(0.2)*	*(0.1)*	*0.0*	*0.0*	*0.6*	*(0.7)*	*0.4*	*(0.1)*	*0.0*
Equity / index contracts	*1.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.4*	*(0.6)*	*0.2*	*(0.2)*	*0.0*
Other	*0.6*	*(0.1)*	*(0.3)*	*0.0*	*0.0*	*0.1*	*(0.6)*	*0.7*	*(0.1)*	*0.0*
Negative replacement values	**3.3**	**0.6**	***0.5***	**0.0**	**0.0**	**1.5**	**(2.1)**	**1.2**	**(0.6)**	**0.0**
of which:										
Credit derivative contracts	*1.3*	*0.5*	*0.6*	*0.0*	*0.0*	*0.2*	*(0.7)*	*0.3*	*(0.1)*	*0.0*
Equity / index contracts	*1.4*	*0.3*	*0.1*	*0.0*	*0.0*	*1.0*	*(0.8)*	*0.2*	*(0.3)*	*0.0*
Other	*0.6*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.3*	*(0.6)*	*0.7*	*(0.2)*	*0.0*
Financial liabilities designated at fair value	**10.7**	**1.0**	***0.6***	**0.0**	**0.0**	**5.0**	**(3.5)**	**0.9**	**(2.9)**	**(0.1)**
of which:										
Issued debt instruments	*9.3*	*0.9*	*0.6*	*0.0*	*0.0*	*4.1*	*(2.5)*	*0.8*	*(2.9)*	*(0.1)*
Over-the-counter debt instruments	*0.8*	*0.1*	*0.0*	*0.0*	*0.0*	*0.8*	*(0.6)*	*0.1*	*0.0*	*0.0*
Structured repurchase agreements	*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*(0.4)*	*0.0*	*0.0*	*0.0*

1 Total Level 3 assets as of 31 December 2017 were CHF 5.5 billion (31 December 2016: CHF 6.9 billion). Total Level 3 liabilities as of 31 December 2017 were CHF 15.7 billion (31 December 2016: CHF 15.1 billion).

Balance as of 31 December 2016	Total gains / (losses) included in comprehensive income: Net interest income, net trading income and other income	Total gains / (losses) included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 31 December 2017[1]
1.7	(0.1)	*0.0*	0.7	(3.8)	2.7	0.0	0.9	(0.2)	0.0	2.0
0.6	*0.1*	*0.1*	*0.4*	*(0.7)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.6*
0.7	*0.0*	*(0.1)*	*0.1*	*(2.8)*	*2.7*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
0.4	*(0.1)*	*0.0*	*0.2*	*(0.3)*	*0.0*	*0.0*	*0.8*	*0.0*	*0.0*	*0.9*
2.1	0.2	*0.2*	0.0	0.0	0.4	(1.2)	0.1	(0.1)	0.0	1.4
1.2	*0.2*	*0.2*	*0.0*	*0.0*	*0.1*	*(0.6)*	*0.0*	*(0.1)*	*0.0*	*0.8*
0.6	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*(0.6)*	*0.0*	*0.0*	*0.0*	*0.2*
0.2	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.2*	*0.0*	*0.1*	*0.0*	*0.0*	*0.5*
0.5	0.0	*0.0*	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.5
2.5	(0.3)	*(0.4)*	0.0	0.0	0.9	(1.2)	0.4	(0.8)	0.0	1.5
1.3	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.0*	*(0.3)*	*0.0*	*(0.4)*	*0.0*	*0.5*
0.7	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.9*	*(0.7)*	*0.3*	*(0.4)*	*0.0*	*0.7*
0.5	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.1*	*(0.1)*	*0.0*	*0.3*
4.0	0.2	*0.1*	0.0	0.0	0.7	(1.4)	0.5	(1.3)	0.1	2.8
1.5	*0.0*	*(0.2)*	*0.0*	*0.0*	*0.1*	*(0.4)*	*0.2*	*(0.8)*	*0.0*	*0.6*
1.9	*0.3*	*0.2*	*0.0*	*0.0*	*0.6*	*(0.6)*	*0.2*	*(0.5)*	*0.0*	*1.9*
0.6	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.4)*	*0.1*	*(0.1)*	*0.0*	*0.3*
11.0	1.4	*0.9*	0.0	0.0	6.7	(5.7)	1.3	(1.8)	(0.1)	12.8
9.7	*1.4*	*0.9*	*0.0*	*0.0*	*5.2*	*(4.9)*	*1.2*	*(1.6)*	*(0.1)*	*10.9*
1.1	*0.0*	*0.0*	*0.0*	*0.0*	*1.5*	*(0.7)*	*0.1*	*0.0*	*0.0*	*1.9*
0.3	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*(0.2)*	*0.0*	*0.0*

Note 22 Fair value measurement (continued)

i) Financial instruments not measured at fair value

The table below provides the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	31.12.17					31.12.16				
	Carrying value	Fair value				Carrying value	Fair value			
CHF billion	Total	Total	Level 1	Level 2	Level 3	Total	Total	Level 1	Level 2	Level 3
Assets										
Cash and balances with central banks	87.8	87.8	87.8	0.0	0.0	107.8	107.8	107.8	0.0	0.0
Due from banks	13.7	13.7	13.1	0.6	0.0	13.1	13.1	12.5	0.7	0.0
Cash collateral on securities borrowed	12.4	12.4	0.0	12.4	0.0	15.1	15.1	0.0	15.1	0.0
Reverse repurchase agreements	77.2	77.2	0.0	74.8	2.5	66.2	66.2	0.0	62.5	3.7
Cash collateral receivables on derivative instruments	23.4	23.4	0.0	23.4	0.0	26.7	26.7	0.0	26.7	0.0
Loans	321.7	323.1	0.0	178.9	144.3	307.0	310.4	0.0	170.0	140.4
Financial assets held to maturity	9.2	9.0	6.3	2.7	0.0	9.3	9.1	6.3	2.8	0.0
Other assets	28.0	28.0	0.0	28.0	0.0	18.5	18.5	0.0	18.5	0.0
Liabilities										
Due to banks	7.5	7.5	6.5	1.1	0.0	10.6	10.6	8.8	1.9	0.0
Cash collateral on securities lent	1.8	1.8	0.0	1.8	0.0	2.8	2.8	0.0	2.8	0.0
Repurchase agreements	15.3	15.3	0.0	15.3	0.0	6.6	6.6	0.0	6.6	0.0
Cash collateral payables on derivative instruments	30.2	30.2	0.0	30.2	0.0	35.5	35.5	0.0	35.5	0.0
Due to customers	447.1	448.8	0.0	448.8	0.0	450.2	450.6	0.0	450.6	0.0
Debt issued	104.8	107.0	0.0	102.7	4.3	79.0	81.1	0.0	78.5	2.6
Other liabilities	37.1	37.1	0.0	37.1	0.0	39.0	39.0	0.0	39.0	0.0

The fair values included in the table above were calculated for disclosure purposes only. The valuation techniques and assumptions described below relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another. The following principles were applied when determining fair value estimates for financial instruments not measured at fair value:

- For financial instruments with remaining maturities greater than three months, the fair value was determined from quoted market prices, if available.
- Where quoted market prices were not available, the fair values were estimated by discounting contractual cash flows using current market interest rates or appropriate yield curves for instruments with similar credit risk and maturity. These estimates generally include adjustments for counterparty credit risk or UBS's own credit.
- For short-term financial instruments with remaining maturities of three months or less, the carrying amount, which is net of credit loss allowances, is generally considered a reasonable estimate of fair value. The following financial instruments not measured at fair value had remaining maturities of three months or less as of 31 December 2017: 100% of cash and balances with central banks, 95% of amounts due from banks, 100% of cash collateral on securities borrowed, 81% of reverse repurchase agreements, 100% of cash collateral receivables on derivative instruments, 51% of loans, 0% of financial assets held to maturity, 86% of amounts due to banks, 100% of cash collateral on securities lent, 96% of repurchase agreements, 100% of cash collateral payables on derivative instruments, 99% of amounts due to customers and 13% of debt issued.
- The fair value estimates for repurchase and reverse repurchase agreements with variable and fixed interest rates, for all maturities, include the valuation of the interest rate component of these instruments. Credit and debit valuation adjustments have not been included in the valuation due to the short-term nature of these instruments.

Note 23 Restricted and transferred financial assets

This Note provides information on restricted financial assets (Note 23a), transfers of financial assets (Note 23b and 23c) and financial assets that are received as collateral with the right to resell or repledge these assets (Note 23d).

a) Restricted financial assets

Restricted financial assets consist of assets pledged as collateral against an existing liability or contingent liability and other assets that are otherwise explicitly restricted such that they cannot be used to secure funding.

Financial assets are mainly pledged as collateral in securities lending transactions, in repurchase transactions, against loans from Swiss mortgage institutions and in connection with the issuance of covered bonds. UBS AG generally enters into repurchase and securities lending arrangements under standard market agreements. For securities lending, the cash received as collateral may be more or less than the fair value of the securities loaned, depending on the nature of the transaction. For repurchase agreements, the fair value of the collateral sold under an agreement to repurchase is generally in excess of the cash borrowed. Pledged mortgage loans serve as collateral for existing liabilities against Swiss central mortgage institutions and for existing covered bond issuances of CHF 12,457 million as of 31 December 2017 (31 December 2016: CHF 14,137 million).

Other restricted financial assets include assets protected under client asset segregation rules, assets held by UBS AG's insurance entities to back related liabilities to the policy holders, assets held in certain jurisdictions to comply with explicit minimum local asset maintenance requirements and assets held in consolidated bankruptcy remote entities such as certain investment funds and other structured entities. The carrying value of the liabilities associated with these other restricted financial assets is generally equal to the carrying value of the assets, with the exception of assets held to comply with local asset maintenance requirements, for which the associated liabilities are greater.

UBS AG and its subsidiaries are, in certain cases, subject to regulatory requirements that affect the transfer of dividends and capital within UBS AG. Certain regulated subsidiaries are required to maintain capital and / or liquidity to comply with local regulations and may be subject to prudential limitations by regulators that limit the amount of funds that they can distribute or otherwise transfer. Supervisory authorities generally have discretion to impose higher requirements or to otherwise limit the activities of subsidiaries. Supervisory authorities also may require entities to measure capital and leverage ratios on a stressed basis, such as the Federal Reserve Board's Comprehensive Capital Analysis and Review (CCAR) process that affects UBS Americas Holding LLC, and may limit the ability of the entity to engage in new activities or take capital actions based on the results of those tests. Non-regulated subsidiaries are generally not subject to such requirements and transfer restrictions. However, restrictions can also be the result of different legal, regulatory, contractual, entity- or country-specific arrangements and / or requirements.

→ **Refer to "Financial and regulatory key figures for our significant regulated subsidiaries and sub-groups" in the "Significant regulated subsidiary and sub-group information" section of this report for financial information on significant regulated subsidiaries of the group**

Restricted financial assets

CHF million	31.12.17	31.12.16
Financial assets pledged as collateral		
Trading portfolio assets	46,257	36,549
of which: assets pledged as collateral that may be sold or repledged by counterparties	*35,363*	*30,260*
Loans[1]	17,631	19,887
Financial assets designated at fair value	170	776
of which: assets pledged as collateral that may be sold or repledged by counterparties	*170*	*636*
Total financial assets pledged as collateral[2]	64,059	57,213
Other restricted financial assets		
Due from banks	3,280	2,625
Reverse repurchase agreements	0	658
Trading portfolio assets	12,273	12,129
Cash collateral receivables on derivative instruments	3,822	4,329
Loans	1,256	958
Financial assets designated at fair value	2,225	0
Financial assets available for sale	246	247
Other	95	5,195
Total other restricted financial assets	23,196	26,141
Total financial assets pledged and other restricted financial assets	87,255	83,354

1 All related to mortgage loans that serve as collateral for existing liabilities against Swiss central mortgage institutions and for existing covered bond issuances. Of these pledged mortgage loans, approximately CHF 2.1 billion for 31 December 2017 (31 December 2016: approximately CHF 1.9 billion) could be withdrawn or used for future liabilities or covered bond issuances without breaching existing collateral requirements. 2 Does not include assets placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes (31 December 2017: CHF 2.5 billion; 31 December 2016: CHF 4.7 billion).

Note 23 Restricted and transferred financial assets (continued)

b) Transferred financial assets that are not derecognized in their entirety

The table below presents information for financial assets that have been transferred but are subject to continued recognition in full, as well as recognized liabilities associated with those transferred assets.

Transferred financial assets subject to continued recognition in full

CHF million	31.12.17		31.12.16	
	Carrying value of transferred assets	Carrying value of associated liabilities recognized on-balance sheet	Carrying value of transferred assets	Carrying value of associated liabilities recognized on-balance sheet
Trading portfolio assets that may be sold or repledged by counterparties	35,363	12,942	30,260	11,260
relating to securities lending and repurchase agreements in exchange for cash received	*13,145*	*12,942*	*11,410*	*11,260*
relating to securities lending agreements in exchange for securities received	*21,137*	*0*	*17,341*	*0*
relating to other financial asset transfers	*1,081*	*0*	*1,509*	*0*
Financial assets designated at fair value that may be sold or repledged by counterparties	170	169	636	630
Total financial assets transferred	35,533	13,111	30,896	11,890

Transactions in which financial assets are transferred, but continue to be recognized in their entirety on UBS AG's balance sheet include securities lending and repurchase agreements as well as other financial asset transfers. Repurchase and securities lending arrangements are, for the most part, conducted under standard market agreements and are undertaken with counterparties subject to UBS AG's normal credit risk control processes.

→ **Refer to Note 1a item 3e for more information on repurchase agreements and securities lending agreements**

As of 31 December 2017, approximately one-third of the transferred financial assets were trading portfolio assets transferred in exchange for cash, in which case the associated recognized liability represents the amount to be repaid to counterparties. For securities lending and repurchase agreements, a haircut between 0% and 15% is generally applied to the transferred assets, which results in associated liabilities having a carrying value below the carrying value of the transferred assets. The counterparties to the associated liabilities presented in the table above have full recourse to UBS AG.

In securities lending arrangements entered into in exchange for the receipt of other securities as collateral, neither the securities received nor the obligation to return them are recognized on UBS AG's balance sheet, as the risks and rewards of ownership are not transferred to UBS AG. In cases where such financial assets received are subsequently sold or repledged in another transaction, this is not considered to be a transfer of financial assets.

Other financial asset transfers primarily include securities transferred to collateralize derivative transactions, for which the carrying value of associated liabilities is not provided in the table above because those replacement values are managed on a portfolio basis across counterparties and product types, and therefore there is no direct relationship between the specific collateral pledged and the associated liability.

Transferred financial assets that are not subject to derecognition in full, but remain on the balance sheet to the extent of UBS AG's continuing involvement, were not material as of 31 December 2017 and as of 31 December 2016.

Note 23 Restricted and transferred financial assets (continued)

c) Transferred financial assets that are derecognized in their entirety with continuing involvement

Continuing involvement in a transferred and fully derecognized financial asset may result from contractual provisions in the transfer agreement or from a separate agreement with the counterparty or a third party entered into in connection with the transfer.

Purchased and retained interests in securitization vehicles

In cases where UBS AG has transferred assets into a securitization vehicle and retained or purchased interests therein, UBS AG has a continuing involvement in those transferred assets.

As of 31 December 2017, the majority of the retained continuing involvement related to securitization positions held in the trading portfolio, primarily collateralized debt obligations, US commercial mortgage-backed securities and residential mortgage-backed securities. The fair value and carrying amount of UBS AG's continuing involvement related to these purchased and retained interests was CHF 8 million as of 31 December 2017, and UBS AG recognized gains of CHF 4 million in 2017 related to these positions. As of 31 December 2017, life-to-date losses of CHF 1,170 million were recorded related to the positions held as of 31 December 2017.

As of 31 December 2016, the fair value and carrying amount of UBS AG's continuing involvement related to purchased and retained interests in securitization vehicles was CHF 5 million, and UBS AG recognized gains of CHF 11 million in 2016 related to these positions. As of 31 December 2016, life-to-date losses of CHF 1,173 million were recorded related to the positions held as of 31 December 2016.

The maximum exposure to loss related to purchased and retained interests in securitization structures was CHF 14 million as of 31 December 2017 compared with CHF 28 million as of 31 December 2016.

Undiscounted cash outflows of CHF 7 million may be payable to the transferee in future periods as a consequence of holding the purchased and retained interests. The earliest period in which payment may be required is less than one month.

d) Off-balance sheet assets received

The table below presents assets received from third parties that can be sold or repledged, that are not recognized on the balance sheet, but that are held as collateral, including amounts that have been sold or repledged.

Off-balance sheet assets received

CHF million	31.12.17	31.12.16
Fair value of assets received that can be sold or repledged	469,132	429,327
received as collateral under reverse repurchase, securities borrowing and lending arrangements, derivative transactions and other transactions [1]	*462,460*	*423,524*
received in unsecured borrowings	*6,672*	*5,803*
Thereof sold or repledged[2]	337,514	316,324
in connection with financing activities	*293,295*	*277,341*
to satisfy commitments under short sale transactions	*30,463*	*22,825*
in connection with derivative and other transactions [1]	*13,756*	*16,158*

1 Includes securities received as initial margin from its clients that UBS AG is required to remit to CCPs, brokers and deposit banks through its exchange-traded derivative (ETD) clearing and execution services.
2 Does not include off-balance sheet securities (31 December 2017: CHF 28.1 billion; 31 December 2016: CHF 30.9 billion) placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes for which there are no associated liabilities or contingent liabilities.

Note 24 Offsetting financial assets and financial liabilities

UBS AG enters into netting agreements with counterparties to manage the credit risks associated primarily with repurchase and reverse repurchase transactions, securities borrowing and lending, over-the-counter (OTC) derivatives and exchange-traded derivatives (ETD). These netting agreements and similar arrangements generally enable the counterparties to set off liabilities against available assets received in the ordinary course of business and / or in the event that the counterparty to the transaction is unable to fulfill its contractual obligations. The right of setoff is a legal right to settle or otherwise eliminate all or a portion of an amount due by applying an amount receivable from the same counterparty against it, thus reducing credit exposure.

The table below provides a summary of financial assets subject to offsetting, enforceable master netting arrangements and similar agreements, as well as financial collateral received to mitigate credit exposures for these financial assets. The gross financial assets of UBS AG that are subject to offsetting, enforceable netting arrangements and similar agreements are reconciled to the net amounts presented within the associated balance sheet line, after giving effect to financial liabilities with the same counterparties that have been offset on the balance sheet and other financial assets not subject to an enforceable netting arrangement or similar agreement. Further, related amounts for financial liabilities and collateral received that are not offset on the balance sheet are shown to arrive at financial assets after consideration of netting potential.

UBS AG engages in a variety of counterparty credit mitigation strategies in addition to netting and collateral arrangements. Therefore, the net amounts presented in the tables on this and on the next page do not purport to represent UBS AG's actual credit exposure.

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

	Assets subject to netting arrangements						Assets not subject to netting arrangements[4]	Total assets	
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[3]					
As of 31.12.17, CHF billion	Gross assets before netting	Netting with gross liabilities[2]	Net assets recognized on the balance sheet	Financial liabilities	Collateral received	Assets after consideration of netting potential	Assets recognized on the balance sheet	Total assets after consideration of netting potential	Total assets recognized on the balance sheet
Cash collateral on securities borrowed	3.7	0.0	3.7	(0.6)	(3.1)	0.0	8.7	8.7	12.4
Reverse repurchase agreements	140.5	(76.8)	63.7	(6.9)	(56.8)	0.0	13.5	13.5	77.2
Positive replacement values	114.3	(2.1)	112.2	(83.5)	(20.7)	8.0	6.0	14.0	118.2
Cash collateral receivables on derivative instruments[1]	21.6	(1.0)	20.6	(11.7)	(0.7)	8.1	2.9	11.0	23.4
Financial assets designated at fair value	0.4	0.0	0.4	0.0	(0.2)	0.2	58.1	58.4	58.6
Total assets	**280.5**	**(79.9)**	**200.6**	**(102.7)**	**(81.6)**	**16.4**	**89.2**	**105.6**	**289.9**
As of 31.12.16, CHF billion									
Cash collateral on securities borrowed	4.2	0.0	4.2	(0.9)	(3.3)	0.0	10.9	10.9	15.1
Reverse repurchase agreements	128.4	(71.5)	56.9	(2.1)	(54.8)	0.0	9.3	9.3	66.2
Positive replacement values	152.3	(2.5)	149.8	(113.1)	(26.7)	10.0	8.6	18.6	158.4
Cash collateral receivables on derivative instruments[1]	37.2	(15.1)	22.1	(14.2)	(1.0)	7.0	4.5	11.5	26.7
Financial assets designated at fair value	1.7	0.0	1.7	0.0	(0.6)	1.1	63.3	64.4	65.0
Total assets	**323.8**	**(89.1)**	**234.7**	**(130.3)**	**(86.3)**	**18.1**	**96.7**	**114.8**	**331.5**

1 The net amount of Cash collateral receivables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and ETD that are economically settled on a daily basis. Effective 3 January 2017, interest rate swaps and credit derivatives transacted with the Chicago Mercantile Exchange (CME) were legally converted from the previous collateral model to a settlement model resulting in a derecognition of the associated assets and liabilities. Previously, UBS applied IAS 32 netting principles to offset the fair value of CME interest rate swaps with the associated variation margin. Gross cash collateral receivables and payables on derivative instruments and corresponding IAS 32 netting, decreased by approximately CHF 11.4 billion as of 31 December 2017, with no change to net cash collateral receivables and payables on derivative instruments recognized and presented on the balance sheet. 2 The logic of the table results in amounts presented in the "Netting with gross liabilities" column corresponding directly to the amounts presented in the "Netting with gross assets" column in the liabilities table presented on the following page. 3 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped by the relevant netting agreement so as not to exceed the net amount of financial assets presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 4 Includes assets not subject to enforceable netting arrangements and other out-of-scope items.

Note 24 Offsetting financial assets and financial liabilities (continued)

The table below provides a summary of financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements, as well as financial collateral pledged to mitigate credit exposures for these financial liabilities. The gross financial liabilities of UBS AG that are subject to offsetting, enforceable netting arrangements and similar agreements are reconciled to the net amounts presented within the associated balance sheet line, after giving effect to financial assets with the same counterparties that have been offset on the balance sheet and other financial liabilities not subject to an enforceable netting arrangement or similar agreement. Further, related amounts for financial assets and collateral pledged that are not offset on the balance sheet are shown to arrive at financial liabilities after consideration of netting potential.

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

	Liabilities subject to netting arrangements						Liabilities not subject to netting arrangements[4]	Total liabilities	
	Netting recognized on the balance sheet			Netting potential not recognized on the balance sheet[3]					
As of 31.12.17, CHF billion	Gross liabilities before netting	Netting with gross assets[2]	Net liabilities recognized on the balance sheet	Financial assets	Collateral pledged	Liabilities after consideration of netting potential	Liabilities recognized on the balance sheet	Total liabilities after consideration of netting potential	Total liabilities recognized on the balance sheet
Cash collateral on securities lent	1.7	0.0	1.7	(0.6)	(1.2)	0.0	0.1	0.1	1.8
Repurchase agreements	88.4	(76.8)	11.6	(6.9)	(4.7)	0.0	3.6	3.6	15.3
Negative replacement values	111.4	(2.1)	109.4	(83.5)	(15.0)	10.9	6.8	17.7	116.1
Cash collateral payables on derivative instruments[1]	29.5	(1.0)	28.4	(16.3)	(1.2)	11.0	1.8	12.8	30.2
Financial liabilities designated at fair value	1.9	0.0	1.9	0.0	(0.1)	1.8	52.3	54.1	54.2
Total liabilities	**233.0**	**(79.9)**	**153.0**	**(107.3)**	**(22.1)**	**23.7**	**64.6**	**88.3**	**217.6**
As of 31.12.16, CHF billion									
Cash collateral on securities lent	2.6	0.0	2.6	(0.9)	(1.7)	0.0	0.2	0.2	2.8
Repurchase agreements	76.7	(71.5)	5.2	(2.1)	(3.1)	0.0	1.4	1.4	6.6
Negative replacement values	146.3	(2.5)	143.9	(113.1)	(16.6)	14.2	10.0	24.2	153.8
Cash collateral payables on derivative instruments[1]	48.5	(15.1)	33.4	(20.8)	(1.4)	11.2	2.1	13.3	35.5
Financial liabilities designated at fair value	2.8	0.0	2.8	0.0	(0.2)	2.6	52.2	54.8	55.0
Total liabilities	**276.9**	**(89.1)**	**187.9**	**(137.0)**	**(22.9)**	**28.0**	**65.9**	**93.9**	**253.7**

1 The net amount of Cash collateral payables on derivative instruments recognized on the balance sheet includes certain OTC derivatives that are net settled on a daily basis either legally or in substance under IAS 32 principles and ETD that are economically settled on a daily basis. Effective 3 January 2017, interest rate swaps and credit derivatives transacted with the Chicago Mercantile Exchange (CME) were legally converted from the previous collateral model to a settlement model resulting in a derecognition of the associated assets and liabilities. Previously, UBS applied IAS 32 netting principles to offset the fair value of CME interest rate swaps with the associated variation margin. Gross cash collateral receivables and payables on derivative instruments and corresponding IAS 32 netting, decreased by approximately CHF 11.4 billion as of 31 December 2017, with no change to net cash collateral receivables and payables on derivative instruments recognized and presented on the balance sheet. 2 The logic of the table results in amounts presented in the "Netting with gross assets" column corresponding directly to the amounts presented in the "Netting with gross liabilities" column in the assets table presented on the previous page. 3 For the purpose of this disclosure, the amounts of financial instruments and cash collateral presented have been capped by the relevant netting agreement so as not to exceed the net amount of financial liabilities presented on the balance sheet; i.e., over-collateralization, where it exists, is not reflected in the table. 4 Includes liabilities not subject to enforceable netting arrangements and other out-of-scope items.

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments

a) Measurement categories of financial assets and liabilities

The table below provides information about the carrying amounts of individual classes of financial instruments within the measurement categories of financial assets and liabilities as defined in IAS 39, *Financial Instruments: Recognition and Measurement*. Only those assets and liabilities that are financial instruments as defined in IAS 32, *Financial Instruments: Presentation* are included in the table below, which causes certain balances to differ from those presented on the balance sheet.

→ **Refer to Note 22 for more information on how the fair value of financial instruments is determined**

Measurement categories of financial assets and financial liabilities

CHF million	31.12.17	31.12.16
Financial assets[1]		
Held for trading		
Trading portfolio assets	126,244	92,112
Due to customers[2]	7	12
Debt issued[2]	10	38
Positive replacement values	118,229	158,411
Total	244,489	250,572
Fair value through profit or loss		
Financial assets designated at fair value	58,556	65,024
Other assets	122	131
Total	58,678	65,155
Financial assets at amortized cost		
Cash and balances with central banks	87,775	107,767
Due from banks	13,693	13,125
Cash collateral on securities borrowed	12,393	15,111
Reverse repurchase agreements	77,240	66,246
Cash collateral receivables on derivative instruments	23,434	26,664
Loans[3]	321,718	307,004
Financial assets held to maturity	9,166	9,289
Other assets	27,986	18,519
Total	573,405	563,727
Available for sale		
Financial assets available for sale	8,665	15,676
Total financial assets	885,237	895,131
Financial liabilities		
Held for trading		
Trading portfolio liabilities	30,463	22,825
Negative replacement values	116,134	153,810
Total	146,598	176,635
Fair value through profit or loss		
Financial liabilities designated at fair value	54,202	55,017
Amounts due under unit-linked investment contracts	11,523	9,286
Other liabilities	122	131
Total	65,847	64,434
Financial liabilities at amortized cost		
Due to banks	7,533	10,645
Cash collateral on securities lent	1,789	2,818
Repurchase agreements	15,255	6,612
Cash collateral payables on derivative instruments	30,247	35,472
Due to customers	447,148	450,211
Debt issued	104,759	79,036
Other liabilities	37,064	38,992
Total	643,795	623,786
Total financial liabilities	856,240	864,855

1 As of 31 December 2017, CHF 134 billion of Loans, CHF 0 billion of Due from banks, CHF 2 billion of Reverse repurchase agreements, CHF 7 billion of Financial assets available for sale, CHF 24 billion of Financial assets designated at fair value and CHF 7 billion of Financial assets held to maturity are expected to be recovered or settled after 12 months. As of 31 December 2016, CHF 126 billion of Loans, CHF 0 billion of Due from banks, CHF 1 billion of Reverse repurchase agreements, CHF 10 billion of Financial assets available for sale, CHF 29 billion of Financial assets designated at fair value and CHF 8 billion of Financial assets held to maturity are expected to be recovered or settled after 12 months. 2 Represents the embedded derivative component of structured financial instruments for which the fair value option has not been applied and that is presented within Due to customers and Debt issued on the balance sheet. 3 Includes finance lease receivables of CHF 1.1 billion as of 31 December 2017 (31 December 2016: CHF 1.0 billion). Refer to Notes 10 and 31 for more information.

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

b) Maximum exposure to credit risk

The tables on the following pages provide UBS AG's maximum exposure to credit risk by class of financial instrument and the respective collateral and other credit enhancements mitigating credit risk for these classes of financial instruments.

The maximum exposure to credit risk includes the carrying amounts of financial instruments recognized on the balance sheet subject to credit risk and the notional amounts for off-balance sheet arrangements. Where information is available, collateral is presented at fair value. For other collateral, such as real estate, a reasonable alternative value is used. Credit enhancements, such as credit derivative contracts and guarantees, are included at their notional amounts. Both are capped at the maximum exposure to credit risk for which they serve as security. The section "Risk management and control" describes management's view of credit risk and the related exposures, which can differ in certain respects from the requirements of IFRS.

Maximum exposure to credit risk

	31.12.17								
		Collateral				Credit enhancements			
CHF billion	Maximum exposure to credit risk	Cash collateral received	Collateral-ized by securities	Secured by real estate	Other collateral[1]	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at amortized cost on the balance sheet									
Balances with central banks	87.1								87.1
Due from banks[2]	13.7		0.1						13.6
Cash collateral on securities borrowed	12.4		12.2						0.2
Reverse repurchase agreements	77.2		72.8		4.2				0.2
Cash collateral receivables on derivative instruments[3,4]	23.4					12.5			11.0
Loans[5]	321.7	17.9	111.4	160.1	15.9		0.0	1.3	15.1
Financial assets held to maturity	9.2								9.2
Other assets	25.8		19.5						6.3
Total financial assets measured at amortized cost	570.6	17.9	216.0	160.1	20.1	12.5	0.0	1.3	142.7
Financial assets measured at fair value on the balance sheet									
Positive replacement values[4]	118.2		4.0			100.2			14.0
Trading portfolio assets – debt instruments[6,7]	25.7								25.7
Financial assets designated at fair value – debt instruments[8]	58.4		9.8						48.5
Financial assets available for sale – debt instruments[8]	7.9								7.9
Total financial assets measured at fair value	210.2	0.0	13.8	0.0	0.0	100.2	0.0	0.0	96.2
Total maximum exposure to credit risk reflected on the balance sheet	780.8	17.9	229.8	160.1	20.1	112.7	0.0	1.3	238.9
Guarantees[9]	18.8	1.0	2.1	0.2	1.2			3.0	11.3
Loan commitments[9]	39.1		2.8	1.1	9.5		1.0	1.4	23.3
Forward starting transactions, reverse repurchase and securities borrowing agreements	12.7		12.4						0.2
Total maximum exposure to credit risk not reflected on the balance sheet	70.6	1.0	17.4	1.2	10.7	0.0	1.0	4.4	34.8
Total	851.4	18.9	247.1	161.3	30.8	112.7	1.1	5.8	273.7

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

Maximum exposure to credit risk (continued)

	31.12.16								
		Collateral				Credit enhancements			
CHF billion	Maximum exposure to credit risk	Cash collateral received	Collateral-ized by securities	Secured by real estate	Other collateral[1]	Netting	Credit derivative contracts	Guarantees	Exposure to credit risk after collateral and credit enhancements
Financial assets measured at amortized cost on the balance sheet									
Balances with central banks	107.1								107.1
Due from banks[2]	13.1								13.1
Cash collateral on securities borrowed	15.1		14.8						0.3
Reverse repurchase agreements	66.2		62.5		3.2				0.5
Cash collateral receivables on derivative instruments[3,4]	26.7					15.1			11.5
Loans[5]	307.0	17.9	99.6	158.2	14.6		0.1	1.8	14.8
Financial assets held to maturity	9.3								9.3
Other assets	18.6		10.0						8.7
Total financial assets measured at amortized cost	563.2	17.9	186.9	158.2	17.7	15.1	0.1	1.8	165.3
Financial assets measured at fair value on the balance sheet									
Positive replacement values[4]	158.4		5.3			134.5			18.6
Trading portfolio assets – debt instruments[6,7]	21.9								21.9
Financial assets designated at fair value – debt instruments[8]	64.8		2.6				0.6		61.6
Financial assets available for sale – debt instruments[8]	14.9								14.9
Total financial assets measured at fair value	260.0	0.0	7.9	0.0	0.0	134.5	0.6	0.0	117.0
Total maximum exposure to credit risk reflected on the balance sheet	823.2	17.9	194.9	158.2	17.7	149.6	0.7	1.8	282.3
Guarantees[9]	16.7	1.4	2.0	0.2	1.2		0.1	3.0	8.8
Loan commitments[9]	54.4	0.1	3.9	1.0	9.5		4.8	2.0	33.1
Forward starting transactions, reverse repurchase and securities borrowing agreements	10.2		10.2						0.0
Total maximum exposure to credit risk not reflected on the balance sheet	81.3	1.5	16.1	1.1	10.6	0.0	4.9	5.1	41.9
Total	904.5	19.4	210.9	159.4	28.4	149.6	5.7	6.8	324.3

1 Includes but is not limited to life insurance contracts, inventory, accounts receivable, mortgage loans, patents and copyrights. 2 Due from banks includes amounts held with third-party banks on behalf of clients. The credit risk associated with these balances may be borne by those clients. 3 Included within Cash collateral receivables on derivative instruments are margin balances due from exchanges or clearing houses. Some of these margin balances reflect amounts transferred on behalf of clients who retain the associated credit risk. 4 The amount shown in the netting column represents the netting potential not recognized on the balance sheet. Refer to Note 24 for more information. 5 Collateral arrangements generally incorporate a range of collateral, including cash, securities, property and other collateral. In 2017, we further aligned our collateral allocation processes within Wealth Management Americas to prioritize collateral mainly according to its liquidity profile. This change resulted in increases in loans secured by cash and decreases in loans secured by securities of CHF 4.5 billion. 6 These positions are generally managed under the market risk framework. For the purpose of this disclosure, collateral and credit enhancements were not considered. 7 Does not include debt instruments held for unit-linked investment contracts and investment fund units. 8 Does not include investment fund units. Financial assets designated at fair value collateralized by securities consisted of structured loans and reverse repurchase and securities borrowing agreements. 9 The amount shown in the "Guarantees" column largely relates to sub-participations. Refer to the "Treasury management" section of this report for more information.

Maximum exposure to credit risk for financial assets designated at fair value

The maximum exposure to credit risk of loans, but not structured loans, designated at fair value is generally mitigated by credit derivatives or similar instruments. As of 31 December 2017, the credit risk of such loans with a total notional amount of CHF 4 million (31 December 2016: CHF 609 million) was mitigated by credit derivatives for which the notional amount and fair value were not material (31 December 2016: notional amount was CHF 578 million, fair value was negative CHF 7 million).

Changes in the fair value of loans designated at fair value attributable to changes in credit risk were not material for the years ended 31 December 2017 and 31 December 2016 and from inception until 31 December 2017 and 31 December 2016.

Similarly, changes in the fair value of credit derivatives mitigating the credit risk of loans designated at fair value were not material for the years ended 31 December 2017 and 31 December 2016 and from inception until 31 December 2017 and 31 December 2016.

→ **Refer to Note 22 for more information on financial assets designated at fair value**

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

c) Financial assets subject to credit risk by rating category

Financial assets subject to credit risk by rating category

CHF billion	31.12.17						
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Defaulted	Total
Balances with central banks	86.6	0.5					87.1
Due from banks	0.6	10.6	1.4	0.9	0.3		13.7
Cash collateral on securities borrowed and reverse repurchase agreements	24.3	36.4	16.8	10.4	1.8		89.6
Positive replacement values	17.0	75.3	19.4	6.2	0.3		118.2
Cash collateral receivables on derivative instruments	6.5	9.7	5.6	1.6	0.1		23.4
Trading portfolio assets – debt instruments[2]	10.3	7.4	3.0	2.1	3.0		25.7
Loans	3.2	163.6	65.7	70.0	17.6	1.5	321.7
Financial assets designated at fair value – debt instruments[3]	33.8	14.2	1.5	0.8	8.0		58.4
Financial assets available for sale – debt instruments[3]	6.8	1.0		0.1			7.9
Financial assets held to maturity	8.5	0.7					9.2
Other assets	0.1	0.4	8.4	15.9	0.8	0.3	25.8
Guarantees, commitments and forward starting transactions							
Guarantees	2.0	9.1	4.1	2.7	0.8	0.2	18.8
Loan commitments	1.9	15.4	9.4	5.8	6.5		39.1
Forward starting transactions, reverse repurchase and securities borrowing agreements		12.7					12.7
Total	201.7	356.8	135.2	116.5	39.1	2.0	851.4

CHF billion	31.12.16						
Rating category[1]	0–1	2–3	4–5	6–8	9–13	Defaulted	Total
Balances with central banks	106.2	0.9					107.1
Due from banks	0.6	9.7	2.0	0.5	0.3		13.1
Cash collateral on securities borrowed and reverse repurchase agreements	29.2	24.5	20.1	6.9	0.7		81.4
Positive replacement values	19.6	96.9	34.2	7.4	0.4		158.4
Cash collateral receivables on derivative instruments	6.4	12.2	6.4	1.6	0.2		26.7
Trading portfolio assets – debt instruments[2]	9.0	6.9	2.9	1.7	1.3		21.9
Loans	31.7	127.8	63.2	63.6	19.1	1.6	307.0
Financial assets designated at fair value – debt instruments[3]	48.4	12.6	1.0	1.6	1.3		64.8
Financial assets available for sale – debt instruments[3]	12.7	1.8	0.2	0.1			14.9
Financial assets held to maturity	8.4	0.9					9.3
Other assets	0.1	2.1	6.2	7.7	2.2	0.3	18.6
Guarantees, commitments and forward starting transactions							
Guarantees	2.0	6.4	3.7	3.6	0.7	0.3	16.7
Loan commitments	2.4	19.5	17.1	8.7	6.5	0.1	54.4
Forward starting transactions, reverse repurchase and securities borrowing agreements	0.6	9.4	0.3				10.2
Total	277.4	331.6	157.2	103.5	32.7	2.2	904.5

1 Refer to the "Internal UBS rating scale and mapping of external ratings" table in the "Risk management and control" section of this report for more information on rating categories. 2 Does not include debt instruments held for unit-linked investment contracts and investment fund units. 3 Does not include investment fund units.

Note 25 Measurement categories, credit risk and maturity analysis of financial instruments (continued)

d) Maturity analysis of financial liabilities

The contractual maturities for non-derivative and non-trading financial liabilities as of 31 December 2017 are based on the earliest date on which UBS could be contractually required to pay. The total amounts that contractually mature in each time band are also shown for 31 December 2016. Derivative positions and trading liabilities, predominantly made up of short sale transactions, are assigned to the column *Due within 1 month,* as this provides a conservative reflection of the nature of these trading activities. The contractual maturities may extend over significantly longer periods.

Maturity analysis of financial liabilities[1]

CHF billion	Due within 1 month	Due between 1 and 3 months	Due between 3 and 12 months	Due between 1 and 5 years	Due after 5 years	Total
Financial liabilities recognized on balance sheet[2]						
Due to banks	6.1	0.4	1.0	0.1	0.0	7.5
Cash collateral on securities lent	1.7	0.2				1.9
Repurchase agreements	11.9	2.8	0.6	0.0	0.0	15.3
Trading portfolio liabilities[3,4]	30.5					30.5
Negative replacement values[3]	116.1					116.1
Cash collateral payables on derivative instruments	30.2					30.2
Due to customers	394.8	11.4	5.8	22.2	19.1	453.3
Financial liabilities designated at fair value[5]	18.4	10.3	11.6	8.8	7.1	56.3
Debt issued	4.1	14.5	44.5	34.8	12.5	110.3
Other liabilities	47.4					47.4
Total 31.12.17	**661.2**	**39.6**	**63.4**	**65.9**	**38.7**	**868.9**
Total 31.12.16	706.7	39.2	40.2	45.9	45.6	877.7
Guarantees, commitments and forward starting transactions[6]						
Loan commitments	38.2	0.2	0.2	0.1		38.7
Guarantees	18.8	0.0				18.9
Forward starting transactions						
Reverse repurchase agreements	12.7					12.7
Securities borrowing agreements	0.0					0.0
Total 31.12.17	**69.7**	**0.2**	**0.2**	**0.1**	**0.0**	**70.2**
Total 31.12.16	81.0	0.2	0.2	0.0	0.0	81.4

1 Non-financial liabilities such as deferred income, deferred tax liabilities, provisions and liabilities on employee compensation plans are not included in this analysis. 2 Except for trading portfolio liabilities and negative replacement values (see footnote 3), the amounts presented generally represent undiscounted cash flows of future interest and principal payments. 3 Carrying value is fair value. Management believes that this best represents the cash flows that would have to be paid if these positions had to be settled or closed out. Refer to Note 12 for undiscounted cash flows of derivatives designated in hedge accounting relationships. 4 Contractual maturities of trading portfolio liabilities are: CHF 29.5 billion due within one month (2016: CHF 21.8 billion), CHF 0.8 billion due between one month and one year (2016: CHF 1.0 billion) and CHF 0.1 billion due between 1 and 5 years (2016: CHF 0.1 billion). 5 Future interest payments on variable rate liabilities are determined by reference to the applicable interest rate prevailing as of the reporting date. Future principal payments that are variable are determined by reference to the conditions existing at the reporting date. 6 Comprises the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

e) Reclassification of financial assets

In 2008 and 2009, certain financial assets were reclassified from *Trading portfolio assets* to *Loans*. On their reclassification date, these assets had fair values of CHF 26 billion and CHF 0.6 billion, respectively.

The reclassification of financial assets reflected UBS's change in intent and ability to hold these financial assets for the foreseeable future rather than for trading in the near term. The financial assets were reclassified using their fair value on the date of the reclassification, which became their new cost basis at that date.

As of 31 December 2017, the carrying value of the remaining reclassified financial assets, which were entirely comprised of municipal auction rate securities, was CHF 0.1 billion (31 December 2016: CHF 0.2 billion), which was approximately equal to the fair value of these assets.

The overall effect on operating profit before tax from reclassified financial assets for the year ended 31 December 2017 was a profit of CHF 1 million (2016: CHF 1 million). If the financial assets had not been reclassified, the impact on operating profit before tax for the year ended 31 December 2017 would have been a loss of CHF 4 million.

Note 26 Pension and other post-employment benefit plans

The table below provides information about expenses for pension and other post-employment benefit plans. These expenses are part of *Personnel expenses*.

Income statement – expenses related to pension and other post-employment benefit plans

CHF million	31.12.17	31.12.16	31.12.15
Net periodic expenses for defined benefit plans	359	433	568
of which: related to major pension plans [1]	*347*	*412*	*546*
of which: Swiss plan [2]	*302*	*381*	*515*
of which: UK plan	*14*	*(2)*	*18*
of which: US and German plans	*31*	*33*	*12*
of which: related to post-employment medical insurance plans [3]	*3*	*4*	*4*
of which: UK plan	*1*	*1*	*1*
of which: US plans	*2*	*3*	*2*
of which: related to remaining plans and other expenses [4]	*8*	*17*	*19*
Expenses for defined contribution plans[5]	232	236	239
of which: UK plans	*64*	*77*	*86*
of which: US plan	*108*	*106*	*100*
of which: remaining plans	*59*	*53*	*53*
Total pension and other post-employment benefit plan expenses[6]	591	669	807

1 Refer to Note 26a for more information. 2 The decrease in net periodic pension expenses for the Swiss pension plan in 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. 3 Refer to Note 26b for more information. 4 Other expenses include differences between actual and estimated performance award accruals and net accrued pension expenses related to restructuring. 5 Refer to Note 26c for more information. 6 Refer to Note 6.

The table below provides information relating to amounts recognized in *Other comprehensive income* for defined benefit plans.

Other comprehensive income – gains / (losses) on defined benefit plans

CHF million	31.12.17	31.12.16	31.12.15
Major pension plans[1]	266	(837)	339
of which: Swiss plan	*(56)*	*(105)*	*58*
of which: UK plan	*295*	*(610)*	*317*
of which: US and German plans	*28*	*(122)*	*(35)*
Post-employment medical insurance plans[2]	1	(13)	(3)
of which: UK plan	*1*	*(6)*	*6*
of which: US plans	*0*	*(7)*	*(9)*
Remaining plans	31	(26)	(14)
Gains / (losses) recognized in other comprehensive income, before tax	299	(876)	322
Tax (expense) / benefit relating to defined benefit plans recognized in other comprehensive income	6	52	(19)
Gains / (losses) recognized in other comprehensive income, net of tax[3]	305	(824)	304

1 Refer to Note 26a for more information. 2 Refer to Note 26b for more information. 3 Refer to the "Statement of comprehensive income."

Note 26 Pension and other post-employment benefit plans (continued)

UBS AG recognizes assets and liabilities with respect to defined benefit plans within *Other assets* and *Other liabilities*.

As of 31 December 2017 and 31 December 2016, the Swiss pension plan was in a surplus situation. However, a surplus is only recognized on the balance sheet to the extent that it does not exceed the estimated future economic benefit. Since the estimated future economic benefit was zero as of 31 December 2017 and 31 December 2016, no net defined benefit pension asset was recognized on the balance sheet.

The table below provides information on UBS AG's liabilities with respect to defined benefit plans.

Balance sheet – net defined benefit pension and post-employment liability

CHF million	31.12.17	31.12.16
Major pension plans[1]	805	1,140
of which: Swiss plan	*0*	*0*
of which: UK plan	*268*	*529*
of which: US and German plans[2]	*536*	*611*
Post-employment medical insurance plans[3]	86	91
of which: UK plan	*26*	*26*
of which: US plans	*59*	*65*
Remaining plans	34	34
Total net defined benefit pension and post-employment liability[4]	925	1,266

1 Refer to Note 26a for more information. 2 Of the total liability as of 31 December 2017, CHF 149 million related to US plans and CHF 388 million related to German plans (31 December 2016: CHF 265 million related to US plans and CHF 346 million related to German plans). 3 Refer to Note 26b for more information. 4 Refer to Note 21.

Note 26 Pension and other post-employment benefit plans (continued)

a) Defined benefit pension plans

UBS AG has established defined benefit pension plans for its employees in various jurisdictions, with the major plans located in Switzerland, the UK, the US and Germany.

The overall investment policy and strategy for UBS AG's defined benefit pension plans is guided by the objective of achieving an investment return that, together with contributions, ensures that there will be sufficient assets to pay pension benefits as they fall due while also mitigating various risks. For the plans with assets, i.e. funded plans, the investment strategies are managed under local laws and regulations in each jurisdiction. The asset allocation is determined by the governance body with reference to the prevailing current and expected economic and market conditions and in consideration of specific asset class risk in the risk profile. Within this framework, UBS AG ensures that the fiduciaries consider how the asset investment strategy correlates with the maturity profile of the plan liabilities and the respective potential effect on the funded status of the plans, including potential short-term liquidity requirements.

The defined benefit obligations (DBOs) for all of UBS AG's defined benefit pension plans are directly affected by changes in yields of high-quality corporate bonds quoted in an active market in the currency of the respective pension plan, as the applicable discount rate used to determine the DBO is based on these yields. For the funded plans, the pension assets are invested in a diversified portfolio of financial assets, including real estate, bonds, investment funds and cash, across geographic regions to ensure a balance of risk and return. Under IAS 19, volatility arises in each pension plan's net asset / liability position because the fair value of the plan's financial assets is not fully correlated to movements in the value of the plan's DBO. Specific asset-liability matching strategies for each pension plan are independently determined by the responsible governance body. The net asset / liability volatility for each plan is dependent on the specific financial assets chosen by each plan's governance body. For certain pension plans, a liability-driven investment approach is applied to a portion of the plan assets to reduce potential volatility.

Swiss pension plan

The Swiss pension plan covers employees of UBS AG and employees of companies having close economic or financial ties with UBS AG and exceeds the minimum benefit requirements under Swiss pension law.

In 2017, a significant number of employees transferred from UBS AG to UBS Business Solutions AG, which is a directly held subsidiary of UBS Group AG. There continues to be one pooled pension plan in Switzerland covering the employees of UBS AG and those transferred to UBS Business Solutions AG. UBS AG and UBS Business Solutions AG both are legal sponsors of UBS's Swiss pension plan. Since the date of the employee transfer, UBS AG and UBS Business Solutions AG apply proportionate defined benefit accounting, i.e., the net pension cost, any OCI impacts from remeasurements and the net pension asset / liability of the Swiss pension plan are allocated proportionally between UBS AG and UBS Business Solutions AG based on the aggregated net pension cost and defined benefit obligations related to their employees.

Contributions to the pension plan are paid by both the employer and the employees. The Swiss pension plan allows employees to choose the level of contributions paid by them. Employee contributions are calculated as a percentage of the contributory salary and are deducted monthly. The percentages deducted from salary depend on age and choice of contribution category and vary between 1% and 13.5% of contributory base salary and between 0% and 9% of contributory variable compensation. Depending on the age of the employee, UBS AG pays a contribution that ranges between 6.5% and 27.5% of contributory base salary and between 3.6% and 9% of contributory variable compensation. UBS AG also pays risk contributions that are used to finance benefits paid out in the event of death and disability, as well as to finance bridging pensions.

The plan benefits include retirement, disability and survivor benefits. The pension plan offers to members at the normal retirement age of 64 a choice between a lifetime pension with or without full restitution and a partial or full lump sum payment. Members can draw early retirement benefits starting from the age of 58. Employees have the possibility to make additional purchases of benefits to fund early retirement benefits (Plan 58+).

The pension amount payable is a result of the conversion rate applied on the accumulated balance of the individual plan participant's pension account at the retirement date. The accumulated balance of each individual plan participant's pension account is based on credited vested benefits transferred from previous employers, purchases of benefits and the employee and employer contributions that have been made to the pension account of each individual plan participant, as well as the interest accrued on the accumulated balance. The interest rate accrued is defined annually by the Pension Foundation Board.

Although the Swiss pension plan is based on a defined contribution promise under Swiss pension law, it is accounted for as a defined benefit plan under IAS 19, primarily because of the obligation to accrue interest on the pension accounts and the payment of lifetime pension benefits.

Note 26 Pension and other post-employment benefit plans (continued)

The Swiss pension plan is governed by a Pension Foundation Board. The responsibilities of this board are defined by Swiss pension law and by the plan rules. An actuarial valuation under Swiss pension law is performed regularly. According to Swiss pension law, a temporary limited underfunding is permitted. However, should an underfunded situation occur, the Pension Foundation Board is required to take the necessary measures to ensure that full funding can be expected to be restored within a maximum period of 10 years. If a Swiss pension plan were to become significantly underfunded on a Swiss pension law basis, additional employer and employee contributions could be required. In this situation, the risk is shared between employer and employees, and the employer is not legally obliged to cover more than 50% of the additional contributions required. As of 31 December 2017, the Swiss pension plan had a technical funding ratio under Swiss pension law of 131.9% (31 December 2016: 125.4%).

The investment strategy of the Swiss plan is implemented on the basis of a multi-level investment and risk management process and complies with Swiss pension law, including the rules and regulations relating to diversification of plan assets. These rules, among others, specify restrictions to the composition of plan assets, e.g., there is a limit of 50% for investments in equities. The investment strategy of the Swiss plan is aligned with the defined risk budget set out by the Pension Foundation Board. The risk budget is determined on the basis of regularly performed asset and liability management analyses. In order to implement the risk budget, the Swiss plan may use direct investments, investment funds and derivatives. To mitigate foreign currency risk, a specific currency hedging strategy is in place. The Pension Foundation Board strives for a medium- and long-term balance between assets and liabilities.

As of 31 December 2017, the Swiss pension plan was in a surplus situation on an International Financial Reporting Standards (IFRS) measurement basis, as the fair value of plan assets exceeded the DBO by CHF 1,940 million (31 December 2016: surplus of CHF 1,749 million). However, a surplus is only recognized on the balance sheet to the extent that it does not exceed the estimated future economic benefit, which equals the difference between the present value of the estimated future net service cost and the present value of the estimated future employer contributions. The maximum future economic benefit is highly variable based on changes in the discount rate. Both as of 31 December 2017 and 31 December 2016, the estimated future economic benefit was zero and hence no net defined benefit asset was recognized on the balance sheet. As of 31 December 2017, the difference between the pension plan surplus and the estimated future economic benefit, i.e., the asset ceiling effect, was CHF 1,940 million (31 December 2016: CHF 1,749 million). CHF 999 million out of the total movement of CHF 1,008 million was recognized in *Other comprehensive income* and CHF 9 million related to interest expense on the asset ceiling effect was recognized in the income statement. As of 31 December 2016, CHF 452 million out of the total movement of CHF 466 million was recognized in *Other comprehensive income* and CHF 14 million related to interest expense on the asset ceiling effect was recognized in the income statement.

The employer contributions expected to be made to the Swiss pension plan in 2018 are estimated to be CHF 294 million.

→ **Refer to Note 35 for information on changes to the Swiss pension plan that will take effect from the start of 2019**

Non-Swiss pension plans

UBS AG locations outside of Switzerland offer various defined benefit pension plans in accordance with local regulations and practices. The non-Swiss locations with major defined benefit pension plans are the UK, the US and Germany. Defined benefit pension plans in other locations are not material to the financial results of UBS AG and hence not separately disclosed.

The non-Swiss plans provide benefits in the event of retirement, death or disability. The level of benefits provided depends on the specific rate of benefit accrual and the level of employee compensation. UBS AG's general principle is to ensure that the plans are adequately funded on the basis of actuarial valuations. Local pension regulations and tax requirements are the primary drivers for determining when contributions are required.

UK pension plan

The UK plan is a career-average revalued earnings scheme, and benefits increase automatically based on UK price inflation. Normal retirement age for participants in the UK plan is 60. The UK plan is closed to new entrants and pension plan participants are no longer accruing benefits for current or future service. Employees instead participate in the UK defined contribution plan.

The governance responsibility for the UK plan lies jointly with the Pension Trustee Board, which is required under local pension laws, and UBS AG. The employer contributions to the pension fund reflect agreed-upon deficit-funding contributions, which are determined on the basis of the most recent actuarial valuation using assumptions agreed by the Pension Trustee Board and UBS AG. In the event of underfunding, UBS AG and the Pension Trustee Board must agree on a deficit recovery plan within statutory deadlines. In 2017 and 2016, UBS AG did not make any deficit-funding contributions.

The plan assets are invested in a diversified portfolio of financial assets. A liability-driven investment approach is applied, as a portion of the plan assets is invested in inflation-indexed bonds that provide a partial hedge against price inflation. If price inflation increases, the DBO will likely increase more significantly than the change in the fair value of plan assets, which would result in an increase in the net defined benefit liability. Plan rules and local pension legislation cap the level of inflationary increase that can be applied to plan benefits.

As the plan is obligated to provide guaranteed lifetime pension benefits to plan participants upon retirement, increases in life expectancy will result in an increase in the plan's liabilities. The sensitivity to changes in life expectancy is particularly high in the UK plan as the pension benefits are indexed to price inflation.

As of 31 December 2017, the UK plan was in a deficit situation on an IFRS measurement basis as the DBO exceeded the fair value of plan assets by CHF 268 million (31 December 2016: deficit of CHF 529 million).

No employer contributions are currently scheduled to be made to the UK defined benefit pension plan in 2018, subject to periodic review.

US pension plans

There are two distinct major defined benefit pension plans in the US. Normal retirement age for participants in both US plans is 65. The plans are closed to new entrants, who instead can participate in defined contribution plans.

One of the major defined benefit pension plans is a contribution-based plan in which each participant accrues a percentage of salary in a pension account. The pension account is credited annually with interest based on a rate that is linked to the average yield on one-year US government bonds. For the other major defined benefit pension plan, retirement benefits accrue based on the career-average earnings of each individual plan participant. Former employees with vested benefits have the option to take a lump sum payment or a lifetime annuity commencing early or at retirement age.

As required under local state pension laws, both plans have fiduciaries who, together with UBS AG, are responsible for the governance of the plans. UBS AG regularly reviews the contribution strategy for these plans. In determining the contribution strategy, UBS AG considers local statutory funding rules and the cost of any premiums that must be paid to the Pension Benefit Guaranty Corporation for having an underfunded plan. In 2017, the contributions made by UBS AG were CHF 89 million (2016: CHF 172 million).

The plan assets for both plans are invested in a diversified portfolio of financial assets. Each pension plan's fiduciaries are responsible for the investment decisions with respect to the plan assets. Both US plans apply a liability-driven investment approach to support the volatility management in the net asset / liability position. Derivative instruments may also be employed to manage volatility.

The employer contributions expected to be made to the US defined benefit pension plans in 2018 are estimated to be CHF 8 million.

German pension plans

There are two different defined benefit pension plans in Germany, and both are contribution-based plans. No plan assets are set aside to fund these plans, and benefits are directly paid by UBS AG. Normal retirement age for the participants in the German plans is 65. Within the larger of the two pension plans, each participant accrues a percentage of salary in a pension account. The accumulated account balance of the plan participant is credited on an annual basis with guaranteed interest at a rate of 5%. In the other plan, amounts are accrued annually based on employee elections. For this plan, the accumulated account balance is credited on an annual basis with a guaranteed interest rate of 4% for amounts accrued after 2009. Both German plans are regulated under German pension law, under which the responsibility to pay pension benefits when they are due rests entirely with UBS AG. For the German plans, a portion of the pension payments is directly increased in line with price inflation.

The benefits expected to be paid by UBS AG to the participants of the German plans in 2018 are estimated to be CHF 10 million.

Financial information by plan

The tables on the following pages provide an analysis of the movement in the net asset / liability recognized on the balance sheet for defined benefit pension plans, as well as an analysis of amounts recognized in net profit and in *Other comprehensive income*.

Note 26 Pension and other post-employment benefit plans (continued)

Defined benefit pension plans

CHF million	Swiss plan		UK plan		US and German plans		Total	
For the year ended	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Defined benefit obligation at the beginning of the year	22,865	22,636	3,704	3,350	1,755	1,619	28,325	27,605
Current service cost	324	471	0	0	9	9	333	480
Interest expense	117	240	100	116	61	62	279	419
Plan participant contributions	155	210	0	0	0	0	155	210
Remeasurements	51	477	(82)	922	80	125	49	1,524
of which: actuarial (gains) / losses due to changes in demographic assumptions	*4*	*(659)*	*(80)*	*(63)*	*(5)*	*3*	*(81)*	*(719)*
of which: actuarial (gains) / losses due to changes in financial assumptions	*138*	*698*	*47*	*1,022*	*84*	*107*	*269*	*1,827*
of which: experience (gains) / losses [1]	*(90)*	*438*	*(49)*	*(37)*	*2*	*15*	*(138)*	*416*
Curtailments	(27)	(96)	0	0	0	0	(27)	(96)
Benefit payments	(767)	(1,074)	(251)	(135)	(107)	(98)	(1,126)	(1,307)
Other movements[2]	(8,682)	0	0	0	0	19	(8,682)	19
Foreign currency translation	0	0	179	(549)	(29)	20	150	(529)
Defined benefit obligation at the end of the year	14,035	22,865	3,650	3,704	1,770	1,755	19,454	28,325
of which: amounts owed to active members	*6,437*	*10,419*	*176*	*290*	*248*	*258*	*6,861*	*10,967*
of which: amounts owed to deferred members	*0*	*0*	*1,881*	*2,210*	*628*	*584*	*2,510*	*2,794*
of which: amounts owed to retirees	*7,598*	*12,446*	*1,593*	*1,204*	*893*	*913*	*10,083*	*14,563*
Fair value of plan assets at the beginning of the year	24,614	23,919	3,175	3,400	1,144	997	28,934	28,316
Return on plan assets excluding amounts included in interest income	994	824	213	312	108	2	1,314	1,139
Interest income	128	258	86	118	44	44	257	420
Employer contributions	351	486	0	0	97	179	448	665
Plan participant contributions	155	210	0	0	0	0	155	210
Benefit payments	(767)	(1,074)	(251)	(135)	(107)	(98)	(1,126)	(1,307)
Administration expenses, taxes and premiums paid	(7)	(10)	0	0	(4)	(6)	(12)	(16)
Other movements[2]	(9,492)	0	0	0	0	0	(9,492)	0
Foreign currency translation	0	0	159	(520)	(48)	26	111	(494)
Fair value of plan assets at the end of the year	15,975	24,614	3,381	3,175	1,234	1,144	20,590	28,934
Asset ceiling effect at the beginning of the year	1,749	1,283	0	0	0	0	1,749	1,283
Interest expense on asset ceiling effect	9	14	0	0	0	0	9	14
Asset ceiling effect excluding interest expense on asset ceiling effect	999	452	0	0	0	0	999	452
Other movements[2]	(817)	0	0	0	0	0	(817)	0
Asset ceiling effect at the end of the year	1,940	1,749	0	0	0	0	1,940	1,749
Net defined benefit asset / (liability)	0	0	(268)	(529)	(536)	(611)	(805)	(1,140)
Movement in the net asset / (liability) recognized on the balance sheet								
Net asset / (liability) recognized on the balance sheet at the beginning of the year	0	0	(529)	50	(611)	(622)	(1,140)	(572)
Net periodic expenses recognized in net profit	(302)	(381)	(14)	2	(31)	(33)	(347)	(412)
Gains / (losses) recognized in other comprehensive income	(56)	(105)	295	(610)	28	(122)	266	(837)
Employer contributions	351	486	0	0	97	179	448	665
Other movements	8	0	0	0	0	(19)	8	(19)
Foreign currency translation	0	0	(20)	29	(20)	6	(39)	35
Net asset / (liability) recognized on the balance sheet at the end of the year	0	0	(268)	(529)	(536)	(611)	(805)	(1,140)
Funded and unfunded plans								
Defined benefit obligation from funded plans	14,035	22,865	3,650	3,704	1,291	1,316	18,975	27,885
Defined benefit obligation from unfunded plans	0	0	0	0	479	440	479	440
Plan assets	15,975	24,614	3,381	3,175	1,234	1,144	20,590	28,934
Surplus / (deficit)	1,940	1,749	(268)	(529)	(536)	(611)	1,135	609
Asset ceiling effect	1,940	1,749	0	0	0	0	1,940	1,749
Net defined benefit asset / (liability)	0	0	(268)	(529)	(536)	(611)	(805)	(1,140)

1 Experience (gains) / losses are a component of actuarial remeasurements of the defined benefit obligation that reflect the effects of differences between the previous actuarial assumptions and what has actually occurred. 2 Primarily reflects the transfer of employees from UBS AG to UBS Business Solutions AG.

Note 26 Pension and other post-employment benefit plans (continued)

Analysis of amounts recognized in net profit

CHF million	Swiss plan		UK plan		US and German plans		Total	
For the year ended	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Current service cost	324	471	0	0	9	9	333	480
Interest expense related to defined benefit obligation	117	240	100	116	61	62	279	419
Interest income related to plan assets	(128)	(258)	(86)	(118)	(44)	(44)	(257)	(420)
Interest expense on asset ceiling effect	9	14	0	0	0	0	9	14
Administration expenses, taxes and premiums paid	7	10	0	0	4	6	12	16
Curtailments	(27)	(96)	0	0	0	0	(27)	(96)
Net periodic expenses recognized in net profit	302	381	14	(2)	31	33	347	412

Analysis of amounts recognized in other comprehensive income (OCI)

CHF million	Swiss plan		UK plan		US and German plans		Total	
For the year ended	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Remeasurement of defined benefit obligation	(51)	(477)	82	(922)	(80)	(125)	(49)	(1,524)
Return on plan assets excluding amounts included in interest income	994	824	213	312	108	2	1,314	1,139
Asset ceiling effect excluding interest expense on asset ceiling effect	(999)	(452)	0	0	0	0	(999)	(452)
Total gains / (losses) recognized in other comprehensive income, before tax	(56)	(105)	295	(610)	28	(122)	266	(837)

The table below provides information on the duration of the DBO and the timing for expected benefit payments.

	Swiss plan[1]		UK plan		US and German plans[2]	
	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Duration of the defined benefit obligation (in years)	15.1	15.1	20.0	22.6	10.6	10.6
Maturity analysis of benefits expected to be paid						
CHF million						
Benefits expected to be paid within 12 months	689	1,140	81	72	105	103
Benefits expected to be paid between 1 and 3 years	1,389	2,204	177	164	212	213
Benefits expected to be paid between 3 and 6 years	2,085	3,394	328	315	321	328
Benefits expected to be paid between 6 and 11 years	3,326	5,439	699	710	558	562
Benefits expected to be paid between 11 and 16 years	3,090	5,041	786	856	501	514
Benefits expected to be paid in more than 16 years	10,453	17,162	4,216	6,064	865	958

1 The decrease in benefits expected to be paid in 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. 2 The duration of the defined benefit obligation represents a weighted average across US and German plans.

Note 26 Pension and other post-employment benefit plans (continued)

Actuarial assumptions

The measurement of each pension plan's DBO considers different actuarial assumptions. Changes in those assumptions lead to volatility in the DBO. The following principal actuarial assumptions are applied:

- Discount rate: the discount rate is based on the yield of high-quality corporate bonds quoted in an active market in the currency of the respective pension plan. Consequently, a decrease in the yield of high-quality corporate bonds increases the DBO. Conversely, an increase in the yield of high-quality corporate bonds decreases the DBO.
- Rate of salary increase: an increase in the salary of plan participants generally increases the DBO, specifically for the Swiss and German plans. For the UK plan, as the plan is closed for future service, UBS AG employees no longer accrue future service benefits and thus salary increases have no effect on the DBO. For the US plans, only a small percentage of the total population continues to accrue benefits for future service and therefore the effect of a salary increase on the DBO is minimal.
- Rate of pension increase: for the Swiss plan, there is no automatic indexing of pensions. Any increase would be decided by the Pension Foundation Board. For the US plans, there is also no automatic indexing of pensions. For the UK plan, pensions are automatically indexed to price inflation as per plan rules and local pension legislation. The German plans are also automatically indexed and a portion of the pensions are directly increased by price inflation. An increase in price inflation in the UK and Germany increases the respective plan's DBO.
- Rate of interest credit on retirement savings: the Swiss plan and one of the US plans have retirement saving balances that are increased annually by an interest credit rate. For these plans, an increase in the interest credit rate increases the respective plan's DBO.
- Life expectancy: for most of UBS AG's defined benefit pension plans, the respective plan is obligated to provide guaranteed lifetime pension benefits. The DBO for all plans is calculated using an underlying best estimate of the life expectancy of plan participants. An increase in the life expectancy of plan participants increases the plan's DBO.

The actuarial assumptions used for the pension plans are based on the economic conditions prevailing in the jurisdiction in which they are offered.

→ **Refer to Note 1a item 7 for a description of the accounting policy for defined benefit pension plans**

Changes in actuarial assumptions

UBS AG regularly reviews the actuarial assumptions used in calculating its DBO to determine their continuing relevance.

Swiss pension plan

In 2017, a net loss of CHF 51 million was recognized in *Other comprehensive income* (OCI) related to the remeasurement of the DBO. This was primarily due to a market-driven decrease in the discount rate, which resulted in an OCI loss of CHF 164 million. This effect was partly offset by experience gains of CHF 90 million, reflecting differences between the previous actuarial assumptions and what actually occurred, and by market-driven changes to the assumed rate of interest credit on retirement savings, which resulted in a gain of CHF 26 million. Changes in other assumptions were not significant.

In 2016, UBS AG continued to enhance its methodology for estimating the discount rate by improving the construction of the yield curve from Swiss high-quality corporate bonds. Furthermore, UBS AG refined its approach for estimating the life expectancy, the rate of employee disability and the rate of salary increases. These changes in estimates decreased the DBO of the Swiss pension plan by CHF 319 million, of which changes in demographic assumptions decreased the DBO by CHF 659 million and changes in financial assumptions increased the DBO by CHF 339 million. However, the effect from these changes in estimates was more than offset by experience losses and market-driven changes in the discount rate, resulting in a total upward remeasurement of the Swiss plan DBO of CHF 477 million recognized in OCI.

UK pension plan

In 2017, a net gain of CHF 82 million was recognized in OCI related to the remeasurement of the DBO for the UK plan. This was primarily driven by changes in the life expectancy assumption, which resulted in a gain of CHF 80 million. In addition, market-driven changes in the inflation rate assumption resulted in a gain of CHF 60 million and experience gains were CHF 49 million. These gains were partly offset by a market-driven decrease in the discount rate, which resulted in a loss of CHF 105 million.

In 2016, a net loss of CHF 922 million was recognized in OCI related to the remeasurement of the DBO for the UK plan, resulting from a loss of CHF 866 million due to a market-driven decrease in the discount rate and a loss of CHF 156 million from market-driven changes in the inflation rate assumption, partly offset by a gain of CHF 63 million from changes in the life expectancy assumption and an experience gain of CHF 37 million.

US and German pension plans

In 2017, a net loss of CHF 80 million was recognized in OCI related to the remeasurement of the DBO for the US and German plans compared with a net loss of CHF 125 million in 2016. OCI losses in both years were primarily driven by market-driven decreases in discount rates.

Note 26 Pension and other post-employment benefit plans (continued)

The tables below show the principal actuarial assumptions used in calculating the DBO at the end of the year.

Principal actuarial assumptions used

	Swiss plan		UK plan		US and German plans[1]	
In %	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Discount rate	0.67	0.73	2.55	2.69	3.14	3.58
Rate of salary increase	1.30	1.30	0.00	0.00	2.83	2.86
Rate of pension increase	0.00	0.00	3.11	3.18	1.50	1.50
Rate of interest credit on retirement savings	0.67	0.73	0.00	0.00	2.56	1.74

1 Represents weighted average assumptions across US and German plans.

Mortality tables and life expectancies for major plans

		Life expectancy at age 65 for a male member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.17	31.12.16	31.12.17	31.12.16
Switzerland	BVG 2015 G with CMI 2016 projections[1]	21.6	21.5	23.0	22.9
UK	S2PA with CMI 2016 projections[2]	23.4	23.7	24.6	25.0
USA	RP2014 WCHA with MP2017 projection scale[3]	22.8	22.9	24.4	24.4
Germany	Dr. K. Heubeck 2005 G	20.3	20.1	22.9	22.8

		Life expectancy at age 65 for a female member currently			
		aged 65		aged 45	
Country	Mortality table	31.12.17	31.12.16	31.12.17	31.12.16
Switzerland	BVG 2015 G with CMI 2016 projections[1]	23.4	23.4	24.9	24.9
UK	S2PA with CMI 2016 projections[2]	25.2	25.6	26.5	27.4
USA	RP2014 WCHA with MP2017 projection scale[3]	24.4	24.5	26.0	26.1
Germany	Dr. K. Heubeck 2005 G	24.3	24.2	26.8	26.7

1 In 2016, the mortality table BVG 2015 G with proposed CMI 2016 was used. 2 In 2016, the mortality table S2PA with CMI 2015 projections was used. 3 In 2016, the mortality table RP2014 WCHA with MP2016 projection scale was used.

Sensitivity analysis of significant actuarial assumptions

The table below presents a sensitivity analysis for each significant actuarial assumption, showing how the DBO would have been affected by changes in the relevant actuarial assumption that were reasonably possible at the balance sheet date. Unforeseen circumstances may arise, which could result in variations that are outside the range of alternatives deemed reasonably possible. Caution should be used in extrapolating the sensitivities below on the DBO as the sensitivities may not be linear.

Sensitivity analysis of significant actuarial assumptions[1]

Increase / (decrease) in defined benefit obligation	Swiss plan[2]		UK plan		US and German plans	
CHF million	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Discount rate						
Increase by 50 basis points	(875)	(1,435)	(341)	(388)	(88)	(86)
Decrease by 50 basis points	996	1,630	391	452	96	94
Rate of salary increase						
Increase by 50 basis points	60	86	–[3]	–[3]	1	1
Decrease by 50 basis points	(57)	(79)	–[3]	–[3]	(1)	(1)
Rate of pension increase						
Increase by 50 basis points	708	1,178	370	435	7	6
Decrease by 50 basis points	–[4]	–[4]	(327)	(377)	(6)	(6)
Rate of interest credit on retirement savings						
Increase by 50 basis points	164	264	–[5]	–[5]	9	9
Decrease by 50 basis points	(155)	(250)	–[5]	–[5]	(9)	(8)
Life expectancy						
Increase in longevity by one additional year	485	796	139	136	47	44

1 The sensitivity analyses are based on a change in one assumption while holding all other assumptions constant, so that interdependencies between the assumptions are excluded. 2 The decrease in sensitivity in 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. 3 As the plan is closed for future service, a change in assumption is not applicable. 4 As the assumed rate of pension increase was 0% as of 31 December 2017 and as of 31 December 2016, a downward change in assumption is not applicable. 5 As the UK plan does not provide interest credits on retirement savings, a change in assumption is not applicable.

Note 26 Pension and other post-employment benefit plans (continued)

Fair value of plan assets

The tables below provide information on the composition and fair value of plan assets of the Swiss, the UK and the US pension plans.

Composition and fair value of plan assets

Swiss plan

	31.12.17				31.12.16			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
CHF million	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	72	0	72	0	869	0	869	4
Real estate / property								
Domestic	0	1,714	1,714	11	0	2,689	2,689	11
Investment funds								
Equity								
Domestic	400	0	400	3	938	0	938	4
Foreign	4,499	798	5,297	33	6,558	1,170	7,728	31
Bonds[1]								
Domestic, AAA to BBB–	1,366	0	1,366	9	2,222	0	2,222	9
Foreign, AAA to BBB–	3,821	0	3,821	24	5,877	0	5,877	24
Foreign, below BBB–	346	0	346	2	1,176	0	1,176	5
Real estate								
Foreign	0	14	14	0	0	42	42	0
Other	516	2,423	2,940	18	283	2,776	3,059	12
Other investments	0	7	7	0	0	15	15	0
Total fair value of plan assets	11,019	4,956	15,975	100	17,923	6,691	24,614	100

	31.12.17	31.12.16
Total fair value of plan assets	15,975	24,614
of which:[2]		
Bank accounts at UBS AG	*117*	*432*
UBS AG debt instruments	*3*	*5*
UBS Group AG shares	*33*	*47*
Securities lent to UBS AG[3]	*1,979*	*1,855*
Property occupied by UBS AG	*83*	*83*
Derivative financial instruments, counterparty UBS AG[3]	*23*	*(220)*

1 The bond credit ratings are primarily based on Standard & Poor's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in the Standard & Poor's rating classification. 2 Bank accounts at UBS AG encompass accounts in the name of the Swiss pension fund. The other positions disclosed in the table encompass both direct investments in UBS AG instruments and UBS Group AG shares and indirect investments, i.e., those made through funds that the pension fund invests in. 3 Securities lent to UBS AG and derivative financial instruments are presented gross of any collateral. Securities lent to UBS AG were fully covered by collateral as of 31 December 2017 and 31 December 2016. Net of collateral, derivative financial instruments amounted to CHF 11 million as of 31 December 2017 (31 December 2016: CHF 76 million).

Note 26 Pension and other post-employment benefit plans (continued)

Composition and fair value of plan assets (continued)

UK plan

	31.12.17				31.12.16			
	Fair value			Plan asset allocation %	Fair value			Plan asset allocation %
CHF million	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	159	0	159	5	133	0	133	4
Bonds[1]								
Domestic, AAA to BBB–	1,666	0	1,666	49	1,131	0	1,131	36
Domestic, below BBB–	1	0	1	0	1	0	1	0
Investment funds								
Equity								
Domestic	31	0	31	1	39	0	39	1
Foreign	1,020	0	1,020	30	984	0	984	31
Bonds[1]								
Domestic, AAA to BBB–	625	81	706	21	500	28	528	17
Domestic, below BBB–	21	0	21	1	23	0	23	1
Foreign, AAA to BBB–	143	0	143	4	245	0	245	8
Foreign, below BBB–	56	0	56	2	39	0	39	1
Real estate								
Domestic	100	27	128	4	39	72	111	4
Other	(4)	5	1	0	(35)	111	76	2
Other investments[2]	(560)	11	(549)	(16)	(144)	10	(134)	(4)
Total fair value of plan assets	3,257	124	3,381	100	2,955	221	3,175	100

1 The bond credit ratings are primarily based on Standard & Poor's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in the Standard & Poor's rating classification. 2 Mainly relates to repurchase arrangements on UK treasury bonds.

Note 26 Pension and other post-employment benefit plans (continued)

Composition and fair value of plan assets (continued)

US plans

	31.12.17				31.12.16			
	Fair value			Weighted average plan asset allocation %	Fair value			Weighted average plan asset allocation %
CHF million	Quoted in an active market	Other	Total		Quoted in an active market	Other	Total	
Cash and cash equivalents	74	0	74	6	75	0	75	7
Bonds[1]								
Domestic, AAA to BBB–	195	0	195	16	158	0	158	14
Domestic, below BBB–	10	0	10	1	13	0	13	1
Foreign, AAA to BBB–	44	0	44	4	42	0	42	4
Foreign, below BBB–	1	0	1	0	1	0	1	0
Investment funds								
Equity								
Domestic	291	0	291	24	264	0	264	23
Foreign	270	0	270	22	248	0	248	22
Bonds[1]								
Domestic, AAA to BBB–	210	0	210	17	218	0	218	19
Domestic, below BBB–	19	0	19	2	18	0	18	2
Foreign, AAA to BBB–	46	0	46	4	42	0	42	4
Foreign, below BBB–	5	0	5	0	5	0	5	0
Real estate								
Domestic	0	12	12	1	0	11	11	1
Other	21	0	21	2	19	0	19	2
Insurance contracts	0	17	17	1	0	18	18	2
Asset-backed securities	15	0	15	1	8	0	8	1
Other investments	4	0	4	0	3	0	3	0
Total fair value of plan assets	1,204	30	1,234	100	1,115	29	1,144	100

1 The bond credit ratings are primarily based on Standard & Poor's credit ratings. Ratings AAA to BBB– and below BBB– represent investment grade and non-investment grade ratings, respectively. In cases where credit ratings from other rating agencies were used, these were converted to the equivalent rating in the Standard & Poor's rating classification.

Note 26 Pension and other post-employment benefit plans (continued)

b) Post-employment medical insurance plans

In the US and the UK, UBS AG offers post-employment medical insurance benefits that contribute to the health care coverage of certain employees and their beneficiaries after retirement. The UK post-employment medical insurance plan is closed to new entrants.

These plans are not prefunded. In the US, the retirees also contribute to the cost of the post-employment medical benefits.

The benefits expected to be paid by UBS AG to the post-employment medical insurance plans in 2018 are estimated to be CHF 5 million.

The table below provides an analysis of the movement in the net asset / liability recognized on the balance sheet for post-employment medical plans, as well as an analysis of amounts recognized in net profit and in *Other comprehensive income*.

Post-employment medical insurance plans

CHF million	UK plan		US plans		Total	
For the year ended	31.12.17	31.12.16	31.12.17	31.12.16	31.12.17	31.12.16
Post-employment benefit obligation at the beginning of the year	26	25	65	59	91	84
Current service cost	0	0	0	0	0	0
Interest expense	1	1	2	3	3	3
Plan participant contributions	0	0	3	2	3	2
Remeasurements	(1)	6	0	7	(1)	13
of which: actuarial (gains) / losses due to changes in demographic assumptions	*0*	*1*	*0*	*(1)*	*(1)*	*0*
of which: actuarial (gains) / losses due to changes in financial assumptions	*(1)*	*5*	*2*	*1*	*2*	*6*
of which: experience (gains) / losses [1]	*0*	*0*	*(2)*	*6*	*(2)*	*6*
Benefit payments[2]	(1)	(1)	(7)	(7)	(9)	(8)
Foreign currency translation	1	(4)	(3)	1	(1)	(3)
Post-employment benefit obligation at the end of the year	26	26	59	65	86	91
of which: amounts owed to active members	*6*	*6*	*0*	*0*	*6*	*6*
of which: amounts owed to deferred members	*0*	*0*	*0*	*0*	*0*	*0*
of which: amounts owed to retirees	*20*	*21*	*59*	*65*	*79*	*86*
Fair value of plan assets at the end of the year	0	0	0	0	0	0
Net post-employment benefit asset / (liability)	(26)	(26)	(59)	(65)	(86)	(91)
Analysis of amounts recognized in net profit						
Current service cost	0	0	0	0	0	0
Interest expense related to post-employment benefit obligation	1	1	2	3	3	3
Net periodic expenses	1	1	2	3	3	4
Analysis of amounts recognized in other comprehensive income (OCI)						
Remeasurement of post-employment benefit obligation	1	(6)	0	(7)	1	(13)
Total gains / (losses) recognized in other comprehensive income, before tax	1	(6)	0	(7)	1	(13)

1 Experience (gains) / losses are a component of actuarial remeasurements of the post-employment benefit obligation that reflect the effects of differences between the previous actuarial assumptions and what has actually occurred. 2 Benefit payments are funded by employer contributions and plan participant contributions.

Note 26 Pension and other post-employment benefit plans (continued)

Actuarial assumptions

The measurement of each medical insurance plan's post-employment benefit obligation considers different actuarial assumptions. Changes in assumptions lead to volatility in the post-employment benefit obligation. The following principal actuarial assumptions are applied:

- Discount rate: discount rates used for post-employment medical insurance plans are the same as those used for defined benefit pension plans. A decrease in the yield of high-quality corporate bonds increases the post-employment benefit obligation. Conversely, an increase in the yield of high-quality corporate bonds decreases the post-employment benefit obligation.
- Average health care cost trend rate: an increase in health care costs generally increases the post-employment benefit obligation.
- Life expectancy: as some plan participants have lifetime benefits under these plans, an increase in life expectancy increases the post-employment benefit obligation.

UBS AG regularly reviews the actuarial assumptions used in calculating its post-employment benefit obligations to determine their continuing relevance. Principal actuarial assumptions used to determine post-employment benefit obligations at the end of the year were:

Principal actuarial assumptions used[1]

	UK plan		US plans[2]	
In %	31.12.17	31.12.16	31.12.17	31.12.16
Discount rate	2.55	2.69	3.54	3.97
Average health care cost trend rate – initial	5.10	5.10	7.99	7.03
Average health care cost trend rate – ultimate	5.10	5.10	4.50	4.50

1 The assumptions for life expectancies are provided within Note 26a. 2 Represents weighted average assumptions across US plans.

Sensitivity analysis of significant actuarial assumptions

The table below presents a sensitivity analysis for each significant actuarial assumption showing how the post-employment benefit obligation would have been affected by changes in the relevant actuarial assumption that were reasonably possible at the balance sheet date. Unforeseen circumstances may arise, which could result in variations that are outside the range of alternatives deemed reasonably possible. Caution should be used in extrapolating the sensitivities below on the post-employment benefit obligation, as the sensitivities may not be linear.

Sensitivity analysis of significant actuarial assumptions[1]

Increase / (decrease) in post-employment benefit obligation	UK plan		US plans	
CHF million	31.12.17	31.12.16	31.12.17	31.12.16
Discount rate				
Increase by 50 basis points	(2)	(2)	(3)	(3)
Decrease by 50 basis points	2	2	3	3
Average health care cost trend rate				
Increase by 100 basis points	4	4	1	2
Decrease by 100 basis points	(3)	(3)	(1)	(1)
Life expectancy				
Increase in longevity by one additional year	2	2	4	5

1 The sensitivity analyses are based on a change in one assumption while holding all other assumptions constant, so that interdependencies between the assumptions are excluded.

c) Defined contribution plans

UBS AG sponsors a number of defined contribution plans in locations outside Switzerland. The locations with significant defined contribution plans are the US and the UK. Certain plans allow employees to make contributions and earn matching or other contributions from UBS AG. Employer contributions to defined contribution plans are recognized as an expense, which, for the years ended 31 December 2017, 2016 and 2015, amounted to CHF 232 million, CHF 236 million and CHF 239 million, respectively.

Note 26 Pension and other post-employment benefit plans (continued)

d) Related-party disclosure

UBS AG is the principal provider of banking services for the pension fund of UBS AG in Switzerland. In this capacity, UBS AG is engaged to execute most of the pension fund's banking activities. These activities can include, but are not limited to, trading, securities lending and borrowing and derivative transactions. The non-Swiss UBS AG pension funds do not have a similar banking relationship with UBS AG.

Also, UBS AG leases certain properties that are owned by the Swiss pension fund. As of 31 December 2017, the minimum commitment toward the Swiss pension fund under the related leases was approximately CHF 5 million (31 December 2016: CHF 11 million).

→ **Refer to the "Composition and fair value of plan assets" table in Note 26a for more information on fair value of investments in UBS AG instruments held by the Swiss pension fund**

The following amounts have been received or paid by UBS AG from and to the pension and other post-employment benefit plans located in Switzerland, the UK and the US in respect of these banking activities and arrangements.

Related-party disclosure

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Received by UBS AG			
Fees	36	36	33
Paid by UBS AG			
Rent	4	4	5
Dividends, capital repayments and interest	9	15	13

The transaction volumes in UBS Group AG shares and UBS AG debt instruments and the balances of UBS Group AG shares held as of 31 December were:

Transaction volumes – UBS Group AG shares and UBS AG debt instruments

	For the year ended	
	31.12.17	31.12.16
Financial instruments bought by pension funds		
UBS Group AG shares (in thousands of shares)	905	2,427
UBS AG debt instruments (par values, CHF million)	2	0
Financial instruments sold by pension funds or matured		
UBS Group AG shares (in thousands of shares)	2,897	1,618
UBS AG debt instruments (par values, CHF million)	4	0

UBS Group AG shares held by pension and other post-employment benefit plans

	31.12.17	31.12.16
Number of shares (in thousands of shares)	16,370	18,363
Fair value (CHF million)	293	293

Note 27 Employee benefits: variable compensation

a) Plans offered

UBS has several share-based and other compensation plans that align the interests of Group Executive Board (GEB) members, Key Risk Takers (KRTs) and other employees with the interests of shareholders and other investors. These compensation plans are also designed to meet regulatory requirements. Section a) of this Note provides a description of the most significant compensation plans.

For the majority of variable compensation awards granted under such plans to employees of UBS AG, the grantor entity is UBS Group AG. Expenses associated with these awards are charged by UBS Group AG to UBS AG. For the purpose of this Note, references to shares refer to UBS Group AG shares.

→ **Refer to Note 1a item 6 for a description of the accounting policy related to share-based and other compensation plans**

Mandatory deferred compensation plans

Equity Ownership Plan (EOP)

The EOP is a mandatory deferred compensation plan for all employees with total compensation greater than CHF / USD 300,000. These employees receive at least 60% of their deferred performance award under the EOP in notional shares.

EOP awards granted to GEB members and certain other employees only vest if both Group and business division performance conditions are met. Group performance is measured based on the average adjusted return on tangible equity (RoTE) excluding deferred tax assets over the performance period. Business division performance is measured on the basis of the business division's average adjusted return on attributed equity (RoAE). For Corporate Center employees, it is measured on the basis of the average operating businesses RoAE.

Certain awards, such as replacement awards issued outside the normal performance year cycle, may take the form of deferred cash under the EOP plan rules.

Notional shares represent a promise to receive UBS shares at vesting and do not carry voting rights during the vesting period. Notional shares granted before February 2014 have no rights to dividends, whereas awards granted since February 2014 carry a dividend equivalent that may be paid in notional shares or cash and that vests on the same terms and conditions as the awards. However, awards that have been granted in February 2018 for the performance year 2017 to individuals who are deemed to be Material Risk Takers (MRTs) based on regulatory guidance in the EU do not carry such a dividend equivalent. Awards are settled by delivering UBS shares at vesting, except in jurisdictions where this is not permitted for legal or tax reasons. EOP awards generally vest in equal installments after two and three years following grant (for GEB members, generally after three, four and five years). The awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS.

Deferred Contingent Capital Plan (DCCP)

The DCCP is a mandatory deferred compensation plan for all employees with total compensation greater than CHF / USD 300,000. DCCP awards granted up to January 2015 represent a right to receive a cash payment at vesting. For awards granted since February 2015, DCCP takes the form of notional additional tier 1 (AT1) capital instruments, which can be settled in the form of either a cash payment or a perpetual, marketable AT1 capital instrument, at the discretion of UBS. Awards vest in full after five years and up to seven years for certain employees subject to specific regulation in the UK unless there is a trigger event.

Awards are written down if the Group's common equity tier 1 (CET1) capital ratio falls below 10% for GEB members and below 7% for all other employees. Awards are also forfeited if a viability event occurs, that is, if FINMA notifies the firm in writing that the DCCP awards must be written down to prevent an insolvency, bankruptcy or failure of UBS, or if the firm receives a commitment of extraordinary support from the public sector that is necessary to prevent such an event. As an additional performance condition, GEB members forfeit 20% of their award for each loss-making year during the vesting period.

For awards granted up to January 2015, interest on the awards is paid annually, provided that UBS achieved an adjusted profit before tax in the preceding year. For awards granted since February 2015, interest payments are discretionary. Awards granted to MRTs since February 2018 are not eligible for interest payments. The awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS.

Asset Management EOP

In order to align deferred compensation of certain Asset Management employees with the performance of the investment funds they manage, awards are granted to such employees in the form of cash-settled notional investment funds. The amount delivered depends on the value of the underlying investment funds at the time of vesting. The awards are generally forfeitable upon, among other circumstances, voluntary termination of employment with UBS.

Wealth Management Americas financial advisor compensation

In line with market practice for US wealth management businesses, the compensation for financial advisors in Wealth Management Americas is comprised of production payout and deferred compensation awards. Production payout, paid monthly in the form of non-deferred cash payments, is primarily based on compensable revenue.

Financial advisors may also qualify for deferred compensation awards, which vest over various time periods of up to 10 years. Production payout rates and deferred compensation awards may be reduced for, among other things, errors, negligence or carelessness, or a failure to comply with the firm's rules, standards, practices and policies or applicable laws and regulations.

Strategic objective awards

Strategic objective awards are deferred compensation awards based on strategic performance measures, including production, length of service with the firm and net new business. These awards are granted in the form of both deferred share-based and deferred cash-based awards with a vesting period of up to six years.

Through performance year 2016, strategic objective awards were partly granted under the PartnerPlus deferred cash plan. In addition to such granted awards (UBS AG company contributions), participants were also allowed to voluntarily contribute additional amounts otherwise payable as production payout up to a certain percentage, which vest upon contribution. Company contributions and voluntary contributions are credited with interest in accordance with the terms of the plan. Rather than being credited with interest, a participant may elect to have voluntary contributions, along with vested company contributions, credited with notional earnings based on the performance of various mutual funds. Company contributions and interest on both company and voluntary contributions ratably vest in 20% installments six to ten years following grant date. Company contributions and interest on notional earnings on both company and voluntary contributions are forfeitable under certain circumstances.

GrowthPlus

GrowthPlus is a compensation plan for selected financial advisors whose revenue production and length of service exceed defined thresholds from 2010 through 2017. Awards were granted in 2010, 2011, 2015 and early 2018. The awards are distributed over seven years, with the exception of 2018 awards, which will be distributed over five years.

Other compensation plans

Equity Plus Plan (Equity Plus)

Equity Plus is a voluntary share-based compensation plan that provides eligible employees with the opportunity to purchase UBS shares at market value and receive one notional share for every three shares purchased, up to a maximum annual limit. Share purchases may be made annually from the performance award and / or monthly through deductions from salary. If the shares purchased are held until three years from the start of the associated plan year and, in general, if the employee remains in employment, the notional shares vest. For notional shares granted since April 2014, employees are entitled to receive a dividend equivalent, which may be paid in notional shares and / or cash.

Role-based allowances (RBAs)

Certain employees of legal entities regulated in the EU may receive an RBA in addition to their base salary. This allowance reflects the market value of a specific role and is only paid as long as the employee is within such a role. RBAs are offered in line with market practice and are generally paid in cash. In the UK, RBAs are awarded in cash and, above a certain threshold, in blocked UBS shares. Such shares will be unblocked in equal installments after two and three years. The compensation expense is recognized in the year of grant.

Discontinued deferred compensation plans

Senior Executive Equity Ownership Plan (SEEOP)

Up to February 2012, GEB members and selected senior executives received a portion of their mandatory deferral in UBS shares or notional shares, which vested in equal installments over a five-year vesting period and were forfeitable if certain conditions had not been met. The employee's business division or the Group as a whole had to be profitable in the financial year preceding scheduled vesting. Awards granted under SEEOP were settled by delivering UBS shares at vesting. No SEEOP awards have been granted since 2012.

Senior Executive Stock Option Plan (SESOP)

Up to February 2008, GEB members and selected senior executives were granted UBS options with a strike price set at 110% of the fair market value of a UBS share on the grant date. These awards vested in full following a three-year vesting period and generally expire ten years from the grant date. No SESOP awards have been granted since 2008.

Long-Term Deferred Retention Senior Incentive Scheme (LTDRSIS)

Awards under the LTDRSIS were granted to employees in Australia up to and including 2014 and represented a profit share amount based on the profitability of the Australian business. Awards vested after three years and included an arrangement that allowed for unpaid installments to be reduced if the business recorded a loss for the calendar year preceding vesting. The awards were generally forfeitable upon voluntary termination of employment with UBS.

Key Employee Stock Appreciation Rights Plan (KESAP) and Key Employee Stock Option Plan (KESOP)

Until 2009, certain key and high-potential employees were granted discretionary share-settled stock appreciation rights (SARs) or options on UBS shares with a strike price not less than the market value of a UBS share on the date of grant. A SAR gives employees the right to receive a number of UBS shares equal to the value of any market price increase of a UBS share between the grant date and the exercise date. One option entitles the holder to acquire one registered UBS share at the option's strike price. SARs and options are settled by delivering UBS shares, except in jurisdictions where this is not permitted for legal reasons. No options or SARs awards have been granted since 2009.

Note 27 Employee benefits: variable compensation (continued)

b) Effect on the income statement

Effect on the income statement for the financial year and future periods

The table below provides information on compensation expenses related to total variable compensation, including financial advisor compensation in Wealth Management Americas, that were recognized in the financial year ended 31 December 2017, as well as expenses that were deferred and will be recognized in the income statement for 2018 and later. The majority of expenses deferred to 2018 and later that are related to the performance year 2017 relates to awards granted in February 2018. The total compensation expense for unvested share-based awards granted up to 31 December 2017 will be recognized in future periods over a weighted average period of 2.1 years.

Variable compensation including Wealth Management Americas financial advisor compensation

	Expenses recognized in 2017			Expenses deferred to 2018 and later		
CHF million	Related to the performance year 2017	Related to prior performance years	Total	Related to the performance year 2017	Related to prior performance years	Total
Non-deferred cash	1,944	(24)	1,920	0	0	0
Deferred compensation awards	385	691	1,076	575	668	1,243
of which: Equity Ownership Plan	*231*	*357*	*588*	*314*	*279*	*593*
of which: Deferred Contingent Capital Plan	*130*	*299*	*429*	*234*	*360*	*594*
of which: Asset Management EOP	*25*	*31*	*55*	*27*	*26*	*52*
of which: Other performance awards	*0*	*4*	*4*	*0*	*3*	*3*
Total variable compensation – performance awards	**2,329**	**667**	**2,996**	**575**	**668**	**1,243**
Replacement payments	12	57	69	79	40	119
Forfeiture credits	0	(104)	(104)	0	0	0
Severance payments	93	0	93	0	0	0
Retention plan and other payments	24	37	61	29	31	61
Deferred Contingent Capital Plan: interest expense	0	108	108	78	212	290
Total variable compensation – other	**129**	**98**	**227**	**186**	**283**	**470**
Financial advisor compensation	2,995	252	3,247	153	779	932
of which: non-deferred cash	*2,836*	*0*	*2,836*	*0*	*0*	*0*
of which: deferred share-based awards	*56*	*44*	*100*	*69*	*117*	*186*
of which: deferred cash-based awards	*102*	*209*	*311*	*84*	*662*	*746*
Compensation commitments with recruited financial advisors[1]	30	710	740	360	2,009	2,369
Total Wealth Management Americas: Financial advisor compensation	**3,025**	**962**	**3,986**	**513**	**2,788**	**3,300**
Total variable compensation including WMA FA compensation	**5,483**	**1,727**	**7,209[2]**	**1,274**	**3,739**	**5,013**

1 Reflects expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. Amounts reflected as deferred expenses represent the maximum deferred exposure as of the balance sheet date. 2 Includes CHF 713 million in expenses related to share-based compensation (performance awards: CHF 588 million; other variable compensation: CHF 25 million; Wealth Management Americas financial advisor compensation: CHF 100 million). A further CHF 95 million in expenses related to share-based compensation was recognized within other Note 6 expense categories (Salaries: CHF 25 million, related to role-based allowances; Social security: CHF 48 million; Other personnel expenses: CHF 22 million, related to the Equity Plus Plan).

Note 27 Employee benefits: variable compensation (continued)

Variable compensation including Wealth Management Americas financial advisor compensation

	Expenses recognized in 2016			Expenses deferred to 2017 and later		
CHF million	Related to the performance year 2016	Related to prior performance years	Total	Related to the performance year 2016	Related to prior performance years	Total
Non-deferred cash	1,808	(41)	1,767	0	0	0
Deferred compensation awards	373	823	1,196	671	856	1,527
of which: Equity Ownership Plan	*214*	*484*	*698*	*372*	*356*	*727*
of which: Deferred Contingent Capital Plan	*133*	*295*	*428*	*266*	*468*	*735*
of which: Asset Management EOP	*26*	*39*	*65*	*34*	*27*	*60*
of which: Other performance awards	*0*	*6*	*6*	*0*	*5*	*5*
Total variable compensation – performance awards	**2,181**	**782**	**2,963**	**671**	**856**	**1,527**
Replacement payments	24	62	86	40	31	71
Forfeiture credits	0	(73)	(73)	0	0	0
Severance payments	217	0	217	0	0	0
Retention plan and other payments	25	51	76	24	27	50
Deferred Contingent Capital Plan: interest expense	0	112	112	98	243	341
Total variable compensation – other	**265**	**151**	**418**	**162**	**301**	**463**
Financial advisor compensation	2,651	247	2,898	196	893	1,089
of which: non-deferred cash	*2,506*	*0*	*2,506*	*0*	*0*	*0*
of which: deferred share-based awards	*33*	*48*	*81*	*57*	*120*	*177*
of which: deferred cash-based awards	*112*	*199*	*311*	*139*	*773*	*912*
Compensation commitments with recruited financial advisors[1]	43	756	799	607	2,120	2,727
Total Wealth Management Americas: Financial advisor compensation	**2,695**	**1,002**	**3,697**	**804**	**3,013**	**3,816**
Total variable compensation including WMA FA compensation	**5,142**	**1,935**	**7,078[2]**	**1,637**	**4,169**	**5,806**

1 Reflects expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. Amounts reflected as deferred expenses represent the maximum deferred exposure as of the balance sheet date. 2 Includes CHF 819 million in expenses related to share-based compensation (performance awards: CHF 698 million; other variable compensation: CHF 40 million; Wealth Management Americas financial advisor compensation: CHF 81 million). A further CHF 90 million in expenses related to share-based compensation was recognized within other Note 6 expense categories (Salaries: CHF 39 million, related to role-based allowances; Social security: CHF 27 million; Other personnel expenses: CHF 24 million, related to the Equity Plus Plan).

Note 27 Employee benefits: variable compensation (continued)

Variable compensation including Wealth Management Americas financial advisor compensation

	Expenses recognized in 2015			Expenses deferred to 2016 and later		
CHF million	Related to the performance year 2015	Related to prior performance years	Total	Related to the performance year 2015	Related to prior performance years	Total
Non-deferred cash	2,073	(94)	1,979	0	0	0
Deferred compensation awards	461	769	1,230	900	822	1,722
of which: Equity Ownership Plan	*261*	*461*	*722*	*524*	*338*	*861*
of which: Deferred Contingent Capital Plan	*172*	*258*	*429*	*343*	*446*	*789*
of which: Asset Management EOP	*28*	*38*	*67*	*34*	*35*	*69*
of which: Other performance awards	*0*	*12*	*12*	*0*	*3*	*3*
Total variable compensation – performance awards	**2,534**	**675**	**3,209**	**900**	**822**	**1,722**
Replacement payments	11	65	76	72	41	114
Forfeiture credits	0	(86)	(86)	0	0	0
Severance payments	157	0	157	0	0	0
Retention plan and other payments	15	103	118	15	52	67
Deferred Contingent Capital Plan: interest expense	0	80	80	160	200	360
Total variable compensation – other	**184**	**162**	**346**	**248**	**293**	**541**
Financial advisor compensation	2,629	187	2,816	776	571	1,347
of which: non-deferred cash	*2,460*	*0*	*2,460*	*0*	*0*	*0*
of which: deferred share-based awards	*37*	*45*	*82*	*66*	*115*	*182*
of which: deferred cash-based awards	*132*	*142*	*275*	*710*	*456*	*1,166*
Compensation commitments with recruited financial advisors[1]	43	692	735	940	1,899	2,839
Total Wealth Management Americas: Financial advisor compensation	**2,673**	**879**	**3,552**	**1,716**	**2,470**	**4,186**
Total variable compensation including WMA FA compensation	**5,391**	**1,716**	**7,107[2]**	**2,864**	**3,585**	**6,449**

1 Reflects expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. Amounts reflected as deferred expenses represent the maximum deferred exposure as of the balance sheet date. 2 Includes CHF 858 million in expenses related to share-based compensation (performance awards: CHF 722 million; other variable compensation: CHF 54 million; Wealth Management Americas financial advisor compensation: CHF 82 million). A further CHF 108 million in expenses related to share-based compensation was recognized within other Note 6 expense categories (Salaries: CHF 26 million, related to role-based allowances; Social security: CHF 61 million; Other personnel expenses: CHF 21 million, related to the Equity Plus Plan).

Note 27 Employee benefits: variable compensation (continued)

c) Outstanding share-based compensation awards

Share and performance share awards

Movements in outstanding share-based awards under the EOP plan during 2017 and 2016 are provided in the table below. The awards presented are granted by UBS AG, but are based on UBS Group AG shares.

Movements in outstanding share and performance share awards granted under the EOP

	Number of shares 2017	Weighted average grant date fair value (CHF)	Number of shares 2016	Weighted average grant date fair value (CHF)
Outstanding, at the beginning of the year	512,185	16	427,443	18
Shares awarded during the year	117,082	14	199,755	13
Distributions during the year	(212,984)	16	(115,014)	18
Forfeited during the year	(11,563)	14	0	0
Outstanding, at the end of the year	404,720	14	512,185	16
of which: shares vested for accounting purposes	*132,117*		*189,953*	

The total carrying amount of the liability related to cash-settled share-based awards as of 31 December 2017 and 31 December 2016 was CHF 5 million and CHF 7 million, respectively.

d) Valuation

Share awards

UBS AG measures compensation expense based on the average market price of the UBS Group AG share on the grant date as quoted on the SIX Swiss Exchange, taking into consideration post-vesting sale and hedge restrictions, non-vesting conditions and market conditions, where applicable. The fair value of the share awards subject to post-vesting sale and hedge restrictions is discounted on the basis of the duration of the post-vesting restriction and is referenced to the cost of purchasing an at-the-money European put option for the term of the transfer restriction. The grant date fair value of notional shares without dividend entitlements also includes a deduction for the present value of future expected dividends to be paid between the grant date and distribution.

Note 28 Interests in subsidiaries and other entities

a) Interests in subsidiaries

UBS AG defines its significant subsidiaries as those entities that, either individually or in aggregate, contribute significantly to UBS AG's financial position or results of operations, based on a number of criteria, including the subsidiaries' equity and their contribution to UBS AG's total assets and profit or loss before tax, in accordance with the requirements set by IFRS 12, Swiss regulations and the rules of the US Securities and Exchange Commission (SEC).

Individually significant subsidiaries

The table below lists UBS AG's individually significant subsidiaries as of 31 December 2017. Unless otherwise stated, the subsidiaries listed below have share capital consisting solely of ordinary shares that are held fully by UBS AG, and the proportion of ownership interest held is equal to the voting rights held by UBS AG.

The country where the respective registered office is located is also the principal place of business. UBS AG operates through a global network of branches and a significant proportion of its business activity is conducted outside Switzerland in the UK, US, Singapore, Hong Kong and other countries. UBS Europe SE has branches and offices in a number of EU member states, including Germany, Italy, Luxembourg, Spain and Austria.

Individually significant subsidiaries as of 31 December 2017

Company	Registered office	Primary business division	Share capital in million		Equity interest accumulated in %
UBS Americas Holding LLC	Wilmington, Delaware, USA	Corporate Center	USD	2,250.0[1]	100.0
UBS Asset Management AG	Zurich, Switzerland	Asset Management	CHF	43.2	100.0
UBS Bank USA	Salt Lake City, Utah, USA	Wealth Management Americas	USD	0.0	100.0
UBS Europe SE	Frankfurt, Germany	Wealth Management	EUR	446.0	100.0
UBS Financial Services Inc.	Wilmington, Delaware, USA	Wealth Management Americas	USD	0.0	100.0
UBS Limited	London, United Kingdom	Investment Bank	GBP	226.6	100.0
UBS Securities LLC	Wilmington, Delaware, USA	Investment Bank	USD	1,283.1[2]	100.0
UBS Switzerland AG	Zurich, Switzerland	Personal & Corporate Banking	CHF	10.0	100.0

1 Comprised of common share capital of USD 1,000 and non-voting preferred share capital of USD 2,250,000,000. 2 Comprised of common share capital of USD 100,000 and non-voting preferred share capital of USD 1,283,000,000.

Note 28 Interests in subsidiaries and other entities (continued)

Other subsidiaries

The table below lists other subsidiaries of UBS AG that are not individually significant but that contribute to UBS AG's total assets and aggregated profit before tax thresholds and are thereby disclosed in accordance with the requirements set by the SEC.

Other subsidiaries as of 31 December 2017

Company	Registered office	Primary business division	Share capital in million		Equity interest accumulated in %
UBS Americas Inc.	Wilmington, Delaware, USA	Corporate Center	USD	0.0	100.0
UBS Asset Management (Americas) Inc.	Wilmington, Delaware, USA	Asset Management	USD	0.0	100.0
UBS Asset Management (Australia) Ltd	Sydney, Australia	Asset Management	AUD	20.1[1]	100.0
UBS Asset Management (Deutschland) GmbH	Frankfurt, Germany	Asset Management	EUR	7.7	100.0
UBS Asset Management (Hong Kong) Limited	Hong Kong, Hong Kong	Asset Management	HKD	206.0	100.0
UBS Asset Management (Japan) Ltd	Tokyo, Japan	Asset Management	JPY	2,200.0	100.0
UBS Asset Management (Singapore) Ltd	Singapore, Singapore	Asset Management	SGD	4.0	100.0
UBS Asset Management (UK) Ltd	London, United Kingdom	Asset Management	GBP	125.0	100.0
UBS Business Solutions US LLC	Wilmington, Delaware, USA	Corporate Center	USD	0.0	100.0
UBS Card Center AG	Glattbrugg, Switzerland	Personal & Corporate Banking	CHF	0.1	100.0
UBS Credit Corp.	Wilmington, Delaware, USA	Wealth Management Americas	USD	0.0	100.0
UBS (France) SA.	Paris, France	Wealth Management	EUR	133.0	100.0
UBS Fund Advisor, L.L.C.	Wilmington, Delaware, USA	Wealth Management Americas	USD	0.0	100.0
UBS Fund Management (Luxembourg) S.A.	Luxembourg, Luxembourg	Asset Management	EUR	13.0	100.0
UBS Fund Management (Switzerland) AG	Basel, Switzerland	Asset Management	CHF	1.0	100.0
UBS Hedge Fund Solutions LLC	Wilmington, Delaware, USA	Asset Management	USD	0.1	100.0
UBS (Monaco) S.A.	Monte Carlo, Monaco	Wealth Management	EUR	49.2	100.0
UBS O'Connor LLC	Dover, Delaware, USA	Asset Management	USD	1.0	100.0
UBS Real Estate Securities Inc.	Wilmington, Delaware, USA	Investment Bank	USD	0.0	100.0
UBS Realty Investors LLC	Boston, Massachusetts, USA	Asset Management	USD	9.0	100.0
UBS Securities (Thailand) Ltd	Bangkok, Thailand	Investment Bank	THB	500.0	100.0
UBS Securities Australia Ltd	Sydney, Australia	Investment Bank	AUD	0.3[1]	100.0
UBS Securities India Private Limited	Mumbai, India	Investment Bank	INR	140.0	100.0
UBS Securities Japan Co., Ltd.	Tokyo, Japan	Investment Bank	JPY	32,100.0	100.0
UBS Securities Pte. Ltd.	Singapore, Singapore	Investment Bank	SGD	420.4	100.0
UBS South Africa (Proprietary) Limited	Sandton, South Africa	Investment Bank	ZAR	0.0	100.0
UBS UK Properties Limited	London, United Kingdom	Corporate Center	GBP	132.0	100.0

1 Includes a nominal amount relating to redeemable preference shares.

Note 28 Interests in subsidiaries and other entities (continued)

Changes in consolidation scope

In 2017, no significant subsidiaries were added to or removed from the scope of consolidation as a result of acquisitions or disposals.

Non-controlling interests

As of 31 December 2017 and 31 December 2016, non-controlling interests were not material to UBS AG.

Consolidated structured entities

UBS AG consolidates a structured entity (SE) if it has power over the relevant activities of the entity, exposure to variable returns and the ability to use its power to affect its returns. Consolidated SEs include certain investment funds, securitization vehicles and client investment vehicles. UBS AG has no individually significant subsidiaries that are SEs.

Investment fund SEs are generally consolidated when UBS AG's aggregate exposure combined with its decision-making rights indicate the ability to use such power in a principal capacity. Typically, UBS AG will have decision-making rights as fund manager, earning a management fee, and will provide seed capital at the inception of the fund or hold a significant percentage of the fund units. Where other investors do not have the substantive ability to remove UBS as decision maker, UBS AG is deemed to have control and therefore consolidates the fund.

Securitization SEs are generally consolidated when UBS AG holds a significant percentage of the asset-backed securities issued by the SE and has the power to remove without cause the servicer of the asset portfolio.

Client investment SEs are generally consolidated when UBS AG has a substantive liquidation right over the SE or a decision right over the assets held by the SE and has exposure to variable returns through derivatives traded with the SE or holding notes issued by the SE.

In 2017 and 2016, UBS AG has not entered into any contractual obligation that could require UBS AG to provide financial support to consolidated SEs. In addition, UBS AG did not provide support, financial or otherwise, to a consolidated SE when UBS AG was not contractually obligated to do so, nor has UBS AG an intention to do so in the future. Further, UBS AG did not provide support, financial or otherwise, to a previously unconsolidated SE that resulted in UBS AG controlling the SE during the reporting period.

Note 28 Interests in subsidiaries and other entities (continued)

b) Interests in associates and joint ventures

As of 31 December 2017 and 2016, no associate or joint venture was individually material to UBS AG. In addition, there were no significant restrictions on the ability of associates or joint ventures to transfer funds to UBS AG or its subsidiaries in the form of cash dividends or to repay loans or advances made. There were no quoted market prices for any associates or joint ventures of UBS AG.

Investments in associates and joint ventures

CHF million	31.12.17	31.12.16
Carrying amount at the beginning of the year	963	954
Additions	3	3
Disposals	0	(2)
Share of comprehensive income	98	82
of which: share of net profit [1]	*75*	*106*
of which: share of other comprehensive income [2]	*23*	*(24)*
Dividends received	(51)	(50)
Impairment	(7)	0
Foreign currency translation	12	(23)
Carrying amount at the end of the year	1,018	963
of which: associates	*989*	*934*
of which: UBS Securities Co. Limited, Beijing [3]	*401*	*392*
of which: SIX Group AG, Zurich [4]	*464*	*426*
of which: other associates	*124*	*116*
of which: joint ventures	*29*	*29*

1 For 2017, consists of CHF 60 million from associates and CHF 15 million from joint ventures. For 2016, consists of CHF 94 million from associates and CHF 12 million from joint ventures. 2 For 2017, consists of CHF 24 million from associates and negative CHF 1 million from joint ventures. For 2016, consists of negative CHF 25 million from associates and CHF 0 million from joint ventures. 3 UBS AG's equity interest amounts to 24.99%. 4 UBS AG's equity interest amounts to 17.31%. UBS AG is represented on the Board of Directors.

Note 28 Interests in subsidiaries and other entities (continued)

c) Interests in unconsolidated structured entities

During 2017, UBS AG sponsored the creation of various SEs and interacted with a number of non-sponsored SEs, including securitization vehicles, client vehicles as well as certain investment funds, which UBS did not consolidate as of 31 December 2017 because it did not control these entities.

The table below presents UBS AG's interests in and maximum exposure to loss from unconsolidated SEs as well as the total assets held by the SEs in which UBS had an interest as of year-end, except for investment funds sponsored by third parties, for which the carrying value of UBS's interest as of year-end has been disclosed.

Interests in unconsolidated structured entities

	31.12.17				
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Trading portfolio assets	363	308	6,143	6,815	6,815
Positive replacement values	21	68	22	111	111
Loans	0	0	97	97	97
Financial assets designated at fair value	84	66[2]	0	150	1,675
Financial assets available for sale	0	3,865	45	3,910	3,910
Other assets	291	29[2]	0	320	1,407
Total assets	760[3]	4,337	6,307	11,403	
Negative replacement values	20[4]	53	203	276	14
Total liabilities	20	53	203	276	
Assets held by the unconsolidated structured entities in which UBS had an interest (CHF billion)	57[5]	78[6]	412[7]		

	31.12.16				
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total	Maximum exposure to loss[1]
Trading portfolio assets	634	394	6,215	7,243	7,243
Positive replacement values	40	76	101	217	217
Loans	0	0	79	79	79
Financial assets designated at fair value	103	83[2]	0	186	1,765
Financial assets available for sale	0	3,381	58	3,439	3,439
Other assets	289	37[2]	0	327	1,490
Total assets	1,066[3]	3,971	6,454	11,491	
Negative replacement values	33[4]	346	67	446	90
Total liabilities	33	346	67	446	
Assets held by the unconsolidated structured entities in which UBS had an interest (CHF billion)	72[5]	102[6]	334[7]		

1 For purposes of this disclosure, maximum exposure to loss amounts do not consider the risk-reducing effects of collateral or other credit enhancements. 2 Represents the carrying value of loan commitments, both designated at fair value and held at amortized cost. The maximum exposure to loss for these instruments is equal to the notional amount. 3 As of 31 December 2017, CHF 0.7 billion of the CHF 0.8 billion (31 December 2016: CHF 1.0 billion of the CHF 1.1 billion) was held in Corporate Center – Non-core and Legacy Portfolio. 4 Comprised of credit default swap (CDS) liabilities and other swap liabilities. The maximum exposure to loss for CDS is equal to the sum of the negative carrying value and the notional amount. For other swap liabilities, no maximum exposure to loss is reported. 5 Represents principal amount outstanding. 6 Represents the market value of total assets. 7 Represents the net asset value of the investment funds sponsored by UBS and the carrying value of UBS's interests in the investment funds not sponsored by UBS.

Note 28 Interests in subsidiaries and other entities (continued)

UBS AG retains or purchases interests in unconsolidated SEs in the form of direct investments, financing, guarantees, letters of credit, derivatives and through management contracts.

UBS AG's maximum exposure to loss is generally equal to the carrying value of UBS AG's interest in the SE, with the exception of guarantees, letters of credit and credit derivatives, for which the contract's notional amount, adjusted for losses already incurred, represents the maximum loss that UBS AG is exposed to. In addition, the current fair value of derivative swap instruments with a positive replacement value only, such as total return swaps, is presented as the maximum exposure to loss. Risk exposure for these swap instruments could change over time with market movements.

The maximum exposure to loss disclosed in the table on the previous page does not reflect UBS AG's risk management activities, including effects from financial instruments that may be used to economically hedge the risks inherent in the unconsolidated SE or the risk-reducing effects of collateral or other credit enhancements.

In 2017 and 2016, UBS AG did not provide support, financial or otherwise, to an unconsolidated SE when not contractually obligated to do so, nor has UBS AG an intention to do so in the future.

In 2017 and 2016, income and expenses from interests in unconsolidated SEs primarily resulted from mark-to-market movements recognized in net trading income, which have generally been hedged with other financial instruments, as well as fee and commission income received from UBS-sponsored funds.

Interests in securitization vehicles

As of 31 December 2017 and 31 December 2016, UBS AG held interests, both retained and acquired, in various securitization vehicles, a majority of which are held within Corporate Center – Non-core and Legacy Portfolio. The Investment Bank also retained interests in securitization vehicles related to financing, underwriting, secondary market and derivative trading activities. In some cases UBS AG may be required to absorb losses from an unconsolidated SE before other parties because UBS AG's interest is subordinated to others in the ownership structure. An overview of UBS AG's interests in unconsolidated securitization vehicles and the relative ranking and external credit rating of those interests is presented in the table on the following pages.

→ **Refer to Note 1a item 1 for more information on UBS AG's accounting policies regarding consolidation and sponsorship of securitization vehicles and other structured entities**

Interests in client vehicles

As of 31 December 2017 and 31 December 2016, UBS AG retained interests in client vehicles sponsored by UBS and third parties that relate to financing and derivative activities, and to hedge structured product offerings. Included within these investments are securities guaranteed by US government agencies.

Interests in investment funds

UBS AG holds interests in a number of investment funds, primarily resulting from seed investments or to hedge structured product offerings. In addition to the interests disclosed in the table on the previous page, UBS AG manages the assets of various pooled investment funds and receives fees that are based, in whole or part, on the net asset value of the fund and / or the performance of the fund. The specific fee structure is determined on the basis of various market factors and considers the nature of the fund, the jurisdiction of incorporation as well as fee schedules negotiated with clients. These fee contracts represent an interest in the fund as they align UBS AG's exposure with investors, providing a variable return that is based on the performance of the entity. Depending on the structure of the fund, these fees may be collected directly from the fund assets and / or from the investors. Any amounts due are collected on a regular basis and are generally backed by the assets of the fund. UBS AG did not have any material exposure to loss from these interests as of 31 December 2017 or as of 31 December 2016.

Note 28 Interests in subsidiaries and other entities (continued)

Interests in unconsolidated securitization vehicles[1]

	31.12.17				
CHF million, except where indicated	Residential mortgage-backed securities	Commercial mortgage-backed securities	Other asset-backed securities[2]	Re-securitization[3]	Total
Sponsored by UBS					
Interests in senior tranches	84	24	0	10	118
of which: rated investment grade	*0*	*24*			*24*
of which: rated sub-investment grade	*84*				*84*
of which: defaulted				*10*	*10*
Interests in junior tranches	0	9	0	0	9
of which: rated investment grade		*9*			*9*
Total	84	32	0	10	126
of which: Trading portfolio assets	*0*	*32*	*0*	*10*	*43*
of which: Financial assets designated at fair value	*84*	*0*	*0*	*0*	*84*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	1	10	0	1	12
Not sponsored by UBS					
Interests in senior tranches	75	6	165	64	311
of which: rated investment grade	*75*	*6*	*165*	*64*	*311*
Interests in mezzanine tranches	9	1	0	0	9
of which: rated investment grade		*1*			*1*
of which: defaulted	*9*				*9*
Interests in junior tranches	1	0	0	0	1
of which: rated sub-investment grade	*1*				*1*
Tranche information not available	0	0	0	0	0
of which: rated investment grade	*0*				*0*
of which: not rated	*0*				*0*
Total	85	7	165	64	321
of which: Trading portfolio assets	*85*	*7*	*165*	*64*	*321*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	18	5	20	0	43

1 This table excludes receivables and derivative transactions with securitization vehicles. 2 Includes credit card, auto and student loan structures. 3 Includes collateralized debt obligations.

Note 28 Interests in subsidiaries and other entities (continued)

Interests in unconsolidated securitization vehicles (continued)[1]

	31.12.16				
CHF million, except where indicated	Residential mortgage-backed securities	Commercial mortgage-backed securities	Other asset-backed securities[2]	Re-securitization[3]	Total
Sponsored by UBS					
Interests in senior tranches	103	34	0	14	151
of which: rated investment grade	*0*	*34*			*34*
of which: rated sub-investment grade	*103*				*103*
of which: defaulted				*14*	*14*
Interests in mezzanine tranches	1	0	0	0	1
of which: rated sub-investment grade	*1*				*1*
Total	104	34	0	14	152
of which: Trading portfolio assets	*1*	*34*	*0*	*14*	*49*
of which: Financial assets designated at fair value	*103*	*0*	*0*	*0*	*103*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	2	13	0	1	16
Not sponsored by UBS					
Interests in senior tranches	165	4	241	125	535
of which: rated investment grade	*165*	*4*	*241*	*125*	*535*
Interests in mezzanine tranches	32	0	0	0	32
of which: rated investment grade	*29*				*29*
of which: defaulted	*3*				*3*
Interests in junior tranches	18	0	0	0	18
of which: rated investment grade	*17*				*17*
of which: rated sub-investment grade	*1*				*1*
Total	215	4	241	125	585
of which: Trading portfolio assets	*215*	*4*	*241*	*125*	*585*
Total assets held by the vehicles in which UBS had an interest (CHF billion)	41	8	5	1	56

1 This table excludes receivables and derivative transactions with securitization vehicles. 2 Includes credit card, auto and student loan structures. 3 Includes collateralized debt obligations.

Note 28 Interests in subsidiaries and other entities (continued)

Sponsored unconsolidated structured entities in which UBS did not have an interest

For several sponsored SEs, no interest was held by UBS AG at year-end. However, during the respective reporting period UBS AG transferred assets, provided services and held instruments that did not qualify as an interest in these sponsored SEs, and accordingly earned income or incurred expenses from these entities. The table below presents the income earned and expenses incurred directly from these entities during the year as well as corresponding asset information. The table does not include income earned and expenses incurred from risk management activities, including income and expenses from financial instruments used to economically hedge instruments transacted with the unconsolidated SEs.

The majority of the fee income arose from investment funds that are sponsored and administrated by UBS AG, but managed by third parties. As UBS AG does not provide any active management services, UBS was not exposed to risk from the performance of these entities and was therefore deemed not to have an interest in them. In certain structures, the fees receivable may be collected directly from the investors and have therefore not been included in the table below.

UBS AG also recorded net trading income from mark-to-market movements arising primarily from derivatives, such as interest rate and currency swaps as well as credit derivatives, through which UBS AG purchases protection, and financial liabilities designated at fair value, which do not qualify as interests because UBS AG does not absorb variability from the performance of the entity. Total income reported does not reflect economic hedges or other mitigating effects from UBS AG's risk management activities.

During 2017, UBS and third parties transferred assets totaling CHF 17 billion (2016: CHF 13 billion) into sponsored securitization and client vehicles created in 2017. For sponsored investment funds, transfers arose during the period as investors invested and redeemed positions, thereby changing the overall size of the funds, which, when combined with market movements, resulted in a total closing net asset value of CHF 15 billion (31 December 2016: CHF 14 billion).

Sponsored unconsolidated structured entities in which UBS did not have an interest at year-end[1]

	As of or for the year ended			
	31.12.17			
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total
Net interest income	2	(9)	0	(7)
Net fee and commission income	0	0	40	40
Net trading income	(8)	(49)	2	(55)
Total income	(6)	(58)	43	(21)
Asset information (CHF billion)	10[2]	7[3]	15[4]	

	As of or for the year ended			
	31.12.16			
CHF million, except where indicated	Securitization vehicles	Client vehicles	Investment funds	Total
Net interest income	3	(6)	0	(3)
Net fee and commission income	0	0	53	53
Net trading income	2	(158)	29	(128)
Total income	4	(165)	82	(78)
Asset information (CHF billion)	7[2]	6[3]	14[4]	

1 These tables exclude profit attributable to preferred noteholders of CHF 72 million for the year ended 31 December 2017 and CHF 78 million for the year ended 31 December 2016. 2 Represents the amount of assets transferred to the respective securitization vehicles. Of the total amount transferred, CHF 2 billion was transferred by UBS (31 December 2016: CHF 2 billion) and CHF 8 billion was transferred by third parties (31 December 2016: CHF 5 billion). 3 Represents total assets transferred to the respective client vehicles. Of the total amount transferred, CHF 6 billion was transferred by UBS (31 December 2016: CHF 5 billion) and CHF 1 billion was transferred by third parties (31 December 2016: CHF 1 billion). 4 Represents the total net asset value of the respective investment funds.

Note 29 Business combinations

In 2017 and 2016, UBS AG did not complete any significant business combinations.

Note 30 Changes in organization and disposals

Measures to improve the resolvability of the UBS Group

In December 2014, UBS Group AG became the holding company of the UBS Group. In 2015, UBS transferred its Personal & Corporate Banking and Wealth Management businesses booked in Switzerland from UBS AG to UBS Switzerland AG and implemented a more self-sufficient business and operating model for UBS Limited.

UBS Business Solutions AG was established in 2015 as a direct subsidiary of UBS Group AG to act as the UBS Group service company. In the second half of 2015, UBS AG transferred the ownership of the majority of its existing service subsidiaries outside the US to UBS Business Solutions AG, and in 2017 shared services functions in Switzerland and the UK were transferred from UBS AG to UBS Business Solutions AG. UBS AG also completed the transfer of the shared services functions in the US to its US service company, UBS Business Solutions US LLC, a wholly owned subsidiary of UBS Americas Holding LLC.

In addition, UBS AG transferred the majority of the operating subsidiaries of Asset Management to UBS Asset Management AG during 2016. Furthermore, UBS AG merged its Wealth Management subsidiaries in Italy, Luxembourg (including its branches in Austria, Denmark and Sweden), the Netherlands and Spain into UBS Deutschland AG, which was renamed to UBS Europe SE, to establish UBS AG's new European legal entity, which is headquartered in Frankfurt, Germany.

Transfers of shared services functions to UBS Business Solutions AG

In 2017, UBS transferred shared services functions in Switzerland and the UK from UBS AG to UBS Business Solutions AG. The transfer in Switzerland to UBS Business Solutions AG was executed in the second quarter of 2017. For UK shared services, a similar transfer to the UK branch of UBS Business Solutions AG was completed in the fourth quarter of 2017.

The transfer in Switzerland was effected by a distribution of the shares of an interim shared services subsidiary of UBS AG to UBS Group AG through a dividend in kind, and the merger of the subsidiary with the previously established UBS Business Solutions AG. The transfer resulted in a CHF 307 million reduction of net assets and of share premium within equity attributable to shareholders.

The transferred functions include Group Technology, Group Operations, Group Corporate Services and most other shared services functions. As a consequence, UBS AG no longer incurs the respective direct costs, no longer charges other Group entities for underlying services and no longer earns a related markup, but rather receives a charge including a markup from a service company for its own consumption of services provided by the service company. UBS AG retained the vast majority of its real estate portfolio and selected other Corporate Center – Services functions and continues to charge UBS Business Solutions AG for services provided to it, earning a markup.

The new shared services model resulted in a reduction of *Operating profit before tax* for UBS AG consolidated of approximately CHF 0.1 billion for the year 2017. This amount includes net increases in *Other income* of approximately CHF 0.3 billion and *General and administrative expenses* of approximately CHF 1.7 billion and net decreases in *Personnel expenses* of approximately CHF 1.2 billion and *Depreciation and impairment of property, equipment and software* of approximately CHF 0.1 billion.

Sale of subsidiaries and businesses

In the fourth quarter of 2017, UBS AG completed the sale of Asset Management's fund administration servicing units in Luxembourg and Switzerland to Northern Trust, resulting in a pre-tax gain on sale of CHF 153 million.

In the second quarter of 2017, UBS AG completed the sale of a life insurance subsidiary within Wealth Management. A loss on sale of CHF 23 million was recognized in 2016 relating to this transaction. Prior to completion of the sale, the assets and liabilities of this business were presented as a disposal group held for sale within *Other assets* and *Other liabilities* (31 December 2016: CHF 5.1 billion and CHF 5.2 billion, respectively).

In 2015, UBS AG sold its Alternative Fund Services (AFS) business to Mitsubishi UFJ Financial Group Investor Services. Upon completion of the sale, UBS AG recognized a gain on sale of CHF 56 million and reclassified an associated net foreign currency translation gain of CHF 119 million from *Other comprehensive income* to the income statement. Also during 2015, UBS AG completed the sale of certain subsidiaries and businesses within Wealth Management, which resulted in the recognition of a combined net gain of CHF 169 million.

Restructuring expenses

Restructuring expenses arise from programs that materially change either the scope of business that UBS AG engages in or the manner in which such business is conducted. Restructuring expenses are necessary to effect such programs and include items such as severance and other personnel-related expenses, duplicate headcount costs, impairment and accelerated depreciation of assets, contract termination costs, consulting fees, and related infrastructure and system costs. These costs are presented in the income statement according to the underlying nature of the expense.

Note 30 Changes in organization and disposals (continued)

Net restructuring expenses by business division and Corporate Center unit

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Wealth Management	463	447	323
Wealth Management Americas	113	139	137
Personal & Corporate Banking	103	117	101
Asset Management	100	100	82
Investment Bank	359	577	396
Corporate Center	49	62	194
of which: Services	*39*	*41*	*138*
of which: Group ALM	*4*	*0*	*0*
of which: Non-core and Legacy Portfolio	*6*	*21*	*56*
Total net restructuring expenses	1,188	1,442	1,233
of which: personnel expenses	*362*	*731*	*458*
of which: general and administrative expenses	*818*	*700*	*760*
of which: depreciation and impairment of property, equipment and software	*7*	*11*	*12*
of which: amortization and impairment of intangible assets	*0*	*0*	*2*

Net restructuring expenses by personnel expense category

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Salaries	213	422	311
Variable compensation – performance awards	22	101	38
Variable compensation – other	80	208	108
Contractors	48	56	46
Social security	6	8	5
Pension and other post-employment benefit plans	(15)	(76)	(65)
Other personnel expenses	8	12	15
Total net restructuring expenses: personnel expenses	362	731	458

Net restructuring expenses by general and administrative expense category

	For the year ended		
CHF million	31.12.17	31.12.16	31.12.15
Occupancy	75	123	109
Rent and maintenance of IT and other equipment	36	93	31
Communication and market data services	1	1	0
Administration	397	28	7
Marketing and public relations	1	0	0
Travel and entertainment	8	12	16
Professional fees	143	162	187
Outsourcing of IT and other services	166	287	316
Other[1]	(8)	(5)	95
Total net restructuring expenses: general and administrative expenses	818	700	760

1 Mainly comprised of onerous real estate lease contracts.

Note 31 Operating leases and finance leases

Information on lease contracts classified as operating leases where UBS AG is the lessee is provided in Note 31a and information on finance leases where UBS AG acts as a lessor is provided in Note 31b.

a) Operating lease commitments

As of 31 December 2017, UBS AG was obligated under a number of non-cancelable operating leases for premises and equipment used primarily for banking purposes. The significant premises leases usually include renewal options and escalation clauses in line with general office rental market conditions, as well as rent adjustments based on price indices. However, the lease agreements do not contain contingent rent payment clauses and purchase options, nor do they impose any restrictions on UBS AG's ability to pay dividends, engage in debt financing transactions or enter into further lease agreements.

CHF million	31.12.17
Expenses for operating leases to be recognized in:	
2018	652
2019	588
2020	506
2021	422
2022	375
2023 and thereafter	1,984
Subtotal commitments for minimum payments under operating leases	4,526
Less: Sublease rental income commitments	262
Net commitments for minimum payments under operating leases	4,265

CHF million	31.12.17	31.12.16	31.12.15
Gross operating lease expense recognized in the income statement	684	737	741
Sublease rental income	67	78	70
Net operating lease expense recognized in the income statement	617	659	671

b) Finance lease receivables

UBS AG leases a variety of assets to third parties under finance leases, such as commercial vehicles, production lines, medical equipment, construction equipment and aircraft. At the end of the respective lease term, assets may be sold to third parties or further leased. Lessees may participate in any sales proceeds achieved. Lease expenses cover the cost of the assets less their residual value as well as financing costs.

As of 31 December 2017, unguaranteed residual values of CHF 158 million had been accrued, and the accumulated allowance for uncollectible minimum lease payments receivable amounted to CHF 10 million. No contingent rents were received in 2017.

Lease receivables

CHF million	31.12.17		
	Total minimum lease payments	Unearned finance income	Present value
2018	333	22	311
2019–2022	684	36	648
Thereafter	112	3	110
Total	1,129	61	1,069

Note 32 Related parties

UBS AG defines related parties as associates (entities that are significantly influenced by UBS), joint ventures (entities in which UBS shares control with another party), post-employment benefit plans for UBS AG employees, key management personnel, close family members of key management personnel and entities that are, directly or indirectly, controlled or jointly controlled by key management personnel or their close family members. Key management personnel is defined as members of the Board of Directors (BoD) and Executive Board (EB).

a) Remuneration of key management personnel

The Chairman of the BoD has a specific management employment contract and receives pension benefits upon retirement. Total remuneration of the Chairman of the Board of Directors and all EB members is included in the table below.

Remuneration of key management personnel

CHF million	31.12.17	31.12.16	31.12.15
Base salaries and other cash payments[1]	23	24	21
Incentive awards – cash[2]	13	10	9
Annual incentive award under DCCP	20	20	20
Employer's contributions to retirement benefit plans	2	2	1
Benefits in kind, fringe benefits (at market value)	2	2	2
Equity-based compensation[3]	36	38	39
Total	98	97	92

1 Includes role-based allowances that have been made in line with market practice in response to the EU Capital Requirements Directive of 2013 (CRD IV). 2 Includes immediate and deferred cash. 3 Expenses for shares granted are calculated at grant date of the respective award and allocated over the vesting period, generally for 5 years. Refer to Note 27 for more information. In 2017, 2016 and 2015, equity-based compensation was entirely comprised of EOP awards.

The independent members of the BoD do not have employment or service contracts with UBS AG, and thus are not entitled to benefits upon termination of their service on the BoD. Payments to these individuals for their services as external board members amounted to CHF 7.1 million in 2017, CHF 7.2 million in 2016 and CHF 6.7 million in 2015.

b) Equity holdings of key management personnel

Equity holdings of key management personnel

	31.12.17	31.12.16
Number of stock options from equity participation plans held by non-independent members of the BoD and the EB members[1]	398,867	620,950
Number of shares held by members of the BoD, EB and parties closely linked to them[2]	3,709,539	3,267,911

1 Refer to Note 27 for more information. 2 Excludes shares granted under variable compensation plans with forfeiture provisions.

Of the share totals above, 95,597 shares were held by close family members of key management personnel on 31 December 2017 and 31 December 2016. No shares were held by entities that are directly or indirectly controlled or jointly controlled by key management personnel or their close family members on 31 December 2017 and 31 December 2016. Refer to Note 27 for more information. As of 31 December 2017, no member of the BoD or EB was the beneficial owner of more than 1% of UBS Group AG's shares.

Note 32 Related parties (continued)

c) Loans, advances and mortgages to key management personnel

The non-independent members of the BoD and EB members are granted loans, fixed advances and mortgages in the ordinary course of business on substantially the same terms and conditions that are available to other employees, including interest rates and collateral, and neither involve more than the normal risk of collectibility nor contain any other unfavorable features for the firm. Independent BoD members are granted loans and mortgages in the ordinary course of business at general market conditions.

Movements in the loan, advances and mortgage balances are as follows.

Loans, advances and mortgages to key management personnel[1]

CHF million	2017	2016
Balance at the beginning of the year	33	33
Additions	1	13
Reductions	(1)	(13)
Balance at the end of the year[2]	34	33

1 All loans are secured loans. 2 Excludes unused uncommitted credit facilities for two EB members and one BoD member of CHF 5,196,294 as of 31 December 2017 and for one EB and one BoD member of CHF 2,684,498 as of 31 December 2016.

d) Other related party transactions with entities controlled by key management personnel

In 2017 and 2016, UBS AG did not enter into transactions with entities that are directly or indirectly controlled or jointly controlled by UBS AG's key management personnel or their close family members and as of 31 December 2017, 31 December 2016 and 31 December 2015, there were no outstanding balances related to such transactions. Furthermore, in 2017 and 2016, entities controlled by key management personnel did not sell any goods or provide any services to UBS AG, and therefore did not receive any fees from UBS AG. UBS AG also did not provide services to such entities in 2017 and 2016, and therefore also received no fees.

Note 32 Related parties (continued)

e) Transactions with associates and joint ventures

Loans to and outstanding receivables from associates and joint ventures

CHF million	2017	2016
Carrying value at the beginning of the year	472	476
Additions	82	4
Reductions	(3)	(8)
Carrying value at the end of the year	551	472
of which: unsecured loans	*540*	*461*

Other transactions with associates and joint ventures

	As of or for the year ended	
CHF million	31.12.17	31.12.16
Payments to associates and joint ventures for goods and services received	177	153
Fees received for services provided to associates and joint ventures	2	3
Commitments and contingent liabilities to associates and joint ventures	4	4

→ **Refer to Note 28 for an overview of investments in associates and joint ventures**

f) Receivables and payables from / to UBS Group AG and other subsidiaries of UBS Group AG

CHF million	2017	2016
Receivables		
Loans	2,152	681
Trading portfolio assets	98	84
Other assets	113	35
Payables		
Due to customers[1]	38,150	26,527
Other liabilities	1,547	1,111

1 Includes Group-internal funding obtained from UBS Group AG and UBS Group Funding (Switzerland) AG of CHF 35 billion as of 31 December 2017 (31 December 2016: CHF 25 billion).

Note 33 Invested assets and net new money

Invested assets

Invested assets include all client assets managed by or deposited with UBS AG for investment purposes. Invested assets include managed fund assets, managed institutional assets, discretionary and advisory wealth management portfolios, fiduciary deposits, time deposits, savings accounts and wealth management securities or brokerage accounts. All assets held for purely transactional purposes and custody-only assets, including corporate client assets held for cash management and transactional purposes, are excluded from invested assets as UBS AG only administers the assets and does not offer advice on how the assets should be invested. Also excluded are non-bankable assets (e.g., art collections) and deposits from third-party banks for funding or trading purposes.

Discretionary assets are defined as client assets that UBS AG decides how to invest. Other invested assets are those where the client ultimately decides how the assets are invested. When a single product is created in one business division and sold in another, it is counted in both the business division that manages the investment and the one that distributes it. This results in double counting within UBS AG total invested assets, as both business divisions are independently providing a service to their respective clients, and both add value and generate revenue.

Net new money

Net new money in a reporting period is the amount of invested assets that are entrusted to UBS AG by new and existing clients, less those withdrawn by existing clients and clients who terminated their relationship with UBS AG.

Net new money is calculated using the direct method, under which inflows and outflows to / from invested assets are determined at the client level based on transactions. Interest and dividend income from invested assets are not counted as net new money inflows. Market and currency movements as well as fees, commissions and interest on loans charged are excluded from net new money, as are the effects resulting from any acquisition or divestment of a UBS AG subsidiary or business. Reclassifications between invested assets and custody-only assets as a result of a change in the service level delivered are generally treated as net new money flows; however, where such change in service level directly results from a new externally imposed regulation, the one-time net effect of the implementation is reported as an asset reclassification without net new money impact.

The Investment Bank does not track invested assets and net new money. However, when a client is transferred from the Investment Bank to another business division, this produces net new money even though client assets were already with UBS AG. There were no such transfers between the Investment Bank and other business divisions in 2017 and 2016.

Invested assets and net new money

	For the year ended	
CHF billion	31.12.17	31.12.16
Fund assets managed by UBS	330	275
Discretionary assets	1,025	886
Other invested assets[1]	1,824	1,649
Total invested assets[1,2]	3,179	2,810
of which: double counts	*204*	*176*
Net new money[2]	104	27

1 Certain account types were corrected during 2017. As a result, invested assets as of 31 December 2016 were corrected by CHF 12 billion. 2 Includes double counts.

Development of invested assets

	For the year ended	
CHF billion	31.12.17	31.12.16
Total invested assets at the beginning of the year[1,2]	2,810	2,678
Net new money	104	27
Market movements[3]	313	98
Foreign currency translation	(45)	21
Other effects	(3)	(14)
of which: acquisitions / (divestments)	*4*	*(14)*
Total invested assets at the end of the year[1,2]	3,179	2,810

1 Includes double counts. 2 Certain account types were corrected during 2017. As a result, invested assets as of 31 December 2016 and 31 December 2015 were corrected by CHF 12 billion and CHF 11 billion, respectively. 3 Includes interest and dividend income.

Note 34 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of foreign operations into Swiss francs.

	Spot rate		Average rate[1]		
	As of		For the year ended		
	31.12.17	31.12.16	31.12.17	31.12.16	31.12.15
1 USD	0.97	1.02	0.98	0.99	0.97
1 EUR	1.17	1.07	1.12	1.09	1.06
1 GBP	1.32	1.26	1.28	1.32	1.47
100 JPY	0.86	0.87	0.88	0.91	0.80

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a year represent an average of 12 month-end rates, weighted according to the income and expense volumes of all foreign operations with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for UBS AG.

Note 35 Events after the reporting period

Events subsequent to the publication of the unaudited fourth quarter 2017 report

The 2017 results and the balance sheet as of 31 December 2017 differ from those presented in the unaudited fourth quarter 2017 report published on 22 January 2018 as a result of events adjusted for after the balance sheet date. Provisions for litigation, regulatory and similar matters increased, which reduced 2017 operating profit before tax by CHF 141 million and 2017 net profit attributable to shareholders by CHF 112 million.

Integration of Wealth Management and Wealth Management Americas into a single business division

Effective 1 February 2018, UBS is integrating its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division. The firm will report the results for Global Wealth Management beginning with the first quarter of 2018.

→ **Refer to Note 1c for more information on the change in segment reporting**

Changes to the Pension Fund of UBS in Switzerland

As a result of the effects of continuing low and in some cases negative interest rates, diminished investment return expectations and increasing life expectancy, the Pension Fund of UBS in Switzerland and UBS have agreed measures that will take effect from the start of 2019 to support the long-term financial stability of the Swiss pension fund. As a result, the conversion rate will be lowered, the regular retirement age and employee contributions will be increased, and savings contributions will start earlier. These measures will have no effect on current pensioners of UBS.

To mitigate the effects of the reduction of the conversion rate on future pensions, UBS AG will make a payment to employees' retirement assets in the Swiss pension fund of up to CHF 450 million in three installments in 2020, 2021 and 2022.

In accordance with International Financial Reporting Standards (IFRS), these measures, including the portion of the payment to be made by UBS that is attributable to past service, will lead to a reduction in the pension obligation recognized by UBS AG, resulting in a pre-tax gain of CHF 123 million in the first quarter of 2018 with no overall effect on total equity and a reduced pension service cost starting from January 2018. The gain will be recognized as a reduction in personnel expense within the income statement across the business divisions and Corporate Center, with a corresponding effect in *Other comprehensive income*, as the Swiss pension plan is currently in a surplus situation that cannot be recognized due to the IFRS asset ceiling requirement. If the Swiss pension plan remains in an asset ceiling position, the annual payments adjusted for expected forfeitures are expected to reduce total equity by approximately CHF 130 million per year over the installment period, with no effect on the income statement.

→ **Refer to Note 26 for more information on the Swiss pension plan and the asset ceiling effect**

Note 36 Main differences between IFRS and Swiss GAAP

The consolidated financial statements of UBS AG are prepared in accordance with International Financial Reporting Standards (IFRS). The Swiss Financial Market Supervisory Authority (FINMA) requires financial groups that present their financial statements under IFRS to provide a narrative explanation of the main differences between IFRS and Swiss GAAP (FINMA Circular 2015 / 1 and the Banking Ordinance). Included in this Note are the significant differences in the recognition and measurement between IFRS and the provisions of the Banking Ordinance and the guidelines of FINMA governing true and fair view financial statement reporting pursuant to article 25 through article 42 of the Banking Ordinance.

1. Consolidation

Under IFRS, all entities that are controlled by the holding entity are consolidated.

Under Swiss GAAP, controlled entities that are deemed immaterial to UBS AG or that are held temporarily only are exempt from consolidation, but instead are recorded as participations accounted for under the equity method of accounting or as financial investments measured at the lower of cost or market value.

2. Financial assets available for sale

Under IFRS, financial assets available for sale are carried at fair value. Changes in fair value are recorded directly in equity until an asset is sold, collected or otherwise disposed of, or until an asset is determined to be impaired. At the time an available-for-sale asset is determined to be impaired, the cumulative unrealized loss previously recognized in equity is included in net profit or loss for the respective period. On disposal of a financial asset available for sale, the cumulative unrealized gain or loss previously recognized in equity is reclassified to the income statement.

Under Swiss GAAP, classification and measurement of financial assets designated as available for sale depend on the nature of the asset. Equity instruments with no permanent holding intent, as well as debt instruments, are classified as *Financial investments* and measured at the lower of (amortized) cost or market value. Market value adjustments up to the original cost amount and realized gains or losses upon disposal of the investment are recorded in the income statement as *Other income from ordinary activities.* Equity instruments with a permanent holding intent are classified as participations in *Non-consolidated investments in subsidiaries and other participations* and measured at cost less impairment. Impairment losses are recorded in the income statement as *Impairment of investments in non-consolidated subsidiaries and other participations.* Reversals of impairments up to the original cost amount as well as realized gains or losses upon disposal of the investment are recorded as *Extraordinary income / Extraordinary expenses* in the income statement.

3. Hedge accounting

Under IFRS, when cash flow hedge accounting is applied, the fair value gain or loss on the effective portion of the derivative designated as a cash flow hedge is recognized in equity. When fair value hedge accounting is applied, the fair value gains or losses of the derivative and the hedged item are recognized in the income statement.

Under Swiss GAAP, the effective portion of the fair value change of the derivative instrument designated as a cash flow or as fair value hedge is deferred on the balance sheet as *Other assets* or *Other liabilities*. The carrying value of the hedged item designated in fair value hedges is not adjusted for fair value changes attributable to the hedged risk.

4. Fair value option

Under IFRS, UBS AG applies the fair value option to certain financial assets and financial liabilities not held for trading. Instruments for which the fair value option is applied are accounted for at fair value with changes in fair value reflected in *Net trading income*. The fair value option is applied primarily to structured debt instruments, certain non-structured debt instruments, high-quality liquid debt securities, structured reverse repurchase and repurchase agreements and securities borrowing agreements, certain structured and non-structured loans as well as loan commitments.

Under Swiss GAAP, the fair value option can only be applied to structured debt instruments that consist of a debt host contract and one or more embedded derivatives that do not relate to own equity. Furthermore, changes in fair value attributable to changes in unrealized own credit are not recognized.

Note 36 Main differences between IFRS and Swiss GAAP (continued)

5. Goodwill and intangible assets

Under IFRS, goodwill acquired in a business combination is not amortized but tested annually for impairment. Intangible assets with an indefinite useful life are also not amortized but tested annually for impairment.

Under Swiss GAAP, goodwill and intangible assets with indefinite useful lives are amortized over a period not exceeding five years, unless a longer useful life, which may not exceed 10 years, can be justified.

6. Pension and other post-employment benefit plans

Swiss GAAP permits the use of IFRS or Swiss accounting standards for pension and other post-employment benefit plans, with the election made on a plan-by-plan basis.

UBS AG has elected to apply IFRS (IAS 19) for the non-Swiss defined benefit plans and Swiss GAAP (FER 16) for the Swiss pension plan in its standalone financial statements. The requirements of Swiss GAAP are better aligned with the specific nature of Swiss pension plans, which are hybrid in that they combine elements of defined contribution and defined benefit plans, but are treated as defined benefit plans under IFRS. Key differences between Swiss GAAP and IFRS include the treatment of dynamic elements, such as future salary increases and future interest credits on retirement savings, which are not considered under the static method used in accordance with Swiss GAAP. Also, the discount rate used to determine the defined benefit obligation in accordance with IFRS is based on the yield of high-quality corporate bonds of the market in the respective pension plan country. The discount rate used in accordance with Swiss GAAP, i.e., the technical interest rate, is determined by the Pension Foundation Board based on the expected returns of the Board's investment strategy.

For defined benefit plans, IFRS requires the full defined benefit obligation net of the plan assets to be recorded on the balance sheet, with changes resulting from remeasurements recognized directly in equity. However, for non-Swiss defined benefit plans for which IFRS accounting is elected, changes due to remeasurements are recognized in the income statement of UBS AG standalone under Swiss GAAP.

Swiss GAAP requires that employer contributions to the pension fund are recognized as personnel expenses in the income statement. Further, Swiss GAAP requires an assessment as to whether, based on the financial statements of the pension fund prepared in accordance with Swiss accounting standards (FER 26), an economic benefit to, or obligation of, the employer arises from the pension fund and is recognized in the balance sheet when conditions are met. Conditions for recording a pension asset or liability would be met if, for example, an employer contribution reserve is available or the employer is required to contribute to the reduction of a pension deficit (on an FER 26 basis).

7. Netting of replacement values

Under IFRS, replacement values and related cash collateral are reported on a gross basis unless the restrictive IFRS netting requirements are met: i) existence of master netting agreements and related collateral arrangements that are unconditional and legally enforceable, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS AG and its counterparties, and ii) UBS AG's intention to either settle on a net basis or to realize the asset and settle the liability simultaneously.

Under Swiss GAAP, replacement values and related cash collateral are generally reported on a net basis, provided the master netting and the related collateral agreements are legally enforceable in the event of default, bankruptcy or insolvency of UBS AG's counterparties.

8. Negative interest

Under IFRS, negative interest income arising on a financial asset does not meet the definition of interest income and, therefore, negative interest on financial assets and negative interest on financial liabilities are presented within interest expense and interest income, respectively.

Under Swiss GAAP, negative interest on financial assets is presented within interest income and negative interest on financial liabilities is presented within interest expense.

9. Extraordinary income and expense

Certain non-recurring and non-operating income and expense items, such as realized gains or losses from the disposal of participations, fixed and intangible assets, as well as reversals of impairments of participations and fixed assets, are classified as extraordinary items under Swiss GAAP. This distinction is not available under IFRS. ▲

Note 37 Supplemental guarantor information required under SEC regulations

Guarantee of PaineWebber securities

Prior to its acquisition by UBS in 2000, Paine Webber Group Inc. (PaineWebber) was an SEC registrant. Upon acquisition, PaineWebber was merged into UBS Americas Inc., a wholly owned subsidiary of UBS AG. Following the acquisition, UBS AG entered into a full and unconditional guarantee of the senior notes (Debt Securities) issued by PaineWebber. Under the guarantee, if UBS Americas Inc. fails to make any timely payment under the Debt Securities agreements, the holders of the Debt Securities or the Debt Securities trustee may demand payment from UBS AG without first proceeding against UBS Americas Inc.

As of 31 December 2017, CHF 1 million of these Debt Securities were outstanding. These remaining notes mature in 2018.

Guarantee of other securities

As of 31 December 2017 and 31 December 2016, UBS Preferred Funding Trust IV and UBS Preferred Funding Trust V had no balances outstanding. These entities are presented in a separate column in supplemental guarantor information provided for prior periods in the following tables. Amounts presented in this column are eliminated in the *Elimination entries* column, as these entities were not consolidated by UBS AG because UBS AG did not absorb any variability from the performance of these entities.

Joint liability of UBS Switzerland AG

In 2015, the Personal & Corporate Banking and Wealth Management businesses booked in Switzerland were transferred from UBS AG to UBS Switzerland AG through an asset transfer in accordance with the Swiss Merger Act. Under the terms of the asset transfer agreement, UBS Switzerland AG assumed joint liability for contractual obligations of UBS AG existing on the asset transfer date, including the existing guarantee of aforementioned PaineWebber and other securities. To reflect this joint liability, UBS Switzerland AG is presented in a separate column as a subsidiary co-guarantor.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million For the year ended 31 December 2017	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income						
Interest income	8,632	3,917	2,732	1,742	(2,815)	14,208
Interest expense	(7,114)	(596)	(1,307)	(1,434)	2,724	(7,728)
Net interest income	1,518	3,321	1,425	308	(91)	6,480
Credit loss (expense) / recovery	(135)	(22)	(4)	(5)	39	(128)
Net interest income after credit loss expense	1,382	3,299	1,421	303	(53)	6,352
Net fee and commission income	1,564	3,966	8,281	3,449	(47)	17,214
Net trading income	3,325	901	457	220	71	4,974
Other income	4,303	167	419	3,439	(7,388)	939
Total operating income	10,574	8,334	10,577	7,411	(7,417)	29,479
Operating expenses						
Personnel expenses	4,409	2,020	6,312	1,932	0	14,673
General and administrative expenses	4,830	3,334	3,014	3,087	(5,455)	8,811
Depreciation and impairment of property, equipment and software	652	11	156	108	0	928
Amortization and impairment of intangible assets	8	0	51	11	0	70
Total operating expenses	9,899	5,366	9,532	5,138	(5,455)	24,481
Operating profit / (loss) before tax	675	2,968	1,045	2,273	(1,962)	4,998
Tax expense / (benefit)	448	616	2,800	213	(1)	4,077
Net profit / (loss)	227	2,351	(1,755)	2,059	(1,962)	921
Net profit / (loss) attributable to preferred noteholders	72	0	0	0	0	72
Net profit / (loss) attributable to non-controlling interests	0	0	0	4	0	4
Net profit / (loss) attributable to shareholders	155	2,351	(1,755)	2,056	(1,962)	845

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information for legal entities and sub-groups" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the year ended 31 December 2017	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders						
Net profit / (loss)	155	2,351	(1,755)	2,056	(1,962)	845
Other comprehensive income						
Other comprehensive income that may be reclassified to the income statement						
Foreign currency translation, net of tax	(170)	0	(751)	426	(40)	(535)
Financial assets available for sale, net of tax	(6)	2	43	(31)	(93)	(86)
Cash flow hedges, net of tax	(465)	(157)	0	(1)	1	(621)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(641)	(156)	(709)	394	(132)	(1,242)
Other comprehensive income that will not be reclassified to the income statement						
Defined benefit plans, net of tax	275	(22)	41	(14)	25	305
Own credit on financial liabilities designated at fair value, net of tax	(313)	0	0	0	0	(313)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(38)	(22)	41	(14)	25	(8)
Total other comprehensive income	(679)	(177)	(668)	380	(107)	(1,250)
Total comprehensive income attributable to shareholders	(524)	2,174	(2,423)	2,436	(2,069)	(404)
Total comprehensive income attributable to preferred noteholders	423					423
Total comprehensive income attributable to non-controlling interests				5		5
Total comprehensive income	(101)	2,174	(2,423)	2,441	(2,069)	23

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information for legal entities and sub-groups" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated balance sheet

CHF million As of 31 December 2017	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Assets						
Cash and balances with central banks	36,552	38,467	3,100	9,656	0	87,775
Due from banks	30,467	3,977	4,712	66,649	(92,112)	13,693
Cash collateral on securities borrowed	9,907	20,972	10,775	6,188	(35,448)	12,393
Reverse repurchase agreements	51,293	13,858	20,676	19,368	(27,955)	77,240
Trading portfolio assets	104,118	1,719	6,720	25,974	(7,723)	130,807
of which: assets pledged as collateral that may be sold or repledged by counterparties	*58,524*	*0*	*2,303*	*7,411*	*(32,877)*	*35,363*
Positive replacement values	114,044	4,123	12,948	21,118	(34,004)	118,229
Cash collateral receivables on derivative instruments	22,346	696	2,129	10,828	(12,565)	23,434
Loans	106,469	184,331	51,743	24,078	(44,903)	321,718
Financial assets designated at fair value	34,097	12,768	3,351	10,820	(2,481)	58,556
Financial assets available for sale	3,607	790	6,495	918	(3,145)	8,665
Financial assets held to maturity	950	8,215	0	0	0	9,166
Investments in subsidiaries and associates	49,632	15	1	27	(48,657)	1,018
Property, equipment and software	6,384	92	979	529	0	7,985
Goodwill and intangible assets	294	0	4,880	1,281	(58)	6,398
Deferred tax assets	1,252	421	5,999	2,110	0	9,783
Other assets	18,157	1,179	11,101	2,456	(3,389)	29,505
Total assets	589,570	291,624	145,611	202,001	(312,442)	916,363
Liabilities						
Due to banks	24,361	20,728	3,160	51,915	(92,631)	7,533
Cash collateral on securities lent	29,898	1,323	2,243	3,774	(35,448)	1,789
Repurchase agreements	18,264	321	12,681	11,945	(27,955)	15,255
Trading portfolio liabilities	24,358	250	3,877	9,122	(7,145)	30,463
Negative replacement values	111,448	3,675	12,932	22,082	(34,004)	116,134
Cash collateral payables on derivative instruments	27,768	60	2,215	12,768	(12,565)	30,247
Due to customers	118,684	241,313	79,684	54,438	(46,977)	447,141
Financial liabilities designated at fair value	53,532	0	104	3,329	(2,762)	54,202
Debt issued	96,572	8,367	8	514	(711)	104,749
Provisions	1,057	145	1,682	200	0	3,084
Other liabilities	30,430	2,246	10,117	15,625	(3,428)	54,990
Total liabilities	536,372	278,430	128,702	185,711	(263,626)	865,588
Equity attributable to shareholders	53,198	13,194	16,909	16,233	(48,816)	50,718
Equity attributable to non-controlling interests				57		57
Total equity	53,198	13,194	16,909	16,290	(48,816)	50,775
Total liabilities and equity	589,570	291,624	145,610	202,001	(312,442)	916,363

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information for legal entities and sub-groups" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the year ended 31 December 2017	UBS AG[1]	UBS Switzerland AG[1]	UBS Americas Inc.[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	(34,372)	(8,192)	(4,859)	(4,448)	(51,872)
Cash flow from / (used in) investing activities					
Purchase of subsidiaries, associates and intangible assets	(1)	(2)	(17)	(82)	(102)
Disposal of subsidiaries, associates and intangible assets[2]	289	0	0	46	336
Purchase of property, equipment and software	(1,032)	(83)	(291)	(94)	(1,500)
Disposal of property, equipment and software	1	0	53	160	213
Purchase of financial assets available for sale	(231)	0	(2,855)	(5,362)	(8,448)
Disposal and redemption of financial assets available for sale	3,385	1,282	2,777	7,473	14,917
Net (purchase) / redemption of financial assets held to maturity	(448)	370	0	0	(77)
Net cash flow from / (used in) investing activities	1,964	1,567	(333)	2,140	5,338
Cash flow from / (used in) financing activities					
Net short-term debt issued / (repaid)	24,195	(5)	0	(49)	24,141
Distributions paid on UBS AG shares	(2,250)	0	0	0	(2,250)
Issuance of long-term debt, including financial liabilities designated at fair value	48,484	622	103	297	49,506
Repayment of long-term debt, including financial liabilities designated at fair value	(41,722)	(580)	(129)	(867)	(43,299)
Dividends paid and repayments of preferred notes	(776)	0	0	0	(776)
Net changes in non-controlling interests	0	0	0	(5)	(5)
Net activity related to group internal capital transactions and dividends	1,242	(191)	883	(1,934)	0
Net cash flow from / (used in) financing activities	29,173	(154)	857	(2,558)	27,317
Total cash flow					
Cash and cash equivalents at the beginning of the year	44,269	46,629	11,892	18,317	121,107
Net cash flow from / (used in) operating, investing and financing activities	(3,236)	(6,780)	(4,335)	(4,866)	(19,216)
Effects of exchange rate differences on cash and cash equivalents	(511)	79	(400)	1,096	264
Cash and cash equivalents at the end of the year[3]	40,522	39,928	7,157	14,547	102,154
of which: cash and balances with central banks	*36,477*	*38,467*	*3,100*	*9,656*	*87,700*
of which: due from banks	*2,285*	*1,455*	*3,945*	*4,721*	*12,406*
of which: money market paper[4]	*1,760*	*7*	*112*	*169*	*2,049*

1 Cash flows generally represent a third-party view from a UBS AG consolidated perspective. 2 Includes dividends received from associates. 3 CHF 2,434 million of cash and cash equivalents were restricted.
4 Money market paper is included in the balance sheet under Trading portfolio assets, Financial investments available for sale and Financial assets designated at fair value.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million For the year ended 31 December 2016	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income							
Interest income	8,500	4,151	2,227	25	1,148	(2,269)	13,782
Interest expense	(6,686)	(714)	(1,135)		(919)	2,054	(7,399)
Net interest income	1,815	3,438	1,092	25	229	(215)	6,383
Credit loss (expense) / recovery	(24)	(3)	(6)		(3)		(37)
Net interest income after credit loss expense	1,790	3,434	1,086	25	226	(215)	6,346
Net fee and commission income	1,500	3,782	7,873		3,332	(40)	16,447
Net trading income	3,717	780	454		310	(318)	4,943
Other income	8,113	346	576		1,677	(10,027)	685
Total operating income	15,120	8,343	9,988	25	5,545	(10,600)	28,421
Operating expenses							
Personnel expenses	5,691	2,044	6,243		1,613	0	15,591
General and administrative expenses	5,213	3,507	3,402		2,458	(6,891)	7,690
Depreciation and impairment of property, equipment and software	699	12	184		85	0	980
Amortization and impairment of intangible assets	22	0	60		9	0	91
Total operating expenses	11,625	5,563	9,889		4,165	(6,891)	24,352
Operating profit / (loss) before tax	3,495	2,780	99	25	1,380	(3,710)	4,069
Tax expense / (benefit)	892	589	(1,175)		482	(7)	781
Net profit / (loss)	2,603	2,191	1,274	25	898	(3,703)	3,288
Net profit / (loss) attributable to preferred noteholders	78	0	0	31	0	(31)	78
Net profit / (loss) attributable to non-controlling interests	0	0	0		4	0	4
Net profit / (loss) attributable to shareholders	2,525	2,191	1,274	(6)	894	(3,672)	3,207

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information for legal entities and sub-groups" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the year ended 31 December 2016	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders							
Net profit / (loss)	2,525	2,191	1,274	(6)	894	(3,672)	3,207
Other comprehensive income							
Other comprehensive income that may be reclassified to the income statement							
Foreign currency translation, net of tax	335	0	285		(707)	379	293
Financial assets available for sale, net of tax	(22)	(33)	(8)		(18)	6	(73)
Cash flow hedges, net of tax	(805)	109	0		0	29	(666)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(491)	77	277	0	(725)	415	(447)
Other comprehensive income that will not be reclassified to the income statement							
Defined benefit plans, net of tax	(651)	(54)	(59)		(36)	(25)	(824)
Own credit on financial liabilities designated at fair value, net of tax	(115)						(115)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(766)	(54)	(59)	0	(36)	(25)	(939)
Total other comprehensive income	(1,257)	23	218	0	(761)	390	(1,386)
Total comprehensive income attributable to shareholders	1,268	2,214	1,492	(6)	133	(3,282)	1,820
Total comprehensive income attributable to preferred noteholders	349						349
Total comprehensive income attributable to non-controlling interests	0				3		3
Total comprehensive income attributable to UBS Preferred Funding Trust IV & V							0
Total comprehensive income	1,617	2,214	1,492	(6)	137	(3,282)	2,173

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information for legal entities and sub-groups" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated balance sheet

CHF million As of 31 December 2016	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Assets						
Cash and balances with central banks	40,538	44,528	8,925	13,775	0	107,767
Due from banks	30,008	3,886	3,759	33,420	(57,948)	13,125
Cash collateral on securities borrowed	6,561	6,657	13,173	5,004	(16,284)	15,111
Reverse repurchase agreements	52,782	19,273	14,406	7,507	(27,722)	66,246
Trading portfolio assets	74,172	1,673	4,702	22,729	(6,615)	96,661
of which: assets pledged as collateral that may be sold or repledged by counterparties	*39,596*	*0*	*1,960*	*5,850*	*(17,145)*	*30,260*
Positive replacement values	156,375	5,458	9,496	27,231	(40,149)	158,411
Cash collateral receivables on derivative instruments	22,117	913	2,701	12,068	(11,135)	26,664
Loans	94,506	184,241	50,150	41,199	(63,091)	307,004
Financial assets designated at fair value	35,498	16,416	5,371	11,589	(3,849)	65,024
Financial assets available for sale	8,104	2,046	6,593	3,469	(4,536)	15,676
Financial assets held to maturity	527	8,762	0	0	0	9,289
Investments in subsidiaries and associates	49,904	22	1	27	(48,991)	963
Property, equipment and software	6,961	19	1,075	241	0	8,297
Goodwill and intangible assets	297	0	5,130	1,161	(32)	6,556
Deferred tax assets	1,801	601	9,148	1,595	0	13,144
Other assets	10,645	1,526	9,071	7,241	(3,071)	25,412
Total assets	590,796	296,022	143,702	188,257	(283,424)	935,353
Liabilities						
Due to banks	27,992	13,204	5,288	32,733	(68,572)	10,645
Cash collateral on securities lent	13,193	1,518	2,549	1,841	(16,284)	2,818
Repurchase agreements	16,944	5,385	2,710	9,295	(27,722)	6,612
Trading portfolio liabilities	15,535	154	3,643	9,780	(6,287)	22,825
Negative replacement values	151,274	4,982	9,491	28,213	(40,149)	153,810
Cash collateral payables on derivative instruments	31,585	109	2,409	12,504	(11,135)	35,472
Due to customers	118,934	248,731	85,702	53,474	(56,641)	450,199
Financial liabilities designated at fair value	54,504	0	1	4,559	(4,047)	55,017
Debt issued	70,558	8,330	145	401	(437)	78,998
Provisions	1,483	186	2,168	312	21	4,169
Other liabilities	31,879	2,212	11,100	18,352	(3,099)	60,443
Total liabilities	533,881	284,811	125,206	171,464	(234,353)	881,009
Equity attributable to shareholders	56,273	11,211	18,496	16,754	(49,072)	53,662
Equity attributable to preferred noteholders	642	0	0	0	0	642
Equity attributable to non-controlling interests	0	0	0	40	0	40
Total equity	56,915	11,211	18,496	16,793	(49,072)	54,343
Total liabilities and equity	590,796	296,022	143,702	188,257	(283,424)	935,353

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information for legal entities and sub-groups" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the year ended 31 December 2016	UBS AG[1]	UBS Switzerland AG[1]	UBS Americas Inc.[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	(26,981)	(3,914)	8,979	4,503	(17,413)
Cash flow from / (used in) investing activities					
Purchase of subsidiaries, associates and intangible assets	0	(3)	0	(23)	(26)
Disposal of subsidiaries, associates and intangible assets[2]	93	0	0	0	93
Purchase of property, equipment and software	(1,332)	(16)	(288)	(111)	(1,746)
Disposal of property, equipment and software	175	0	1	32	209
Purchase of financial assets available for sale	(694)	(998)	(2,792)	(2,788)	(7,271)
Disposal and redemption of financial assets available for sale	24,902	21,729	1,694	5,772	54,097
Net (purchase) / redemption of financial assets held to maturity	(527)	(8,468)	0	0	(8,996)
Net cash flow from / (used in) investing activities	22,616	12,245	(1,384)	2,882	36,359
Cash flow from / (used in) financing activities					
Net short-term debt issued / (repaid)	8,229	(7)	(2,975)	193	5,440
Distributions paid on UBS AG shares	(3,434)	0	0	0	(3,434)
Issuance of long-term debt, including financial liabilities designated at fair value	31,484	733	196	1,039	33,453
Repayment of long-term debt, including financial liabilities designated at fair value	(32,279)	(669)	(8)	(1,126)	(34,081)
Dividends paid and repayments of preferred notes	(1,366)	0	0	0	(1,366)
Net changes in non-controlling interests	0	0	0	(5)	(5)
Net activity related to group internal capital transactions and dividends	(1,333)	(2,000)	0	3,333	0
Net cash flow from / (used in) financing activities	1,300	(1,943)	(2,786)	3,435	6
Total cash flow					
Cash and cash equivalents at the beginning of the year	47,902	40,246	7,084	7,731	102,962
Net cash flow from / (used in) operating, investing and financing activities	(3,065)	6,388	4,808	10,821	18,952
Effects of exchange rate differences on cash and cash equivalents	(569)	(4)	0	(234)	(807)
Cash and cash equivalents at the end of the year[3]	44,269	46,629	11,892	18,317	121,107
of which: cash and balances with central banks	*40,486*	*44,528*	*8,925*	*13,775*	*107,715*
of which: due from banks	*2,836*	*2,095*	*2,931*	*4,065*	*11,927*
of which: money market paper[4]	*946*	*7*	*36*	*477*	*1,465*

1 Cash flows generally represent a third-party view from a UBS AG (consolidated) perspective. As a consequence, the non-consolidated UBS Preferred Funding Trusts IV and V are not presented in this table. For the year ended 31 December 2016, these trusts had cash inflows of CHF 1,317 million from operating activities and an equivalent cash outflow for dividends paid to preferred note holders. 2 Includes dividends received from associates. 3 CHF 2,662 million of cash and cash equivalents were restricted. 4 Money market paper is included in the balance sheet under Trading portfolio assets, Financial investments available for sale and Financial assets designated at fair value.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million For the year ended 31 December 2015	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income							
Interest income	9,102	3,039	1,367	63	1,626	(2,020)	13,178
Interest expense	(5,885)	(545)	(501)		(1,410)	1,892	(6,449)
Net interest income	3,218	2,494	866	63	217	(128)	6,729
Credit loss (expense) / recovery	(109)	(12)	0		4	0	(117)
Net interest income after credit loss expense	3,109	2,482	866	63	220	(128)	6,612
Net fee and commission income	2,738	3,001	7,940		3,586	(81)	17,184
Net trading income	5,031	735	355		331	(756)	5,696
Other income	15,371	120	774		89	(15,243)	1,112
Total operating income	26,249	6,338	9,935	63	4,227	(16,208)	30,605
Operating expenses							
Personnel expenses	6,800	1,607	6,281		1,265	0	15,954
General and administrative expenses	5,439	2,621	3,785		2,254	(5,880)	8,219
Depreciation and impairment of property, equipment and software	672	11	159		76	0	918
Amortization and impairment of intangible assets	22	0	73		12	0	107
Total operating expenses	12,934	4,239	10,298		3,607	(5,880)	25,198
Operating profit / (loss) before tax	13,315	2,099	(362)	63	619	(10,327)	5,407
Tax expense / (benefit)	1,136	489	(1,200)		(1,317)	(16)	(908)
Net profit / (loss)	12,180	1,610	837	63	1,936	(10,313)	6,314
Net profit / (loss) attributable to preferred noteholders	77	0	0	31	0	(31)	77
Net profit / (loss) attributable to non-controlling interests	0	0	0		3	0	3
Net profit / (loss) attributable to shareholders	12,103	1,610	837	32	1,933	(10,281)	6,235

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under Complementary financial information for legal entities and sub-groups at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the year ended 31 December 2015	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	UBS Preferred Funding Trust IV & V	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders							
Net profit / (loss)	12,103	1,610	837	32	1,933	(10,281)	6,235
Other comprehensive income							
Other comprehensive income that may be reclassified to the income statement							
Foreign currency translation, net of tax	(11)	0	121		(843)	467	(266)
Financial assets available for sale, net of tax	(51)	43	(21)		(16)	(19)	(64)
Cash flow hedges, net of tax	(503)	(72)	0		0	57	(518)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(564)	(29)	100	0	(859)	504	(848)
Other comprehensive income that will not be reclassified to the income statement							
Defined benefit plans, net of tax	701	(337)	(71)		27	(15)	304
Total other comprehensive income that will not be reclassified to the income statement, net of tax	701	(337)	(71)	0	27	(15)	304
Total other comprehensive income	136	(366)	29	0	(832)	489	(545)
Total comprehensive income attributable to shareholders	12,239	1,244	866	32	1,101	(9,792)	5,690
Total comprehensive income attributable to preferred noteholders	18	0	0	0	0	0	18
Total comprehensive income attributable to non-controlling interests	0	0	0	0	1	0	1
Total comprehensive income attributable to UBS Preferred Funding Trust IV & V	0	0	0	40	0	(40)	0
Total comprehensive income	12,257	1,244	866	72	1,102	(9,832)	5,709

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the UBS AG standalone and UBS Switzerland AG standalone financial statements under "Complementary financial information for legal entities and sub-groups" at www.ubs.com/investors for information prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 37 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the year ended 31 December 2015	UBS AG[1]	UBS Switzerland AG[1]	UBS Americas Inc.[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	(1,457)	2,681	(525)	1,298	1,997
Cash flow from / (used in) investing activities					
Purchase of subsidiaries, associates and intangible assets	(12)	0	1	0	(13)
Disposal of subsidiaries, associates and intangible assets[2]	464	0	13	0	477
Purchase of property, equipment and software	(1,423)	(5)	(299)	(114)	(1,841)
Disposal of property, equipment and software	503	0	9	35	547
Purchase of financial assets available for sale	(66,659)	(18,686)	(2,722)	(13,123)	(101,189)
Disposal and redemption of financial assets available for sale	51,515	22,501	2,952	16,616	93,584
Net (purchase) / redemption of financial assets held to maturity					
Net cash flow from / (used in) investing activities	(15,613)	3,810	(47)	3,415	(8,434)
Cash flow from / (used in) financing activities					
Net short-term debt issued / (repaid)	(5,603)	24	(826)	0	(6,404)
Distributions paid on UBS AG shares	(2,626)	0	0	0	(2,626)
Issuance of long-term debt, including financial liabilities designated at fair value	46,882	772	7	129	47,790
Repayment of long-term debt, including financial liabilities designated at fair value	(42,415)	(402)	(129)	(1,274)	(44,221)
Dividends paid and repayments of preferred notes	(108)	0	0	0	(108)
Net changes in non-controlling interests	0	0	0	(5)	(5)
Net activity related to group internal capital transactions and dividends[3]	(30,512)	33,293	(114)	(2,666)	0
Net cash flow from / (used in) financing activities	(34,382)	33,687	(1,062)	(3,817)	(5,573)
Total cash flow					
Cash and cash equivalents at the beginning of the year	100,662	0	8,960	7,093	116,715
Net cash flow from / (used in) operating, investing and financing activities	(51,451)	40,178	(1,634)	896	(12,010)
Effects of exchange rate differences on cash and cash equivalents	(1,309)	67	(241)	(259)	(1,742)
Cash and cash equivalents at the end of the year[4]	47,902	40,246	7,084	7,731	102,962
of which: cash and balances with central banks	*45,125*	*38,701*	*4,971*	*2,509*	*91,306*
of which: due from banks	*2,072*	*1,438*	*2,009*	*5,213*	*10,732*
of which: money market paper[5]	*704*	*107*	*104*	*9*	*924*

1 Cash flows generally represent a third-party view from a UBS AG (consolidated) perspective. As a consequence, the non-consolidated UBS Preferred Funding Trusts IV and V are not presented in this table. For the year ended 31 December 2015, these trusts had cash inflows of CHF 77 million from operating activities and an equivalent cash outflow for dividends paid to preferred note holders. 2 Includes dividends received from associates. 3 Includes a transfer of cash and cash equivalents from UBS AG to UBS Switzerland AG of CHF 33,283 million. Refer to "Establishment of UBS Switzerland AG" in the "Legal entity financial and regulatory information" section of the UBS Group AG Annual Report 2015 for more information on the business transfer from UBS AG to UBS Switzerland AG. 4 CHF 3,963 million of cash and cash equivalents were restricted. 5 Money market paper is included in the balance sheet under Trading portfolio assets and Financial investments available for sale.

Appendix 4 – Excerpts from the UBS AG Standalone Financial Statements and Regulatory Information for the Year Ended 31 December 2017

It should be noted that the term "pro-forma" as used in this Appendix 4 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

UBS AG standalone financial statements (audited)

Income statement

		For the year ended	
CHF million	Note	31.12.17	31.12.16
Interest and discount income		5,493	5,776
Interest and dividend income from trading portfolio		2,158	2,060
Interest and dividend income from financial investments		224	165
Interest expense		(6,386)	(6,251)
Gross interest income		1,489	1,749
Credit loss (expense) / recovery		(115)	(32)
Net interest income		1,374	1,717
Fee and commission income from securities and investment business and other fee and commission income		2,354	2,154
Credit-related fees and commissions		194	217
Fee and commission expense		(948)	(829)
Net fee and commission income		1,601	1,541
Net trading income	3	3,192	3,930
Net income from disposal of financial investments		85	117
Dividend income from investments in subsidiaries and other participations	4	1,261	3,041
Income from real estate holdings		580	563
Sundry ordinary income	5	2,690	4,740
Sundry ordinary expenses	5	(485)	(539)
Other income from ordinary activities		4,131	7,922
Total operating income		10,297	15,111
Personnel expenses	6	4,128	6,350
General and administrative expenses	7	4,553	5,073
Subtotal operating expenses		8,680	11,422
Impairment of investments in subsidiaries and other participations		267	1,099
Depreciation and impairment of property, equipment and software		652	700
Amortization and impairment of goodwill and other intangible assets		8	22
Changes in provisions and other allowances and losses		229	109
Total operating expenses		9,837	13,352
Operating profit		460	1,759
Extraordinary income	8	382	1,637
Extraordinary expenses	8	4	2
Tax expense / (benefit)	9	(70)	150
Net profit / (loss)		909	3,244

Balance sheet

CHF million	Note	31.12.17	31.12.16
Assets			
Cash and balances with central banks		36,514	40,778
Due from banks	23	40,978	40,700
of which: total loss-absorbing capacity eligible at significant regulated subsidiary level	2	*12,301*	*5,362*
Receivables from securities financing transactions	10, 23	61,358	59,778
of which: cash collateral on securities borrowed		*9,906*	*6,561*
of which: reverse repurchase agreements		*51,452*	*53,217*
Due from customers	11, 12, 23	129,550	103,880
Mortgage loans	11, 12	4,853	4,312
Trading portfolio assets	13	104,649	74,282
Positive replacement values	14	14,799	20,951
Financial investments	15	24,417	34,669
Accrued income and prepaid expenses		1,259	1,595
Investments in subsidiaries and other participations		47,962	48,262
Property, equipment and software		6,384	6,961
Goodwill and other intangible assets		6	13
Other assets	16	4,248	3,295
Total assets		476,977	439,476
of which: subordinated assets		*5,348*	*6,851*
of which: subject to mandatory conversion and / or debt waiver		*3,013*	*4,521*
Liabilities			
Due to banks	23	29,161	32,781
Payables from securities financing transactions	10, 23	48,313	30,275
of which: cash collateral on securities lent		*29,898*	*13,193*
of which: repurchase agreements		*18,416*	*17,082*
Due to customers	23	151,144	152,690
of which: total loss-absorbing capacity eligible at UBS AG level	2	*32,629*	*22,270*
Trading portfolio liabilities	13	24,358	15,535
Negative replacement values	14	18,292	23,896
Financial liabilities designated at fair value	13, 19	51,171	51,806
Bonds issued		96,588	71,215
of which: total loss-absorbing capacity eligible at UBS AG level		*8,851*	*12,003*
Accrued expenses and deferred income		3,347	4,125
Other liabilities	16	3,558	4,113
Provisions	12	1,097	1,501
Total liabilities		427,030	387,937
Equity			
Share capital	20	386	386
General reserve		35,649	38,149
of which: statutory capital reserve		*35,649*	*38,149*
of which: capital contribution reserve[1]		*35,649*	*38,149*
Voluntary earnings reserve		13,004	9,760
Net profit / (loss) for the period		909	3,244
Total equity		49,947	51,539
Total liabilities and equity		476,977	439,476
of which: subordinated liabilities		*14,317*	*17,692*
of which: subject to mandatory conversion and / or debt waiver		*13,596*	*15,877*

Balance sheet (continued)

CHF million	31.12.17	31.12.16
Off-balance sheet items		
Contingent liabilities, gross	21,815	25,395
Sub-participations	(1,850)	(1,905)
Contingent liabilities, net	19,965	23,489
of which: guarantees to third parties related to subsidiaries	*14,017*	*17,505*
of which: credit guarantees and similar instruments	*3,684*	*3,607*
of which: performance guarantees and similar instruments	*64*	*68*
of which: documentary credits	*2,200*	*2,310*
Irrevocable commitments, gross	33,500	47,273
Sub-participations	(1,070)	(1,512)
Irrevocable commitments, net	32,430	45,761
of which: loan commitments	*32,430*	*45,761*
Forward starting transactions[2]	12,984	10,549
of which: reverse repurchase agreements	*7,814*	*7,238*
of which: securities borrowing agreements	*23*	*36*
of which: repurchase agreements	*5,147*	*3,267*
of which: securities lending agreements	*0*	*8*
Liabilities for calls on shares and other equity instruments	5	5

1 Effective 1 January 2011, the Swiss withholding tax law provides that payments out of the capital contribution reserve are not subject to withholding tax. This law has led to interpretational differences between the Swiss Federal Tax Administration and companies about the qualifying amounts of capital contribution reserve and the disclosure in the financial statements. In view of this, the Swiss Federal Tax Administration has confirmed that UBS AG would be able to repay to shareholders CHF 23.0 billion of disclosed capital contribution reserve without being subject to the withholding tax deduction that applies to dividends paid out of retained earnings. The confirmation by the Swiss Tax Administration was dated 1 January 2016. This amount decreased by CHF 2.5 billion as of 31 December 2017 subsequent to distributions in 2017. The decision about the remaining amount has been deferred to a future point in time. 2 Cash to be paid in the future by either UBS AG or the counterparty.

Off-balance sheet items

Off-balance sheet items include indemnities and guarantees issued by UBS AG for the benefit of subsidiaries and creditors of subsidiaries.

Where the indemnity amount issued by UBS AG is not specifically defined, the indemnity relates to the solvency or minimum capitalization of a subsidiary, and therefore no amount is included in the table above.

Joint and several liability – Value added tax (VAT)

UBS AG is jointly and severally liable for the combined VAT liability of UBS entities that belong to the VAT group of UBS in Switzerland. This contingent liability is not included in the table above.

Guarantee – UBS Limited

UBS AG has issued a guarantee for the benefit of each counterparty of UBS Limited. Under this guarantee, UBS AG irrevocably and unconditionally guarantees each and every obligation that UBS Limited enters into. UBS AG promises to pay to that counterparty on demand any unpaid balance of such liabilities under the terms of the guarantee.

Indemnities – UBS Europe SE

In connection with the establishment of UBS Europe SE in 2016, UBS AG entered into an agreement with UBS Europe SE under which UBS AG would provide UBS Europe SE with limited indemnification of payment obligations that may arise from certain litigation, regulatory and similar matters.

As of 31 December 2017, the amount of such potential payment obligations could not be reliably estimated and the table above does therefore not include any amount related to this limited indemnification.

In addition, in accordance with the bylaws of the Deposit Protection Fund of the Association of German Banks, UBS AG issued on behalf of UBS Europe SE an indemnity in favor of this fund. The probability of an outflow was assessed to be remote, and as a result, the table above does not include any exposure arising under this indemnity.

Joint and several liability – UBS Switzerland AG

In June 2015, the Personal & Corporate Banking and Wealth Management businesses booked in Switzerland were transferred from UBS AG to UBS Switzerland AG through an asset transfer in accordance with the Swiss Merger Act. Under the Swiss Merger Act, UBS AG assumed joint liability for obligations existing on the asset transfer date, 14 June 2015, that were transferred to UBS Switzerland AG, excluding the collateralized portion of secured contractual obligations.

As of the asset transfer date, this joint liability amounted to approximately CHF 260 billion. UBS AG has no liability for new obligations incurred by UBS Switzerland AG after the asset transfer date. The joint liability amount declines as obligations mature, terminate or are novated following the asset transfer date.

As of 31 December 2017, the joint liability of UBS AG for contractual obligations of UBS Switzerland AG amounted to less than CHF 1 billion, unchanged from 31 December 2016. As of 31 December 2017, the probability of an outflow under this joint and several liability was assessed to be remote, and as a result, the table above does not include any exposures arising under this joint and several liability.

→ **Refer to "Establishment of UBS Switzerland AG" in the "Legal entity financial and regulatory information" section of the UBS Group AG Annual Report 2015 for more information**

Statement of changes in equity

CHF million	Share capital	Statutory capital reserve	Statutory earnings reserve	Voluntary earnings reserve	Net profit / (loss) for the period	Total equity
Balance as of 1 January 2016	**386**	**38,149**	**(4,480)**	**5,689**	**11,984**	**51,728**
Dividends and other distributions			(3,434)			(3,434)
Net profit / (loss) appropriation			7,914	4,070	(11,984)	0
Net profit / (loss) for the period					3,244	3,244
Balance as of 31 December 2016	**386**	**38,149**	**0**	**9,760**	**3,244**	**51,539**
Balance as of 1 January 2017	**386**	**38,149**	**0**	**9,760**	**3,244**	**51,539**
Dividends and other distributions		(2,500)[1]				(2,500)
Net profit / (loss) appropriation				3,244	(3,244)	0
Net profit / (loss) for the period					909	909
Balance as of 31 December 2017	**386**	**35,649**	**0**	**13,004**	**909**	**49,947**

1 Reflects the payment of an ordinary cash dividend of CHF 2,250 million and the payment of a non-cash dividend of CHF 250 million, both out of the capital contribution reserve to UBS Group AG. Refer to Note 20a for more information on the non-cash dividend.

Statement of appropriation of retained earnings and proposed dividend distribution out of voluntary earnings reserve

The Board of Directors proposes that the Annual General Meeting of Shareholders (AGM) on 26 April 2018 approve an ordinary dividend distribution of CHF 3,065 million, consisting of the *Net profit for the period* of CHF 909 million and CHF 2,156 million out of the *Voluntary earnings reserve*.

Proposed appropriation of retained earnings

The Board of Directors proposes that the AGM on 26 April 2018 approve the following appropriation of retained earnings.

	For the year ended
CHF million	31.12.17
Net profit for the period	909
Retained earnings carried forward	0
Total retained earnings available for appropriation	909
Appropriation of retained earnings	
Dividend distribution	(909)
Retained earnings carried forward	0

Proposed dividend distribution out of voluntary earnings reserve

The Board of Directors proposes that the AGM on 26 April 2018 approve the following dividend distribution out of the *Voluntary earnings reserve*.

	For the year ended
CHF million	31.12.17
Total voluntary earnings reserve before distribution	13,004
Dividend distribution	(2,156)
Total voluntary earnings reserve after distribution	10,848

Note 1 Name, legal form and registered office

UBS AG is incorporated and domiciled in Switzerland. Its registered offices are at Bahnhofstrasse 45, CH-8001 Zurich and Aeschenvorstadt 1, CH-4051 Basel, Switzerland. UBS AG operates under art. 620ff. of the Swiss Code of Obligations and Swiss banking law as an Aktiengesellschaft, a corporation limited by shares.

UBS AG is a regulated bank in Switzerland and is 100% owned by UBS Group AG, the ultimate parent of the UBS Group. UBS AG holds investments in and provides funding to subsidiaries, including the other banking subsidiaries of the UBS Group. In addition, UBS AG operates globally, including business activities from all five UBS business divisions and Corporate Center. In the ordinary course of business, main contributors to the profitability of UBS AG are the Investment Bank, Wealth Management business booked outside of Switzerland and Corporate Center – Group Asset and Liability Management (Group ALM). The balance sheet is mainly composed of financial assets and liabilities from the Investment Bank, Corporate Center – Group ALM and Wealth Management business booked outside of Switzerland as well as investments in subsidiaries and other participations in Corporate Center – Group ALM and fixed assets of Corporate Center – Services.

During 2017, shared services functions previously provided by UBS AG to subsidiaries and self-consumed in Switzerland, the UK and US were substantially transferred to Group service companies. UBS AG employed 10,551 personnel on a full-time equivalent basis as of 31 December 2017 compared with 20,062 personnel as of 31 December 2016.

→ **Refer to Note 2b for more information**

Note 2 Accounting policies

a) Significant accounting policies

UBS AG standalone financial statements are prepared in accordance with Swiss GAAP (FINMA Circular 2015 / 1 and the Banking Ordinance) and represent "reliable assessment statutory single-entity financial statements." The accounting policies are principally the same as for the consolidated financial statements of UBS AG outlined in Note 1 to the consolidated financial statements of UBS AG included in the UBS Group AG and UBS AG Annual Report 2017. Major differences between the Swiss GAAP requirements and International Financial Reporting Standards are described in Note 36 to the consolidated financial statements of UBS AG. The significant accounting policies applied for the standalone financial statements of UBS AG are discussed below.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2017 for more information**

Risk management

UBS AG is fully integrated into the Group-wide risk management process described in the audited part of the "Risk management and control" section of the UBS Group AG and UBS AG Annual Report 2017.

Further information on the use of derivative instruments and hedge accounting is provided in Notes 1 and 12 to the consolidated financial statements of UBS AG.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2017 for more information**

Compensation policy

The compensation structure and processes of UBS AG conform to the compensation principles and framework of UBS Group AG. For detailed information, refer to the Compensation Report of UBS Group AG.

Foreign currency translation

Transactions denominated in foreign currency are translated into Swiss francs at the spot exchange rate on the date of the transaction. At the balance sheet date, all monetary assets and liabilities, as well as equity instruments recorded in *Trading portfolio assets* and *Financial investments* denominated in foreign currency, are translated into Swiss francs using the closing exchange rate. Non-monetary items measured at historic cost are translated at the spot exchange rate on the date of the transaction. Assets and liabilities of foreign branches are translated into Swiss francs at the closing exchange rate. Income and expense items of foreign branches are translated at weighted average exchange rates for the period. All currency translation effects are recognized in the income statement.

The main currency translation rates used by UBS AG are provided in Note 34 to the consolidated financial statements of UBS AG.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2017 for more information**

Note 2 Accounting policies (continued)

Structured debt instruments

Structured debt instruments comprise structured debt instruments issued and transacted over-the-counter and include a host contract and one or more embedded derivatives that do not relate to UBS AG's own equity. By applying the fair value option, the vast majority of structured debt instruments are measured at fair value as a whole and recognized in *Financial liabilities designated at fair value.* The fair value option for structured debt instruments can be applied only if the following criteria are cumulatively met:

- the structured debt instrument is measured on a fair value basis and is subject to risk management that is equivalent to risk management for trading activities;
- the application of the fair value option eliminates or significantly reduces an accounting mismatch that would otherwise arise; and
- changes in fair value attributable to changes in unrealized own credit are not recognized.

Fair value changes related to *Financial liabilities designated at fair value,* excluding changes in unrealized own credit, are recognized in *Net trading income.* Interest expense on *Financial liabilities designated at fair value* is recognized in *Interest expense.*

Where the designation criteria for the fair value option are not met, the embedded derivatives are assessed for bifurcation for measurement purposes. Bifurcated embedded derivatives are measured at fair value through profit or loss and presented in the same balance sheet line as the host contract.

→ **Refer to Note 19 for more information**

Group-internal funding

UBS AG obtains funding from UBS Group AG and UBS Group Funding (Switzerland) AG in the form of loans that qualify as going concern additional tier 1 capital at the UBS AG consolidated and standalone levels and as gone concern loss-absorbing capacity at the UBS AG consolidated level. A portion of Group-internal funding obtained is further on-lent by UBS AG to certain subsidiaries in the form of loans.

Where such Group-internal funding is eligible to meet the requirements for total loss-absorbing capacity (TLAC) at the level of UBS AG consolidated or standalone, or at the levels of significant regulated subsidiaries as defined for Pillar 3 disclosure purposes, the aggregate amounts of the respective obligations and claims are separately disclosed on the balance sheet. For those TLAC instruments that are eligible to meet the going concern capital requirements, i.e., are subordinated and subject to mandatory conversion and / or debt waiver as explained below, the aggregate corresponding amounts are disclosed on the balance sheet.

Obligations of UBS AG arising from Group-internal funding it has received are presented as *Due to customers* and measured at amortized cost. Claims of UBS AG from Group-internal funding it has provided are presented as *Due from banks* and *Due from customers* and measured at amortized cost less any allowance for credit losses. Further information on the assessment and recognition of credit losses of claims is provided in Note 1 to the consolidated financial statements of UBS AG.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2017 for more information**

Subordinated assets and liabilities

Subordinated assets are comprised of claims that, based on an irrevocable written declaration, in the event of liquidation, bankruptcy or composition concerning the debtor, rank after the claims of all other creditors and may not be offset against amounts payable to the debtor nor be secured by its assets. Subordinated liabilities are comprised of corresponding obligations.

Subordinated assets and liabilities that contain a point-of-non-viability clause in accordance with Swiss capital requirements per articles 29 and 30 of the Capital Adequacy Ordinance are disclosed as being *subject to mandatory conversion and / or debt waiver* and provide for the claim or the obligation to be written off or converted into equity in the event that the issuing bank reaches a point of non-viability.

Investments in subsidiaries and other participations

Investments in subsidiaries and other participations are equity interests that are held to carry on the business of UBS AG or for other strategic purposes. They include all subsidiaries directly held by UBS AG through which UBS AG conducts its business on a global basis. The investments are measured individually and carried at cost less impairment. The carrying value is tested for impairment when indications for a decrease in value exist, which include incurrence of significant operating losses or a severe depreciation of the currency in which the investment is denominated. If an investment in a subsidiary is impaired, its value is generally written down to the net asset value. Subsequent recoveries in value are recognized up to the original cost value based on either the increased net asset value or a value above the net asset value if, in the opinion of management, forecasts of future profitability provide sufficient evidence that a carrying value above net asset value is supported. Management may exercise its discretion as to what extent and in which period a recovery in value is recognized.

Impairments of investments are presented as *Impairment of investments in subsidiaries and other participations.* Reversals of impairments are presented as *Extraordinary income* in the income statement. Impairments and partial or full reversals of impairments for a subsidiary during the same annual period are determined on a net basis.

Note 2 Accounting policies (continued)

Services received from and provided to Group entities

UBS AG receives services from UBS Business Solutions AG, the main Group service company, mainly relating to Group Technology, Group Operations and Group Corporate Services, as well as certain other services from other Group entities. UBS AG provides services to Group entities mainly relating to real estate and selected other Corporate Center – Services functions. Services received from and provided to Group entities are settled in cash as hard cost transfers or hard revenue transfers paid or received.

When the nature of the underlying transaction between UBS AG and the Group entity contains a single, clearly identifiable service element, related income and expenses are presented in the respective income statement line item, e.g., *Fee and commission income from securities and investment business and other fee and commission income, Fee and commission expense, Net trading income* or *General and administrative expenses*. To the extent the nature of the underlying transaction contains various service elements and is not clearly attributable to a particular income statement line item, related income and expenses are presented in *Sundry ordinary income* and *Sundry ordinary expenses*.

→ **Refer to Notes 5 and 7 for more information**

Pension and other post-employment benefit plans

Swiss GAAP permits the use of IFRS or Swiss accounting standards for pension and other post-employment benefit plans, with the election made on a plan-by-plan basis.

UBS AG has elected to apply Swiss GAAP (FER 16) for the Swiss pension plan in its standalone financial statements. The requirements of Swiss GAAP are better aligned with the specific nature of Swiss pension plans, which are hybrid in that they combine elements of defined contribution and defined benefit plans, but are treated as defined benefit plans under IFRS. Swiss GAAP requires that the employer contributions to the pension fund are recognized as *Personnel expenses* in the income statement. The employer contributions to the Swiss pension fund are determined as a percentage of contributory compensation. Furthermore, Swiss GAAP requires an assessment as to whether, based on the financial statements of the pension fund prepared in accordance with Swiss accounting standards (FER 26), an economic benefit to, or obligation of, UBS AG arises from the pension fund and is recognized in the balance sheet when conditions are met. Conditions for recording a pension asset or liability would be met if, for example, an employer contribution reserve is available or UBS AG is required to contribute to the reduction of a pension deficit (on a FER 26 basis).

Key differences between Swiss GAAP and IFRS include the treatment of dynamic elements, such as future salary increases and future interest credits on retirement savings, which are not considered under the static method used in accordance with Swiss GAAP. Also, the discount rate used to determine the defined benefit obligation in accordance with IFRS is based on the yield of high-quality corporate bonds of the market in the respective pension plan country. The discount rate used in accordance with Swiss GAAP, i.e., the technical interest rate, is determined by the Pension Foundation Board based on the expected returns of the Board's investment strategy.

→ **Refer to Note 21 for more information**

UBS AG has elected to apply IFRS (IAS 19) for its non-Swiss defined benefit plans. However, remeasurements of the defined benefit obligation and the plan assets are recognized in the income statement rather than directly in equity. For corresponding disclosures in accordance with IAS 19 requirements, refer to Note 26 to the consolidated financial statements of UBS AG.

→ **Refer to the UBS Group AG and UBS AG Annual Report 2017 for more information**

After the transfer of shared services functions to UBS Business Solutions AG as further outlined in Note 2b, UBS AG ceased to make direct contributions to the respective pension plans for transferred employees. Instead, UBS AG receives a service charge from the Group service companies including their respective pension costs, which is recognized as *General and administrative expenses*.

Deferred taxes

Deferred tax assets are not recognized in UBS AG's standalone financial statements. However, deferred tax liabilities may be recognized for taxable temporary differences. Changes in the deferred tax liability balance are recognized in the income statement.

Dispensations in the standalone financial statements

As UBS AG prepares consolidated financial statements in accordance with IFRS, UBS AG is exempt from various disclosures in the standalone financial statements. The dispensations include the management report, the statement of cash flows and various note disclosures, as well as the publication of full interim financial statements. As a Swiss issuer of debt, in order to validly issue debt throughout the year, UBS AG discloses interim mid-year financial information as per the requirements of Article 1156 in conjunction with Article 652a of the Swiss Code of Obligations, including an income statement, a balance sheet and a note on the basis of accounting.

Note 2 Accounting policies (continued)

b) Changes in accounting policies and / or comparability

Presentation of interest income and expense on derivatives designated as hedging instruments

Effective 1 January 2017, UBS AG refined the presentation of interest income and interest expense on derivatives designated as hedging instruments in effective hedge relationships to align the presentation with interest arising from designated hedged items. As a result, *Interest and discount income* and *Interest expense* for the year ended 31 December 2017 were each CHF 530 million lower, with no change to *Net interest income*. Prior-period information has not been restated.

Transfers of shared services functions to UBS Business Solutions AG and UBS Business Solutions US LLC

The comparative figures presented as of and for the year ended 31 December 2016 include the financial effect of shared services functions in Switzerland, the UK and the US. These functions were substantially transferred to Group service companies in 2017. The transfer in Switzerland to UBS Business Solutions AG, the main Group service company and a wholly owned subsidiary of UBS Group AG, was executed in the second quarter of 2017. For UK shared services, a similar transfer to the UK branch of UBS Business Solutions AG was completed in the fourth quarter of 2017. In the second quarter of 2017, UBS also completed the transfer of the shared services functions in the US, which started in 2016, to its US service company, UBS Business Solutions US LLC, a wholly owned subsidiary of UBS Americas Holding LLC.

The transfer in Switzerland was carried out in three steps: a transfer of the respective business from UBS AG to an interim shared services subsidiary of UBS AG in accordance with article 69ff. of the Swiss Federal Act on Mergers, Demergers, Transformations and Transfers of Assets and Liabilities (Merger Act), followed by a distribution of the shares in this interim shared services subsidiary from UBS AG to UBS Group AG through a dividend in kind, and the merger of the subsidiary with the previously established UBS Business Solutions AG.

The transfer resulted in a CHF 250 million reduction of net assets and of the capital contribution reserve.

The transferred functions include Group Technology, Group Operations, Group Corporate Services and most other shared services functions. As a consequence, UBS AG no longer incurs the respective direct costs, no longer charges other Group entities for underlying services and no longer earns a related markup, but rather receives a charge including a markup from a service company for its own consumption of services provided by the service companies. UBS AG retained the vast majority of its real estate portfolio and selected other Corporate Center – Services functions and continues to charge other Group entities for services provided to them, earning a markup.

The new shared services model resulted in a net profit reduction for UBS AG of approximately CHF 0.2 billion in the year 2017. This amount includes net decreases in *Other income from ordinary activities* of CHF 1.9 billion, *Personnel expenses* of CHF 1.3 billion, *General and administrative expenses* of CHF 0.3 billion and *Depreciation and impairment of property, equipment and software* of CHF 0.1 billion.

The transfer in Switzerland resulted in a reduction in UBS AG's share in the Swiss pension plan surplus of CHF 2.4 billion in the year 2017.

→ **Refer to Notes 6 and 21 for more information**

Note 3a Net trading income by business

	For the year ended	
CHF million	31.12.17	31.12.16
Investment Bank	3,311	3,203
of which: Corporate Client Solutions	*539*	*(2)*
of which: Investor Client Services	*2,772*	*3,205*
Other business divisions and Corporate Center	(120)	727
Total net trading income	3,192	3,930

Note 3b Net trading income by underlying risk category

	For the year ended	
CHF million	31.12.17	31.12.16
Interest rate instruments (including funds)	286	939
Foreign exchange instruments	559	1,208
Equity instruments (including funds)	2,045	1,797
Credit instruments	233	(44)
Precious metals / commodities	69	31
Total net trading income	3,192	3,930
of which: net gains / (losses) from financial liabilities designated at fair value[1]	*(3,971)*	*(1,416)*

1 Excludes fair value changes of hedges related to financial liabilities designated at fair value and foreign currency effects arising from translating foreign currency transactions into the respective functional currency, both of which are reported within Net trading income.

Note 4 Dividend income from investments in subsidiaries

UBS AG received dividends from UBS Switzerland AG of CHF 191 million in 2017 and CHF 2,000 million in 2016, resulting in a decrease in the total *Dividend income from investments in subsidiaries and other participations*.

Note 5 Sundry ordinary income and expenses

	For the year ended	
CHF million	31.12.17	31.12.16
Income from hard cost transfers[1]	2,600	4,699
Other	90	41
Total sundry ordinary income	2,690	4,740
Expenses from hard revenue transfers	(373)	(440)
Other[2]	(112)	(98)
Total sundry ordinary expenses	(485)	(539)

1 Represents income received from UBS Group AG and subsidiaries in the UBS Group for services provided by UBS AG. Services provided by UBS AG primarily related to Corporate Center functions. The decrease mainly arose as UBS AG is no longer charging other Group entities for the shared services functions that were transferred in 2017. Refer to Note 2b for more information. 2 Following a change in the business model related to certain credit facilities within the commercial lending business in 2017, certain loans and loan commitments were reclassified into held for trading measured at fair value. Upon reclassification, a loss of CHF 81 million was recognized in Sundry ordinary expenses, partly offset by a gain of CHF 30 million, which was recognized in Gross interest income (CHF 8 million), Credit loss recovery (CHF 20 million) and Sundry ordinary income (CHF 2 million).

Note 6 Personnel expenses

	For the year ended	
CHF million	31.12.17	31.12.16
Salaries	2,078	2,901
Variable compensation – performance awards	1,401	1,448
Variable compensation – other	90	164
Contractors	202	331
Social security	267	314
Pension and other post-employment benefit plans	(81)	966
of which: value adjustments for economic benefits or obligations from pension funds[1]	*(298)*	*620*
Other personnel expenses	170	227
Total personnel expenses[2]	4,128	6,350

1 Reflects the remeasurement of the defined benefit obligation and return on plan assets excluding amounts included in interest income for the non-Swiss defined benefit plans, for which IAS 19 is applied. 2 The decrease is partly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG and UBS Business Solutions US LLC. Refer to Note 2b for more information.

Note 7 General and administrative expenses

	For the year ended	
CHF million	31.12.17	31.12.16
Occupancy	524	589
Rent and maintenance of IT equipment	205	384
Communication and market data services	213	313
Administration	2,255	1,334
of which: hard cost transfers paid[1]	*1,954*	*929*
Marketing and public relations	118	231
Travel and entertainment	132	167
Fees to audit firms	32	44
of which: financial and regulatory audits	*26*	*41*
of which: audit-related services	*6*	*2*
of which: tax and other services	*0*	*1*
Other professional fees	436	584
Outsourcing of IT and other services	638	1,427
Total general and administrative expenses[2]	4,553	5,073

1 Represents expenses for services provided by UBS Group AG and subsidiaries in the UBS Group to UBS AG. 2 The increase in hard cost transfers paid and the decrease in direct costs are mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG and UBS Business Solutions US LLC. Refer to Note 2b for more information.

Note 8 Extraordinary income and expenses

	For the year ended	
CHF million	31.12.17	31.12.16
Gains from disposals of subsidiaries and other participations	194	78
Reversal of impairments and provisions of subsidiaries and other participations	181	1,415
Net gains from disposals of properties	0	121
Other extraordinary income	6	23
Total extraordinary income	382	1,637
Total extraordinary expenses	4	2

In 2017, UBS recorded a gain of CHF 107 million on the sale of its remaining investment in IHS Markit, recognized within *Extraordinary income*. Also in 2017, UBS completed the sale of a life insurance subsidiary, which resulted in a gain of CHF 57 million for UBS AG, recognized within *Extraordinary income*.

In 2016, UBS AG contributed the majority of its non-US participations conducting Asset Management businesses into UBS Asset Management AG, a direct subsidiary of UBS AG. The contribution was made at the aggregate cost value of the transferred investments of CHF 1.5 billion. This resulted in a gain of CHF 1.1 billion, recognized within *Extraordinary income*, as impairment losses recorded in previous years on some of these investments were reversed.

Also in 2016, UBS AG's direct Wealth Management subsidiaries UBS (Italia) SpA, UBS (Luxembourg) S.A. (including its branches in Austria, Denmark and Sweden), UBS Bank S.A. (Madrid) and UBS Bank (Netherlands) B.V. were merged into UBS Deutschland AG, which was renamed to UBS Europe SE and is headquartered in Frankfurt, Germany. The merger resulted in the recognition of a gain of CHF 0.3 billion, recognized within *Extraordinary income*, as certain impairment losses recorded in previous years were reversed.

Note 9 Taxes

	For the year ended	
CHF million	31.12.17	31.12.16
Income tax expense / (benefit)	(118)	118
of which: current	*(148)*	*109*
of which: deferred	*29*	*9*
Capital tax	48	32
Total tax expense / (benefit)	(70)	150

There was an income tax benefit of CHF 118 million for the year ended 31 December 2017, as compared to an income tax expense of CHF 118 million for the year ended 31 December 2016. The income tax benefit for the year ended 31 December 2017 reflected a benefit of CHF 150 million (2016: CHF 256 million) from the utilization of tax losses carried forward in UBS AG's main tax jurisdictions and also a benefit of CHF 244 million (2016: nil) as compensation received from other Group companies in respect of tax losses that were utilized by those companies.

For the year ended 31 December 2017, the average tax rate, defined as income tax expense divided by the sum of operating profit and extraordinary income minus extraordinary expenses and capital tax, was negative 14.9% (2016: positive 3.5%).

Note 10 Securities financing transactions

CHF billion	31.12.17	31.12.16
On-balance sheet		
Receivables from securities financing transactions, gross	112.7	109.3
Netting of securities financing transactions	(51.4)	(49.5)
Receivables from securities financing transactions, net	61.4	59.8
Payables from securities financing transactions, gross	99.7	79.8
Netting of securities financing transactions	(51.4)	(49.5)
Payables from securities financing transactions, net	48.3	30.3
Assets pledged as collateral in connection with securities financing transactions	58.2	39.9
of which: trading portfolio assets	*57.6*	*39.1*
of which: assets that may be sold or repledged by counterparties	*56.7*	*38.4*
of which: financial assets available for sale	*0.5*	*0.8*
of which: assets that may be sold or repledged by counterparties	*0.5*	*0.8*
Off-balance sheet		
Fair value of assets received as collateral in connection with securities financing transactions	287.0	257.1
of which: repledged	*214.6*	*199.4*
of which: sold in connection with short sale transactions	*24.4*	*15.5*

Note 11a Collateral for loans and off-balance sheet transactions

	31.12.17					31.12.16				
	Secured			Unsecured	Total	Secured			Unsecured	Total
	Secured by collateral		Secured by other credit enhancements[2]			Secured by collateral		Secured by other credit enhancements[2]		
CHF million	Real estate	Other collateral[1]				Real estate	Other collateral[1]			
On-balance sheet										
Due from customers, gross[3]	0	89,630	171	39,931[4]	129,731	4	60,922	224	42,811[4]	103,961
Mortgage loans, gross	4,859	0	0	0	4,859	4,314	0	0	0	4,314
of which: residential mortgages	*4,767*				*4,767*	*4,225*				*4,225*
of which: office and business premises mortgages	*33*				*33*	*36*				*36*
of which: industrial premises mortgages	*28*				*28*	*30*				*30*
of which: other mortgages	*31*				*31*	*23*				*23*
Total on-balance sheet, gross	4,859	89,630	171	39,931	134,590	4,319	60,922	224	42,811	108,275
Allowances	(6)	(26)	0	(156)	(188)	(2)	(20)	0	(62)	(83)
Total on-balance sheet, net	4,853	89,603	171	39,775	134,402	4,317	60,902	224	42,749	108,192
Off-balance sheet										
Contingent liabilities, gross	12	1,917	1,880	18,006	21,815	0	2,219	1,993	21,183	25,395
Irrevocable commitments, gross	367	10,369	1,920	20,845	33,500	342	12,301	5,516	29,114	47,273
Forward starting reverse repurchase and securities borrowing transactions	0	7,603	0	234	7,837	0	7,196	0	78	7,274
Liabilities for calls on shares and other equities	0	0	0	5	5	0	0	0	5	5
Total off-balance sheet	379	19,889	3,800	39,089	63,158	342	21,716	7,509	50,380	79,946

1 Mainly comprised of cash and securities. 2 Includes credit default swaps and guarantees. 3 Includes prime brokerage margin lending receivables and prime brokerage receivables relating to securities financing transactions. 4 Primarily comprised of amounts due from subsidiaries.

Note 11b Impaired financial instruments

	31.12.17				31.12.16			
CHF million	Gross impaired financial instruments	Allowances and provisions	Estimated liquidation proceeds of collateral	Net impaired financial instruments	Gross impaired financial instruments	Allowances and provisions	Estimated liquidation proceeds of collateral	Net impaired financial instruments
Amounts due from customers	261	187	63	10	157	81	0	76
Mortgage loans	2	1	1	0	5	2	3	0
Other assets[1]	350	17	0	333	334	15	0	319
Guarantees and loan commitments	28	0	0	28	24	13	0	11
Total impaired financial instruments	641	205	64	371	520	111	3	406

1 Effective in 2017 impaired exposures and associated allowances within Other assets have been included in the table.

Note 12a Allowances

CHF million	Balance as of 31.12.16	Increase recognized in the income statement	Release recognized in the income statement	Write-offs	Recoveries and past due interest	Reclassifications / other	Foreign currency translation	Balance as of 31.12.17
Specific allowances for amounts due from customers and mortgage loans	78	164	(31)	(34)	13	0	(2)	188
Collective allowances	5	0	(5)	0	0	0	0	0
Allowances for other assets	0	8	(9)	0	0	18	0	17
Total allowances	83	172	(45)	(34)	13	18	(2)	205

Note 12b Provisions

CHF million	Balance as of 31.12.16	Increase recognized in the income statement	Release recognized in the income statement	Provisions used in conformity with designated purpose	Reclassifications / other	Foreign currency translation	Balance as of 31.12.17
Default risk related to loan commitments and guarantees	13	9	(21)	0	0	(1)	0
Operational risks	15	2	(2)	(1)	0	(1)	13
Litigation, regulatory and similar matters[1]	1,096	316	(79)	(527)	0	1	807
Restructuring	178	56	(38)	(115)	(16)	(5)	61
Real estate[2]	77	3	(1)	(7)	3	0	75
Employee benefits	50	5	(10)	0	(14)	1	31
Deferred taxes	18	25	0	0	0	0	44
Other	54	23	(12)	(7)	8	0	66
Total provisions	1,501	438	(162)	(657)	(19)	(5)	1,097

1 Includes provisions for litigation resulting from security risks. 2 Includes provisions for onerous lease contracts of CHF 12 million as of 31 December 2017 (31 December 2016: CHF 16 million) and reinstatement cost provisions for leasehold improvements of CHF 63 million as of 31 December 2017 (31 December 2016: CHF 61 million).

Note 13 Trading portfolio and other financial instruments measured at fair value

CHF million	31.12.17	31.12.16
Assets		
Trading portfolio assets	104,649	74,282
of which: debt instruments[1]	*18,750*	*16,073*
of which: listed	*13,331*	*11,840*
of which: equity instruments	*82,963*	*55,304*
of which: precious metals and other physical commodities	*2,936*	*2,905*
Total assets measured at fair value	104,649	74,282
of which: fair value derived using a valuation model	*12,590*	*11,159*
of which: securities eligible for repurchase transactions in accordance with liquidity regulations[2]	*11,327*	*10,249*
Liabilities		
Trading portfolio liabilities	24,358	15,535
of which: debt instruments[1]	*4,773*	*3,884*
of which: listed	*4,498*	*3,540*
of which: equity instruments	*19,585*	*11,651*
Financial liabilities designated at fair value[3]	51,171	51,806
Total liabilities measured at fair value	75,529	67,341
of which: fair value derived using a valuation model	*53,880*	*53,974*

1 Includes money market paper. 2 Consists of high-quality liquid debt securities that are eligible for repurchase transactions at the Swiss National Bank or other central banks. 3 Refer to Note 19 for more information.

Note 14 Derivative instruments

	31.12.17			31.12.16		
CHF billion	PRV[2]	NRV[3]	Total notional values	PRV[2]	NRV[3]	Total notional values
Interest rate contracts						
Forwards[1]	0.2	0.3	2,357	0.1	0.2	2,283
Swaps	36.9	29.5	8,520	47.3	39.8	8,222
of which: designated in hedge accounting relationships	*0.1*	*0.0*	*96*	*0.2*	*0.0*	*96*[4]
Futures	0.0	0.0	449	0.0	0.0	319
Over-the-counter (OTC) options	8.5	9.8	1,106	12.5	13.9	959
Exchange-traded options	0.0	0.0	212	0.0	0.0	146
Total	45.6	39.7	12,645	59.9	54.0	11,928
Foreign exchange contracts						
Forwards	17.2	17.9	1,371	21.7	19.0	1,365
Interest and currency swaps	23.9	22.1	2,417	43.3	42.4	2,393
Futures	0.0	0.0	0	0.0	0.0	6
Over-the-counter (OTC) options	6.2	5.8	825	11.1	11.0	1,045
Exchange-traded options	0.0	0.1	10	0.0	0.1	9
Total	47.3	45.9	4,624	76.2	72.5	4,818
Equity / index contracts						
Forwards	0.1	0.1	19	0.1	0.1	14
Swaps	3.9	5.6	169	4.5	5.6	147
Futures	0.0	0.0	42	0.0	0.0	28
Over-the-counter (OTC) options	5.8	8.2	220	3.8	5.8	149
Exchange-traded options	7.4	7.4	488	6.1	7.0	299
Total	17.3	21.2	938	14.4	18.4	637
Credit derivative contracts						
Credit default swaps	2.5	2.8	181	3.7	3.8	251
Total return swaps	0.2	0.9	7	0.2	0.9	10
Other	0.0	0.0	4	0.0	0.0	3
Total	2.7	3.7	192	3.9	4.8	264
Commodity, precious metals and other contracts						
Forwards	0.1	0.1	7	0.3	0.2	8
Swaps	0.2	0.4	22	0.4	0.5	24
Futures	0.0	0.0	8	0.0	0.0	9
Over-the-counter (OTC) options	0.3	0.1	19	0.5	0.2	24
Exchange-traded options	0.6	0.5	23	0.7	0.7	19
Total	1.2	1.0	79	1.9	1.7	84
Total before netting	114.1	111.5	18,477	156.4	151.3	17,732
of which: trading derivatives	*114.0*	*111.5*		*156.2*	*151.3*	
of which: fair value derived using a valuation model	*113.6*	*111.2*		*155.9*	*150.8*	
of which: derivatives designated in hedge accounting relationships	*0.1*	*0.0*		*0.2*	*0.0*	
of which: fair value derived using a valuation model	*0.1*	*0.0*		*0.2*	*0.0*	
Netting with cash collateral payables / receivables	(15.7)	(9.7)		(19.5)	(11.5)	
Replacement value netting	(83.5)	(83.5)		(115.9)	(115.9)	
Total after netting	14.8	18.3		21.0	23.9	
of which: with central clearing counterparties	*0.0*	*0.2*		*0.0*	*0.2*	
of which: with bank and broker-dealer counterparties	*5.5*	*6.4*		*7.7*	*8.6*	
of which: other client counterparties	*9.2*	*11.7*		*13.2*	*15.0*	

1 Includes forward rate agreements. 2 PRV: positive replacement values. 3 NRV: negative replacement values. 4 The comparative period information for notional values of interest rate swaps designated in hedge accounting relationships has been corrected.

Note 15a Financial investments by instrument type

	31.12.17		31.12.16	
CHF million	Carrying value	Fair value	Carrying value	Fair value
Debt instruments	24,221	24,220	34,427	34,463
of which: held to maturity	*950*	*942*	*527*	*527*
of which: available for sale	*23,270*	*23,278*	*33,900*	*33,936*
Equity instruments	188	212	233	244
of which: qualified participations[1]	*51*	*56*	*82*	*84*
Property	8	8	8	8
Total financial investments	24,417	24,440	34,669	34,715
of which: securities eligible for repurchase transactions in accordance with liquidity regulations[2]	*22,969*	*22,994*	*33,326*	*33,360*

1 Qualified participations are investments in which UBS AG holds 10% or more of the total capital or has at least 10% of total voting rights. 2 Consists of high-quality liquid debt securities that are eligible for repurchase transactions at the Swiss National Bank or other central banks.

Note 15b Financial investments by counterparty rating – debt instruments

CHF million	31.12.17	31.12.16
Internal UBS rating[1]		
0–1	17,345	27,607
2–3	6,875	6,817
4–5	0	0
6–8	0	0
9–13	0	0
Non-rated	1	4
Total financial investments	24,221	34,427

1 Refer to Note 18 for more information.

Note 16a Other assets

CHF million	31.12.17	31.12.16
Settlement and clearing accounts	78	136
VAT and other indirect tax receivables	152	182
Bail deposit[1]	1,325	1,202
Other	2,693	1,775
of which: other receivables due from UBS Group AG and subsidiaries in the UBS Group	*1,731*	*1,284*
Total other assets	4,248	3,295

1 Refer to item 1 in Note 20b to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2017 for more information.

Note 16b Other liabilities

CHF million	31.12.17	31.12.16
Deferral position for hedging instruments	208	1,259
Settlement and clearing accounts	500	247
Net defined benefit liabilities	418	697
VAT and other indirect tax payables	72	126
Other	2,360	1,785
of which: other payables due to UBS Group AG and subsidiaries in the UBS Group	*1,910*	*1,521*
Total other liabilities	3,558	4,113

Note 17 Pledged assets

As of 31 December 2017, assets pledged by UBS AG were entirely comprised of securities with a carrying value of CHF 2,407 million (31 December 2016: CHF 1,809 million) with a related effective commitment of CHF 158 million (31 December 2016: CHF 160 million). These assets were primarily pledged for derivative transactions and exclude assets pledged for securities financing transactions. They also exclude assets placed with central banks related to undrawn credit lines and for payment, clearing and settlement purposes that together amounted to CHF 2.7 billion as of 31 December 2017 (31 December 2016: CHF 1.8 billion).

→ **Refer to Note 10 for more information on securities financing transactions**

Note 18 Country risk of total assets

The table below provides a breakdown of total non-Swiss assets by credit rating. These credit ratings reflect the sovereign credit rating of the country to which the ultimate risk of the underlying asset is related. The ultimate country of risk for unsecured loan positions is the domicile of the immediate borrower or, in the case of a legal entity, the domicile of the ultimate parent entity. For collateralized or guaranteed positions, the ultimate country of risk is the domicile of the provider of the collateral or guarantor or, if applicable, the domicile of the ultimate parent entity of the provider of the collateral or guarantor. For mortgage loans, the ultimate country of risk is the country where the real estate is located. Similarly, the ultimate country of risk for property and equipment is the country where the property and equipment is located. Assets for which Switzerland is the ultimate country of risk are provided separately in order to reconcile them to total balance sheets assets.

→ **Refer to the "Risk management and control" section of the UBS Group AG and UBS AG Annual Report 2017 for more information**

						31.12.17		31.12.16	
Classification	Internal UBS rating	Description	Moody's Investors Service	Standard & Poor's	Fitch	CHF million	%	CHF million	%
	0 and 1	Investment grade	Aaa	AAA	AAA	207,595	44	204,113	46
Low risk	2		Aa1 to Aa3	AA+ to AA–	AA+ to AA–	143,320	30	127,349	29
	3		A1 to A3	A+ to A–	A+ to AA–	48,947	10	38,915	9
Medium risk	4		Baa1 to Baa2	BBB+ to BBB	BBB+ to BBB	15,411	3	13,810	3
	5		Baa3	BBB–	BBB–	5,070	1	4,477	1
High risk	6	Sub-investment grade	Ba1	BB+	BB+	1,536	0	1,308	0
	7		Ba2	BB	BB	2,005	0	1,241	0
	8		Ba3	BB–	BB–	48	0	61	0
	9		B1	B+	B+	872	0	192	0
Very high risk	10		B2	B	B	976	0	1,065	0
	11		B3	B–	B–	349	0	156	0
	12		Caa	CCC	CCC	146	0	361	0
	13		Ca to C	CC to C	CC to C	110	0	121	0
Distressed	Default	Defaulted	D	D	D	1	0	6	0
Subtotal						426,387	89	393,175	89
Switzerland						50,590	11	46,301	11
Total assets						476,977	100	439,476	100

Note 19 Structured debt instruments

The table below provides a breakdown of financial liabilities designated at fair value that are considered structured debt instruments.

CHF million	31.12.17	31.12.16
Fixed-rate bonds with structured features	2,875	1,778
Structured debt instruments issued:		
Equity-linked	34,189	29,648
Rates-linked	5,689	10,013
Credit-linked	1,642	2,444
Commodities-linked[1]	1,986	1,949
FX-linked	431	826
Structured over-the-counter (OTC) debt instruments	4,359	5,149
Total financial liabilities designated at fair value	51,171	51,806

1 Includes precious metals-linked debt instruments issued.

In addition to *Financial liabilities designated at fair value*, certain structured debt instruments were reported within the balance sheet lines *Due to banks, Due to customers* and *Bonds issued.* These instruments were bifurcated for measurement purposes. As of 31 December 2017, the total carrying value of the host instruments was CHF 3,932 million (31 December 2016: CHF 5,197 million) and the total carrying value of the bifurcated embedded derivatives was positive CHF 68 million (31 December 2016: positive CHF 116 million).

Note 20a Share capital

UBS AG shares

UBS AG's share capital consists of fully paid up registered issued shares with a par value of CHF 0.10, which entitle the holder to one vote at the UBS AG shareholders' meeting, if entered into the share register as having the right to vote, as well as a proportionate share of distributed dividends. UBS AG's shares are not subject to any restrictions or limitations on their transferability.

As of 31 December 2017, shares issued by UBS AG totaled 3,858,408,466 shares (unchanged from 31 December 2016). The shares were all dividend bearing and held by UBS Group AG.

Additionally, as of 31 December 2017, 516,200,312 registered shares with a par value of CHF 0.10 each were available to be issued out of conditional capital (unchanged from 31 December 2016).

During 2017 and 2016, there were no new share issuances out of conditional capital.

Non-cash dividend

With the transfer of shared services functions in Switzerland, UBS AG transferred its participation in a service center subsidiary to UBS Group AG in June 2017 by way of distribution of a dividend in kind, which resulted in a CHF 250 million reduction in the capital contribution reserve.

→ **Refer to Note 2b for more information on the transfer of shared services functions**

Non-distributable reserves

Non-distributable reserves consist of 50% of the share capital of UBS AG, amounting to CHF 193 million as of 31 December 2017 (unchanged from 31 December 2016).

Note 20b Significant shareholders

The sole direct shareholder of UBS AG is UBS Group AG, which holds 100% of UBS AG shares. These shares are entitled to voting rights. Indirect shareholders of UBS AG included in the table below comprise direct shareholders of UBS Group AG (acting in their own name or in their capacity as nominees for other investors or beneficial owners) that were registered in the UBS Group AG share register with 3% or more of the share capital of UBS Group AG as of 31 December 2017 or as of 31 December 2016. The shares and share capital of UBS AG held by indirect shareholders, as shown in the table below, represent their relative holding of UBS Group AG shares. They do not have voting rights in UBS AG.

→ **Refer to Note 23 to the UBS Group AG standalone financial statements in the UBS Group AG Annual Report 2017 for more information on significant shareholders of UBS Group AG**

	31.12.17		31.12.16	
CHF million, except where indicated	Share capital held	Shares held (%)	Share capital held	Shares held (%)
Significant direct shareholder of UBS AG				
UBS Group AG	386	100	386	100
Significant indirect shareholders of UBS AG				
Chase Nominees Ltd., London	43	11	36	9
DTC (Cede & Co.), New York[1]	26	7	26	7
Nortrust Nominees Ltd., London	16	4	15	4

1 DTC (Cede & Co.), New York, "The Depository Trust Company," is a US securities clearing organization.

Note 21 Swiss pension plan and non-Swiss defined benefit plans

a) Liabilities related to Swiss pension plan and non-Swiss defined benefit plans[1]

CHF million	31.12.17	31.12.16
Provision for Swiss pension plan	0	0
Net defined benefit liabilities for non-Swiss defined benefit plans[2]	418	697
Total provision for Swiss pension plan and net defined benefit liabilities for non-Swiss defined benefit plans	418	697
Bank accounts at UBS and UBS debt instruments held by Swiss pension fund	15	220
UBS derivative financial instruments held by Swiss pension fund	5	47
Total liabilities related to Swiss pension plan and non-Swiss defined benefit plans	438	964

1 Decrease from 31 December 2016 to 31 December 2017 related to Swiss pension plan was partly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. Refer to Note 2b for more information. 2 As of 31 December 2017, CHF 268 million related to the UK defined benefit pension plan and CHF 26 million related to the UK post-employment medical insurance plan. As of 31 December 2016, CHF 529 million related to the UK defined benefit pension plan and CHF 26 million related to the UK post-employment medical insurance plan.

b) Swiss pension plan[1]

	As of or for the year ended	
CHF million	31.12.17	31.12.16
Pension plan surplus[2]	786	2,508
Economic benefit / (obligation) of UBS AG	0	0
Change in economic benefit / obligation recognized in the income statement	0	0
Employer contributions in the period recognized in the income statement	90	216
Performance awards-related employer contributions accrued	12	21
Total pension expense recognized in the income statement within Personnel expenses	102	238

1 Decrease from 31 December 2016 to 31 December 2017 related to Swiss pension plan was partly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG. Refer to Note 2b for more information. 2 The pension plan surplus is determined in accordance with FER 26 and consists of the reserve for the fluctuation in asset value. The surplus did not represent an economic benefit for UBS AG in accordance with FER 16 both as of 31 December 2017 and 31 December 2016.

UBS AG has elected to apply FER 16 for its Swiss pension plan and IFRS (IAS 19) for its UK and other non-Swiss defined benefit plans. However, remeasurements of the defined benefit obligations for UK and other non-Swiss defined benefit plans are recognized in the income statement rather than directly in equity.

→ **Refer to Note 2 for more information**

→ **Refer to Note 26 to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2017 for more information on non-Swiss defined benefit plans in accordance with IAS 19**

The Swiss pension plan had no employer contribution reserve as of both 31 December 2017 and 31 December 2016.

Note 22 Share-based compensation

Expenses for awards under employee share, option, notional fund and deferred cash compensation plans granted to UBS AG employees are generally charged by UBS Group AG to UBS AG. Obligations related to other compensation vehicles, such as defined benefit pension plans and other local awards, are held by the relevant employing and / or sponsoring subsidiaries, such as UBS AG.

→ **Refer to Note 27 to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2017 for more information**

Note 23 Related parties

Transactions with related parties are conducted at internally agreed transfer prices, at arm's length or, with respect to loans, fixed advances and mortgages to non-independent members of the governing bodies in the ordinary course of business, on substantially the same terms and conditions that are available to other employees, including interest rates and collateral, and neither involve more than the normal risk of collectability nor contain any other unfavorable features for the firm. Independent members of the governing bodies are granted loans and mortgages in the ordinary course of business at general market conditions.

	31.12.17		31.12.16	
CHF million	Amounts due from	Amounts due to	Amounts due from	Amounts due to
Qualified shareholders[1]	1,797	10,819	522	8,536
of which: due from / to customers	*1,793*	*10,145*	*505*	*7,865*
Subsidiaries	92,527	72,202	94,171	59,553
of which: due from / to banks	*36,940*	*24,472*	*36,151*	*25,256*
of which: due from / to customers	*32,654*	*1,860*	*33,994*	*2,272*
of which: receivables / payables from securities financing transactions	*17,486*	*41,186*	*19,029*	*25,114*
Affiliated entities[2]	422	28,508	121	17,476
of which: due from / to customers	*307*	*27,730*	*108*	*17,291*
Members of governing bodies[3]	41		41	
External auditors		10		11
Other related parties	13		8	

1 The qualified shareholder of UBS AG is UBS Group AG. 2 Affiliated entities of UBS AG are all direct subsidiaries of UBS Group AG. 3 Members of governing bodies consist of members of the Board of Directors and Group Executive Board of UBS Group AG and members of the Board of Directors and Executive Board of UBS AG.

As of 31 December 2017, off-balance sheet positions related to subsidiaries amounted to CHF 21.1 billion (31 December 2016: CHF 24.8 billion), of which CHF 14.0 billion were guarantees to third parties (31 December 2016: CHF 17.5 billion) and CHF 5.6 billion were loan commitments (31 December 2016: CHF 4.5 billion).

Note 24 Fiduciary transactions

CHF million	31.12.17	31.12.16
Fiduciary deposits	205	349
of which: placed with third-party banks	*205*	*349*
of which: placed with subsidiaries and affiliated entities	*0*	*0*
Total fiduciary transactions	205	349

Fiduciary transactions encompass transactions entered into or granted by UBS AG that result in holding or placing assets on behalf of individuals, trusts, defined benefit plans and other institutions. Unless the recognition criteria for the assets are satisfied, these assets and the related income are excluded from UBS AG's balance sheet and income statement but disclosed in this Note as off-balance sheet fiduciary transactions. Client deposits that are initially placed as fiduciary transactions with UBS AG may be recognized on UBS AG's balance sheet in situations in which the deposit is subsequently placed within UBS AG. In such cases, these deposits are not reported in the table above.

Note 25a Invested assets and net new money

	For the year ended	
CHF billion	31.12.17	31.12.16
Fund assets managed	23	12
Discretionary assets	198	168
Other invested assets	409	329
Total invested assets	630	509
of which: double counts	*5*	*3*
Net new money	46	17

Note 25b Development of invested assets

	For the year ended	
CHF billion	31.12.17	31.12.16
Total invested assets at the beginning of the year[1]	509	488
Net new money	46	17
Market movements[2]	84	17
Foreign currency translation	(9)	0
Other effects	(1)	(13)
of which: acquisitions / (divestments)	*0*	*(12)*
Total invested assets at the end of the year[1]	630	509

1 Includes double counts. 2 Includes interest and dividend income.

→ **Refer to Note 33 to the UBS AG consolidated financial statements in the UBS Group AG and UBS AG Annual Report 2017 for more information**

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To the General Meeting of
UBS AG, Zurich and Basel

Basel, 8 March 2018

Report of the statutory auditor on the financial statements

As statutory auditor, we have audited the financial statements of UBS AG, which comprise the balance sheet, income statement and notes (pages 1 to 22), for the year ended 31 December 2017.

Board of Directors' responsibility
The Board of Directors is responsible for the preparation of the financial statements in accordance with the requirements of Swiss law and the company's articles of incorporation. This responsibility includes designing, implementing and maintaining an internal control system relevant to the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is further responsible for selecting and applying appropriate accounting policies and making accounting estimates that are reasonable in the circumstances.

Auditor's responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Swiss law and Swiss Auditing Standards. Those standards require that we plan and perform the audit to obtain reasonable assurance whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers the internal control system relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control system. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of accounting estimates made, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion
In our opinion, the financial statements for the year ended 31 December 2017 comply with Swiss law and the company's articles of incorporation.

Report on key audit matters based on the circular 1/2015 of the Federal Audit Oversight Authority
Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements of the current period. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, our description of how our audit addressed the matter is provided in that context.

We have fulfilled the responsibilities described in the *Auditor's responsibilities* section of our report, including in relation to these matters. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the financial statements. The results of our audit procedures, including the procedures performed to address the matters below, provide the basis for our audit opinion on the financial statements.

Legal provision & contingencies

Area of focus	We focused on this area because UBS AG operates in a legal and regulatory environment that is exposed to significant litigation and similar risks arising from disputes and regulatory proceedings. Such matters are subject to many uncertainties and the outcome may be difficult to predict. These uncertainties inherently affect the amount and timing of potential outflows with respect to the provisions which have been established and other contingent liabilities. Overall, the legal provision should represent the best estimate of UBS AG for existing legal matters that have a probable and estimable impact on the financial position of UBS AG. See note 12b to the UBS AG financial statements on page 13.
Our audit response	We obtained an understanding, evaluated the design and tested the operating effectiveness of the key controls over the legal provision and contingencies process at UBS AG. We assessed the methodologies on which the provision amounts are based, recalculated the provisions, and tested the completeness and accuracy of the underlying information. We read the legal analyses that support the judgmental aspects impacted by legal interpretations. We obtained correspondence directly from external legal counsel to corroborate the information provided by UBS AG and followed up directly with external counsel as deemed necessary. We also assessed the disclosure in the UBS AG financial statements (within note 12b).

Valuation of investments in subsidiaries and other participations

Area of focus	We focused on this area because of the judgments and assumptions over the valuation of the investments in subsidiaries and other participations. Investments in subsidiaries and other participations comprise directly held equity interests. See note 2 to the financial statements on page 6.
Our audit response	We obtained an understanding, evaluated the design and tested the operating effectiveness of the key controls over the valuation of investments in subsidiaries and other participations at UBS AG. We tested a sample of the valuation models and the inputs used in those models.

Valuation of complex or illiquid trading portfolio assets and liabilities, financial assets and liabilities and derivative financial instruments held at fair value

Area of focus	We focused on this area because of the complexity and judgments and assumptions over the fair valuation of financial assets and liabilities with significant unobservable inputs. We have continued to focus on market developments in fair value methodologies and specifically on the bank's higher estimation uncertainty ("HEU") products, Credit Valuation Adjustment ("CVA") and Funding Valuation Adjustment ("FVA"). See notes 13 and 14 to the UBS AG financial statements on pages 14 and 15.
Our audit response	We obtained an understanding, evaluated the design and tested the operating effectiveness of the key controls over the financial instrument valuation processes of UBS AG, including controls over market data inputs into valuation models, model governance, and valuation adjustments. We tested a sample of the valuation models and the inputs used in those models, using a variety of techniques, including comparing inputs to available market data. We selected a sample of positions and independently determined estimated values and compared the values to those recorded by UBS AG. In addition, we evaluated the methodology and inputs used by UBS AG in determining funding and credit fair value adjustments on uncollateralized derivatives and fair value option liabilities. We also assessed the disclosure in the UBS AG financial statements (within notes 13 and 14).

IT Controls relevant to financial reporting

Area of focus	We focused on this area because UBS AG is highly dependent on its IT systems for business processes and financial reporting. UBS AG continues to invest in its IT systems to meet client needs and business requirements including the effectiveness of its logical access and change management IT controls.
Our audit response	In assessing the reliability of electronic data processing, we included specialized IT auditors as part of our audit team. Our audit procedures focused on the IT infrastructure and applications relevant to financial reporting including evaluation of the design and testing of the operating effectiveness of key IT general controls and IT automated controls. Our audit procedures related to logical access included testing of user access management, privileged user access, periodic access right recertifications and user authentication controls.

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Report on other legal requirements

We confirm that we meet the legal requirements on licensing according to the Auditor Oversight Act (AOA) and independence (article 728 CO and article 11 AOA) and that there are no circumstances incompatible with our independence.

In accordance with article 728a para. 1 item 3 CO and Swiss Auditing Standard 890, we confirm that an internal control system exists, which has been designed for the preparation of financial statements according to the instructions of the Board of Directors.

We further confirm that the proposed appropriation of available earnings complies with Swiss law and the company's articles of incorporation. We recommend that the financial statements submitted to you be approved.

Ernst & Young Ltd

Marie-Laure Delarue
Licensed audit expert
(Auditor in charge)

Bruno Patusi
Licensed audit expert

Appendix 5 – Excerpts from the UBS Group First Quarter 2018 Report

It should be noted that the term "pro-forma" as used in this Appendix 5 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

UBS Group AG interim consolidated financial statements (unaudited)

Income statement

		For the quarter ended		
CHF million, except per share data	Note	31.3.18	31.12.17	31.3.17
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income		2,250	2,714	2,397
Interest expense from financial instruments measured at amortized cost		(1,310)	(1,467)	(1,146)
Interest income from financial instruments measured at fair value through profit or loss		1,593	893	955
Interest expense from financial instruments measured at fair value through profit or loss		(790)	(467)	(510)
Net interest income		1,743	1,672	1,696
Fee and commission income		4,882	4,772	4,789
Fee and commission expense		(409)	(478)	(436)
Net fee and commission income	3	4,473	4,294	4,353
Other net income from fair value changes on financial instruments		1,466	987	1,440
Credit loss (expense) / recovery	9	(25)	(89)	0
Other income	4	40	257	43
Total operating income		7,698	7,122	7,532
Personnel expenses	5	4,014	3,923	4,060
General and administrative expenses	6	1,424	2,054	1,506
Depreciation and impairment of property, equipment and software		272	272	255
Amortization and impairment of intangible assets		16	17	21
Total operating expenses		5,725	6,266	5,842
Operating profit / (loss) before tax		1,973	855	1,690
Tax expense / (benefit)	7	457	3,165	375
Net profit / (loss)		1,516	(2,310)	1,315
Net profit / (loss) attributable to non-controlling interests		1	27	47
Net profit / (loss) attributable to shareholders		1,514	(2,336)	1,269
Earnings per share (CHF)				
Basic	8	0.41	(0.63)	0.34
Diluted	8	0.39	(0.63)	0.33

Statement of comprehensive income

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Comprehensive income attributable to shareholders			
Net profit / (loss)	1,514	(2,336)	1,269
Other comprehensive income that may be reclassified to the income statement			
Foreign currency translation			
Foreign currency translation movements, before tax (revaluation of net investment)	(482)	353	(314)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax	97	(112)	(57)
Foreign currency translation differences on foreign operations reclassified to the income statement	0	0	4
Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to the income statement	0	(6)	0
Income tax relating to foreign currency translations, including the impact of net investment hedges	1	(32)	2
Subtotal foreign currency translation, net of tax	(384)	203	(365)
Financial assets measured at fair value through other comprehensive income			
Net unrealized gains / (losses), before tax	(71)	(11)	44
Impairment charges reclassified to the income statement from equity	0	2	14
Realized gains reclassified to the income statement from equity	0	(51)	(8)
Realized losses reclassified to the income statement from equity	0	4	2
Income tax relating to net unrealized gains / (losses)	19	17	(8)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax	(51)	(39)	43
Cash flow hedges of interest rate risk			
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	(441)	(150)	(30)
Net (gains) / losses reclassified to the income statement from equity	(127)	(187)	(220)
Income tax relating to cash flow hedges	114	66	52
Subtotal cash flow hedges, net of tax	(454)	(270)	(198)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(889)	(106)	(520)
Other comprehensive income that will not be reclassified to the income statement			
Defined benefit plans			
Gains / (losses) on defined benefit plans, before tax	(144)	(7)	49
Income tax relating to defined benefit plans	44	12	2
Subtotal defined benefit plans, net of tax	(100)	5	51
Own credit on financial liabilities designated at fair value			
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	171	(23)	(181)
Income tax relating to own credit on financial liabilities designated at fair value	(2)	0	0
Subtotal own credit on financial liabilities designated at fair value, net of tax	170	(23)	(181)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	70	(19)	(129)
Total other comprehensive income	(820)	(124)	(649)
Total comprehensive income attributable to shareholders	695	(2,461)	620

Statement of comprehensive income (continued)

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Comprehensive income attributable to non-controlling interests			
Net profit / (loss)	1	27	47
Other comprehensive income that will not be reclassified to the income statement			
Foreign currency translation movements, before tax	0	309	0
Income tax relating to foreign currency translation movements	0	0	0
Subtotal foreign currency translation, net of tax	0	309	0
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	309	0
Total comprehensive income attributable to non-controlling interests	1	336	47
Total comprehensive income			
Net profit / (loss)	1,515	(2,310)	1,315
Other comprehensive income	(819)	184	(649)
of which: other comprehensive income that may be reclassified to the income statement	*(889)*	*(106)*	*(520)*
of which: other comprehensive income that will not be reclassified to the income statement	*70*	*290*	*(129)*
Total comprehensive income	696	(2,125)	666

Balance sheet

CHF million	Note	31.3.18	31.12.17
Assets			
Cash and balances at central banks		92,800	87,775
Loans and advances to banks		13,338	13,739
Receivables from securities financing transactions		77,016	89,633
Cash collateral receivables on derivative instruments	11	24,271	23,434
Loans and advances to customers	9	316,195	318,509
Other financial assets measured at amortized cost	12	19,129	36,861
Total financial assets measured at amortized cost		542,749	569,950
Financial assets at fair value held for trading	10	105,554	126,144
of which: assets pledged as collateral that may be sold or repledged by counterparties		*34,536*	*35,363*
Derivative financial instruments	10,11	113,333	118,227
Brokerage receivables	10	20,250	
Financial assets at fair value not held for trading	10	97,532	58,933
Total financial assets measured at fair value through profit or loss		336,669	303,304
Financial assets measured at fair value through other comprehensive income	10	6,758	8,665
Investments in associates		1,037	1,018
Property, equipment and software		8,860	8,829
Goodwill and intangible assets		6,235	6,398
Deferred tax assets		9,729	9,844
Other non-financial assets	12	7,324	7,633
Total assets		919,361	915,642

Balance sheet (continued)

CHF million	Note	31.3.18	31.12.17
Liabilities			
Amounts due to banks		9,024	7,533
Payables from securities financing transactions		9,167	17,044
Cash collateral payables on derivative instruments	11	29,426	30,247
Customer deposits		398,604	408,999
Debt issued measured at amortized cost	14	137,883	139,551
Other financial liabilities measured at amortized cost	12	5,911	36,337
Total financial liabilities measured at amortized cost		590,014	639,711
Financial liabilities at fair value held for trading	10	34,747	30,463
Derivative financial instruments	10,11	111,945	116,133
Brokerage payables designated at fair value	10	34,793	
Debt issued designated at fair value	10,13	52,059	49,502
Other financial liabilities designated at fair value	10,12	34,438	16,223
Total financial liabilities measured at fair value through profit or loss		267,983	212,322
Provisions	15	3,044	3,133
Other non-financial liabilities	12	7,016	9,205
Total liabilities		868,056	864,371
Equity			
Share capital		385	385
Share premium		25,262	25,942
Treasury shares		(1,520)	(2,133)
Retained earnings		33,807	32,752
Other comprehensive income recognized directly in equity, net of tax		(6,692)	(5,732)
Equity attributable to shareholders		51,243	51,214
Equity attributable to non-controlling interests		62	57
Total equity		51,305	51,271
Total liabilities and equity		919,361	915,642

Statement of changes in equity

CHF million	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 1 January 2017	**385**	**28,254**	**(2,249)**	**31,725**
Issuance of share capital	0			
Acquisition of treasury shares			(820)	
Delivery of treasury shares under share-based compensation plans		(804)	853	
Other disposal of treasury shares		0	5	
Premium on shares issued and warrants exercised		4		
Share-based compensation expensed in the income statement		174		
Tax (expense) / benefit		12		
Dividends				
New consolidations / (deconsolidations) and other increases / (decreases)		(3)		
Total comprehensive income for the period				1,139
of which: net profit / (loss)				*1,269*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*51*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*(181)*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 March 2017	**385**	**27,637**	**(2,211)**	**32,864**
Balance as of 1 January 2018 before the adoption of IFRS 9 and IFRS 15	**385**	**25,942**	**(2,133)**	**32,752**
Effect of adoption of IFRS 9				(505)
Effect of adoption of IFRS 15				(24)
Balance as of 1 January 2018 after the adoption of IFRS 9 and IFRS 15	**385**	**25,942**	**(2,133)**	**32,223**
Issuance of share capital	0			
Acquisition of treasury shares			(362)	
Delivery of treasury shares under share-based compensation plans		(911)	963	
Other disposal of treasury shares			12	
Premium on shares issued and warrants exercised		10		
Share-based compensation expensed in the income statement		206		
Tax (expense) / benefit		3		
Dividends				
New consolidations / (deconsolidations) and other increases / (decreases)		14		
Total comprehensive income for the period				1,584
of which: net profit / (loss)				*1,514*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*(100)*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*170*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 March 2018	**385**	**25,262**	**(1,520)**	**33,807**

1 Excludes defined benefit plans and own credit that are recorded directly in Retained earnings.

Other comprehensive income recognized directly in equity, net of tax [1]	*of which: foreign currency translation*	*of which: financial assets measured at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Non-controlling interests	Total equity
(4,494)	*(5,564)*	*98*	*972*	**53,621**	**682**	**54,302**
				0		0
				(820)		(820)
				49		49
				5		5
				4		4
				174		174
				12		12
				0	(50)	(50)
				(3)	1	(2)
(520)	*(365)*	*43*	*(198)*	620	47	666
				1,269	*47*	*1,315*
(520)	*(365)*	*43*	*(198)*	*(520)*		*(520)*
				51		*51*
				(181)		*(181)*
				0	*0*	*0*
(5,014)	*(5,930)*	*141*	*774*	**53,661**	**679**	**54,340**
(5,732)	*(6,095)*	*12*	*351*	51,214	57	51,271
(72)		*(72)*		(577)		(577)
				(24)		(24)
(5,804)	*(6,095)*	*(60)*	*351*	50,612	57	50,670
				0		0
				(362)		(362)
				52		52
				12		12
				10		10
				206		206
				3		3
				0	(4)	(4)
				14	8	22
(889)	*(384)*	*(51)*	*(454)*	695	1	696
				1,514	*1*	*1,515*
(889)	*(384)*	*(51)*	*(454)*	*(889)*		*(889)*
				(100)		*(100)*
				170		*170*
				0	*0*	*0*
(6,692)	*(6,478)*	*(110)*	*(103)*	51,243	62	51,305

Statement of cash flows[1]

	Year-to-date	
CHF million	31.3.18	31.3.17
Cash flow from / (used in) operating activities		
Net profit / (loss)	1,516	1,315
Non-cash items included in net profit and other adjustments:		
Depreciation and impairment of property, equipment and software	272	255
Amortization and impairment of intangible assets	16	21
Credit loss expense / (recovery)	25	0
Share of net profits of associates / joint ventures and impairment of associates	(15)	(19)
Deferred tax expense / (benefit)	257	131
Net loss / (gain) from investing activities	149	141
Net loss / (gain) from financing activities	(3,647)	449
Other net adjustments	(578)	(560)
Net change in operating assets and liabilities:		
Loans and advances to banks / amounts due to banks	1,651	(2,192)
Securities financing transactions	4,839	(10,223)
Cash collateral on derivative instruments	(1,763)	(1,396)
Loans and advances to customers	(6,980)	(3,460)
Customer deposits	(3,270)	(3,364)
Financial assets and liabilities at FV held for trading and derivative financial instruments	14,341	(1,991)
Brokerage receivables and payables	3,226	
Financial assets at fair value not held for trading, other financial assets and liabilities	(4,614)	13,617
Provisions, other non-financial assets and liabilities	(2,002)	(1,398)
Income taxes paid, net of refunds	(140)	(52)
Net cash flow from / (used in) operating activities	3,283	(8,726)
Cash flow from / (used in) investing activities		
Purchase of subsidiaries, associates and intangible assets	(5)	(1)
Disposal of subsidiaries, associates and intangible assets[2]	29	3
Purchase of property, equipment and software	(365)	(315)
Disposal of property, equipment and software	29	23
Purchase of financial assets measured at fair value through other comprehensive income	(422)	(2,227)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	225	2,102
Net (purchase) / redemption of debt securities measured at amortized cost	(1,061)	
Net (purchase) / redemption of financial assets held to maturity		199
Net cash flow from / (used in) investing activities	(1,571)	(215)

Table continues on the next page.

Statement of cash flows (continued)[1]

Table continued from previous page.

	Year-to-date	
CHF million	31.3.18	31.3.17
Cash flow from / (used in) financing activities		
Net short-term debt issued / (repaid)	(4,507)	9,432
Net movements in treasury shares and own equity derivative activity	(317)	(786)
Issuance of long-term debt, including debt issued designated at fair value	19,203	14,195
Repayment of long-term debt, including debt issued designated at fair value	(10,107)	(10,803)
Net changes in non-controlling interests and preferred notes	17	(4)
Net cash flow from / (used in) financing activities	4,288	12,033
Total cash flow		
Cash and cash equivalents at the beginning of the period	102,200	121,138
Net cash flow from / (used in) operating, investing and financing activities	6,001	3,093
Effects of exchange rate differences on cash and cash equivalents	(18)	(55)
Cash and cash equivalents at the end of the period[3]	108,182	124,175
of which: cash and balances with central banks	*92,723*	*108,931*
of which: due from banks	*12,233*	*12,669*
of which: money market paper[4]	*3,227*	*2,576*
Additional information		
Net cash flow from / (used in) operating activities includes:		
Interest received in cash	3,193	2,718
Interest paid in cash	1,879	1,605
Dividends on equity investments, investment funds and associates received in cash[5]	541	436

1 Upon adoption of IFRS 9 cash flows from certain financial instruments have been reclassified from investing to operating activities. Refer to Note 1 for more information. 2 Includes dividends received from associates. 3 CHF 3,428 million and CHF 2,314 million of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 31 March 2018 and 31 March 2017, respectively. Refer to "Note 23 Restricted and transferred financial assets" in the "Consolidated financial statements" section in the Annual Report 2017 for more information. 4 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading and Other financial assets measured at amortized cost. 5 Includes dividends received from associates reported within Cash flow from / (used in) investing activities.

Notes to the UBS Group AG interim consolidated financial statements (unaudited)

Note 1 Basis of accounting

1.1 Basis of preparation

The consolidated financial statements (the Financial Statements) of UBS Group AG and its subsidiaries (together "UBS" or "the Group") are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), which is also the functional currency of UBS Group AG and UBS AG's Head Office and its Swiss-based operations.[1] These interim Financial Statements are prepared in accordance with IAS 34, *Interim Financial Reporting*.

In preparing these interim Financial Statements, the same accounting policies and methods of computation have been applied as in the UBS Group AG consolidated annual Financial Statements for the period ended 31 December 2017, except for the changes described in this note. These interim Financial Statements are unaudited and should be read in conjunction with UBS Group AG's audited consolidated Financial Statements included in the Annual Report 2017. In the opinion of management, all necessary adjustments were made for a fair presentation of the Group's financial position, results of operations and cash flows.

Preparation of these interim Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities. These estimates and assumptions are based on the best available information. Actual results in the future could differ from such estimates and such differences may be material to the Financial Statements. Revisions to estimates, based on regular reviews, are recognized in the period in which they occur. For more information on areas of estimation uncertainty considered to require critical judgment, refer to "Note 1a) Significant accounting policies" in the "Consolidated financial statements" section of the Annual Report 2017 and in Note 1.3 in this report.

1.2 Changes to segment reporting effective first quarter 2018

Effective 1 February 2018, UBS integrated its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division, which is managed on an integrated basis, with a single set of key performance indicators, performance targets, operating plan and management structure. Consistent with this, the operating results of Global Wealth Management are presented and assessed on an integrated basis in internal management reports to the Group Executive Board, which is considered the "chief operating decision maker" pursuant to IFRS 8, *Operating Segments*. Consequently, beginning from the first quarter of 2018, Global Wealth Management qualifies as an operating and reportable segment for the purposes of segment reporting and is presented in these Financial Statements alongside Personal & Corporate Banking, Asset Management, the Investment Bank and Corporate Center (with its units Services, Group Asset and Liability Management (Group ALM) and Non-core and Legacy Portfolio). Following the change in the composition of UBS's operating segments and corresponding reportable segments, previously reported segment information has been restated. The change has no effect on the recognized goodwill of both former segments.

1 As explained in UBS's Annual Report 2017, in light of cumulative changes in UBS's legal structure, business activities and evolving changes to its structural currency management strategy, it is anticipated that during the second half of 2018 the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland will change from Swiss francs to US dollars, and the functional currency of UBS AG's London Branch operations will change from British pounds to US dollars, where such changes would be made on a prospective basis. As a consequence, it is also expected that management would change the presentation currency of UBS Group AG's consolidated and UBS AG's consolidated financial statements from Swiss francs to US dollars to align to the change in functional currency, with prior periods restated.

Note 1 Basis of accounting (continued)

1.3 Update to significant accounting policies disclosed in Note 1a) to the Financial Statements 2017

The adoption of IFRS 9, *Financial Instruments* (IFRS 9) and IFRS 15, *Revenue from Contracts with Customers* (IFRS 15) resulted in changes to UBS's accounting policies applicable from 1 January 2018. Accounting polices set out in section 1.3.1 replace item 3) b, c, g, h, i, l, o and p in Note 1a) in the UBS Group consolidated annual Financial Statements for the year ended 31 December 2017 and those set out in section 1.3.2 replace item 4) in Note 1a) in the UBS Group consolidated annual Financial Statements for the year ended 31 December 2017.

As permitted by the transition provisions of IFRS 9 and IFRS 15, UBS elected not to restate comparative period information, and the accounting policies as set out in Note 1 in the UBS Group AG consolidated annual Financial Statements for the period ended 31 December 2017 apply to comparative periods.

1.3.1 Update to Note 1a) to the Financial Statements 2017 mainly related to IFRS 9

Update to Note 1a) 3) Financial instruments

b. Classification, measurement and presentation

On initial recognition, financial assets are classified as measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL).

A debt instrument is measured at amortized cost if it meets the following conditions:

- it is held within a business model that has an objective to hold financial assets to collect contractual cash flows; and
- the contractual terms of the financial asset result in cash flows that are solely payments of principal and interest on the principal amount outstanding (SPPI).

A debt instrument is measured at FVOCI if it meets both of the following conditions:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms of the financial asset result in cash flows that are SPPI.

Equity instruments are accounted for at FVTPL. All other financial assets are measured at FVTPL and consist of held for trading assets, assets mandatorily measured on a fair value basis and derivatives, except to the extent that they are designated in a hedging relationship, in which case the IAS 39 hedge accounting requirements continue to apply.

Business model assessment

UBS determines the nature of the business model, for example if the objective is to hold the financial asset and collect the contractual cash flows, by considering the way in which the financial assets are managed to achieve a particular business objective as determined by management.

Financial assets that are held for trading or managed on a fair value basis are measured at FVTPL insofar as the associated business model is neither to hold the financial assets to collect contractual cash flows nor to hold to collect contractual cash flows and sell.

The Group originates loans to hold to maturity and to sell or sub-participate to other parties, resulting in a transfer of substantially all the risks and rewards, and derecognition of the loan or portions of it. The Group considers the activities of lending to hold and lending to sell or sub-participate as two separate business models, with financial assets within the former considered to be within a business model that has an objective to hold the assets to collect contractual cash flows, and those within the latter included in a trading portfolio. In certain cases, it may not be possible on origination to identify whether loans or portions of loans will be sold or sub-participated and certain loans may be managed on a fair value basis through, for instance, using credit derivatives. These financial assets are mandatorily measured at FVTPL.

Critical accounting estimates and judgments

UBS exercises judgment to determine the appropriate level at which to assess its business models. In general the assessment is performed at the product level, e.g., retail and commercial mortgages. In other cases the assessment is carried out at a more granular level, e.g., loan portfolios by region, and, if required, further disaggregation is performed by business strategy. In addition, UBS exercises judgment in determining the effect of sales of financial instruments on the business model assessment.

Note 1 Basis of accounting (continued)

Contractual cash flow characteristics
In assessing whether the contractual cash flows are SPPI, the Group considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument, which could affect whether the instrument is considered to meet the SPPI criteria.

For example, the Group holds portfolios of private mortgage contracts and corporate loans in Personal & Corporate Banking that commonly contain clauses that provide for two-way compensation if prepayment occurs. The amount of compensation paid by or to UBS reflects the effect of changes in market interest rates. The Group has determined that the inclusion of the change in market interest rates in the compensation amount is reasonable for the early termination of the contract, and therefore results in contractual cash flows that are SPPI.

Critical accounting estimates and judgments

UBS applies judgment when considering whether certain contractual features, such as interest rate reset frequency or non-recourse features, significantly affect future cash flows. Furthermore, judgment is required when assessing whether compensation paid or received on early termination of lending arrangements results in cash flows that are not SPPI.

All financial instruments are initially measured at fair value. In the case of financial instruments subsequently measured at amortized cost or FVOCI, the initial fair value is adjusted for directly attributable transaction costs.

After initial recognition, UBS classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9 as described in the table on the following pages.

Note 1 Basis of accounting (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		A debt financial asset is measured at amortized cost if: – it is held in a business model that has an objective to hold assets to collect contractual cash flows, and – the contractual terms give rise to cash flows that are SPPI. This classification includes: – cash and balances at central banks – loans and advances to banks – cash collateral receivable on securities borrowed – receivables on reverse repurchase agreements – cash collateral receivables on derivative instruments – residential and commercial mortgages – corporate loans – secured loans, including Lombard loans, and unsecured loans – loans to financial advisors – debt securities held as high-quality liquid assets (HQLA) – fee and lease receivables.	Measured at amortized cost using the effective interest rate (EIR) method less allowances for expected credit losses (ECL) (refer to items 3c and 3g in this Note for more information). The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments – when it is probable that UBS will enter into a specific lending relationship – are deferred and amortized over the life of the loan using the EIR method. When the financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amounts arising from exchange-traded derivatives (ETD) and certain over-the-counter (OTC) derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral receivables on derivative instruments.*
Measured at FVOCI	Debt instruments measured at FVOCI	A debt financial asset is measured at FVOCI if: – it is held in a business model whose objective is achieved by both holding assets to collect contractual cash flows and selling the assets, and – the contractual terms give rise to cash flows that are SPPI. This classification primarily includes debt securities and certain asset-backed securities held as HQLA for which the contractual cash flows meet the SPPI conditions.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized (when sold, collected or otherwise disposed). Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses. The amounts recognized in the income statement are determined on the same basis as for financial assets measured at amortized cost.

Note 1 Basis of accounting (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at FVTPL	Held for trading	Financial assets held for trading include: – all derivatives with a positive replacement value, except those that are designated as effective hedging instruments – other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans) and equity instruments.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Other net income from fair value changes on financial instruments*, except interest and dividend income on instruments other than derivatives (refer to item 3c in this Note for more information), interest on derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain long- and short-duration foreign exchange contracts, which are reported in *Net interest income*. Derivative assets are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives which are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral receivables on derivative instruments.* The presentation of fair value changes on derivatives that are designated and effective as hedging instruments depends on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information). Financial assets held for trading (other than derivatives) are presented as *Financial assets at fair value held for trading*. Other financial assets mandatorily measured at fair value through profit or loss are presented as *Financial assets at fair value not held for trading*, except for brokerage receivables, which are presented as a separate line item on the Group's balance sheet.
	Mandatorily measured at FVTPL – Other	A financial asset is mandatorily measured at FVTPL if: – it is not held in a business model whose objective is to hold assets to collect contractual cash flows or to hold them to collect contractual cash flows and sell, and / or – the contractual terms give rise to cash flows that are not SPPI, and / or – it is not held for trading. The following financial assets are mandatorily measured at FVTPL: – Certain structured loans, certain commercial loans, receivables under reverse repurchase and cash collateral on securities borrowing agreements that are managed on a fair value basis – Loans, managed on a fair value basis and hedged with credit derivatives – Certain debt securities held as HQLA and managed on a fair value basis – Certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets represent holdings in investments funds, whereby the contractual cash flows do not meet the SPPI conditions because the entry and exit price is based on the fair value of the fund's assets – Brokerage receivables, for which contractual cash flows do not meet the SPPI conditions due to the aggregate balance being accounted for as a single unit of account, with interest being calculated on the individual components – Auction rate securities, for which contractual cash flows do not meet the SPPI conditions because interest may be reset at rates that contain leverage – Equity instruments – Assets held under unit-linked investment contracts.	

Note 1 Basis of accounting (continued)

Financial liabilities classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – Demand and time deposits, retail savings / deposits, amounts payable under repurchase agreements, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit and covered bonds – Cash collateral payables on derivative instruments.	Measured at amortized cost using the EIR method. Upfront fees and direct costs relating to the issuance or origination of the liability are deferred and amortized over the life of the liability using the EIR method. When the financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amortized cost liabilities are presented on the balance sheet primarily as *Amounts due to banks, Customer deposits, Payables from securities financing transactions* and *Debt issued measured at amortized cost.* Amounts arising from ETD and certain OTC derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral payables on derivative instruments.*
Measured at fair value through profit or loss	Held for trading	Financial liabilities held for trading include: – All derivatives with a negative replacement value (including certain loan commitments) except those that are designated and effective hedging instruments – Obligations to deliver financial instruments, such as debt and equity instruments, that UBS has sold to third parties, but does not own (short positions).	Measurement of financial liabilities classified at FVTPL follows the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of the financial liability that is attributable to changes in UBS's own credit risk is presented in OCI. Financial liabilities measured at FVTPL are presented as *Financial liabilities at fair value held for trading* and *Other financial liabilities designated at fair value*, respectively, except for brokerage payables and debt issued, which are presented as separate sub-totals on the Group's balance sheet. Derivative liabilities are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives which are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral payables on derivative instruments.* Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective as hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information).
	Designated at FVTPL	UBS designated at FVTPL the following financial liabilities: – Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes – Issued debt instruments managed on a fair value basis – Certain payables under repurchase agreements and cash collateral on securities lending agreements that are managed in conjunction with associated reverse repurchase agreements and cash collateral on securities borrowed – Loan commitments that are hedged predominantly with credit derivatives and those managed on a fair value basis – Amounts due under unit-linked investment contracts whose cash flows are linked to financial assets measured at FVTPL and eliminate an accounting mismatch – Brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.	

c. Interest income and expense

Interest income and expense are recognized in the income statement applying the EIR method.

In determining interest income and expense, the EIR is applied to the gross carrying amount of the financial asset (unless the asset is credit-impaired) or the amortized cost of a financial liability, based on estimated future cash flows that take into account all contractual cash flows, except those related to ECL. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying EIR to the amortized cost of the instrument. Furthermore, for financial assets that were credit-impaired on initial recognition, interest is determined by applying a credit-adjusted EIR to the amortized cost of the instrument.

Note 1 Basis of accounting (continued)

UBS also presents interest income and expense on financial instruments (excluding derivatives) measured at FVTPL separately from the rest of the fair value changes in the income statement. Interest income or expense on financial instruments measured at amortized cost and financial assets measured at FVOCI are presented separately within *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* and *Interest expense from financial instruments measured at amortized cost,* with interest on financial instruments at FVTPL presented in *Interest income (or expense) from financial instruments measured at fair value through profit or loss*. All are part of *Net interest income*.

Interest income from financial instruments measured at fair value through profit or loss includes forward points on certain short- and long-duration foreign exchange contracts and dividend income.

Furthermore, interest income and expense on derivatives designated as hedging instruments in effective hedge relationships are presented consistently with the interest income and expense of the respective hedged item.

→ **Refer to "Note 1a) Significant Accounting Policies" in the "Consolidated financial Statements" section of the Annual Report 2017 for more information**

g. Expected credit losses

Expected credit losses (ECL) are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees and loan commitments. ECL are also recognized on the undrawn portion of revolving revocable credit lines, which include UBS's credit card limits and master credit facilities, which are customary in the Swiss market for corporate and commercial clients. UBS refers to both as "other credit lines," with clients allowed to draw down on demand balances (with the Swiss master credit facilities also allowing for term products) and which can be terminated by UBS at any time. Though these other credit lines are revocable, UBS is exposed to credit risk because the client has the ability to draw down funds before UBS can take credit risk mitigation actions.

Recognition of expected credit losses

ECL represent the difference between contractual cash flows and those UBS expects to receive, discounted at the EIR. For loan commitments and other credit facilities in scope of ECL, expected cash shortfalls are determined by considering expected future draw downs.

ECL are recognized on the following basis:

- A maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 1. For instruments with a remaining maturity of less than 12 months, ECL are determined for this shorter period.
- Lifetime ECL are recognized if a significant increase in credit risk (SICR) is detected subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 2. Where an SICR is no longer observed, the instrument will move back to stage 1.
- Lifetime ECL are always recognized for credit-impaired financial instruments, referred to as instruments in stage 3. The IFRS 9 determination of whether an instrument is credit-impaired is based on the occurrence of one or more loss events, with lifetime ECL generally derived by estimating expected cash flows based on a chosen recovery strategy with additional consideration given to forward-looking economic scenarios. Credit-impaired exposures may include positions for which no loss has occurred or no allowance has been recognized, for example, because they are expected to be fully recoverable through the collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired financial assets (POCI). POCI are initially recognized at fair value with interest income subsequently being recognized based on a credit-adjusted EIR. POCI include financial instruments that are newly recognized following a substantial restructuring and remain a separate category until maturity.

Note 1 Basis of accounting (continued)

UBS does not apply the low-credit-risk practical expedient that allows a lifetime ECL for lease or fee receivables to be recognized irrespective of whether a significant increase in credit risk has occurred. Instead, UBS has incorporated lease and fee receivables into the standard ECL calculation.

A write-off is made when all or part of a financial asset is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / recovery*. Write-offs and partial write-offs represent derecognition / partial derecognition events.

ECL are recognized in profit or loss with a corresponding ECL allowance reported as a decrease in the carrying value of financial assets measured at amortized cost on the balance sheet. For financial assets measured at fair value through OCI, the carrying value is not reduced, but an accumulated amount is recognized in OCI. For off-balance sheet financial instruments and other credit lines, provisions for ECL are reported in *Provisions*. ECL are recognized within the income statement in *Credit loss expense / recovery.*

Default and credit impairment

The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for the Personal & Corporate Banking and Swiss wealth management portfolios. Counterparties are also classified as defaulted when bankruptcy, insolvency proceedings or enforced liquidation have commenced, obligations have been restructured on preferential terms or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If a counterparty is defaulted, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is POCI. An instrument is POCI if it has been purchased with a material discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCIs), it remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit-restructured, and there is general evidence of credit recovery. A minimum period of three months is applied whereby most instruments remain in stage 3 for a longer period.

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on either loss expectations resulting from default events over a maximum 12-month period from the reporting date or over the remaining life of a financial instrument. The method used to calculate individual probability-weighted unbiased ECL is based on a combination of the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). PDs and LGDs used in the ECL calculation are point in time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For each instrument or group of instruments, parameter time series are generated consisting of the instruments' PD, LGD and EAD profiles considering the respective period of exposure to credit risk.

For the purpose of determining the ECL-relevant parameters, UBS leverages its Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and new IFRS 9-related models have been developed, which consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III through the cycle (TTC) parameters. The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III are not affected by the IFRS 9 ECL calculation.

Probability of default (PD): The PD represents the likelihood of a default over a specified time period. A 12-month PD represents the likelihood of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. The lifetime PD calculation is based on a series of 12-month PIT PDs that are derived from TTC PDs and scenario forecasts. This modeling is region-, industry- and client segment-specific and considers both scenario-systematic and client-idiosyncratic information. To derive the cumulative lifetime PD per scenario, the series of 12-month PIT PDs are transformed into marginal PIT PDs taking any assumed default events from previous periods into account.

Note 1 Basis of accounting (continued)

Exposure at default (EAD): The EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring during the life of a financial instrument. It represents the cash flows outstanding at the time of default, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios. IFRS 9-specific CCFs have been modeled to capture client segment- and product-specific patterns after removing Basel standard-specific limitations, i.e., conservativism and focus on a 12-month period prior to default.

Loss given default (LGD): The LGD represents an estimate of the loss at the time of a potential default occurring during the life of a financial instrument. The determination of the LGD takes into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. The LGD is commonly expressed as a percentage of the EAD.

PD and LGD are determined for four different scenarios whereas EAD projections are treated as scenario independent.

Parameters are generally determined on an individual financial asset level. For credit card exposures in Switzerland, personal account overdrafts and certain loans to financial advisors, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio.

Scenarios and scenario weights

The determination of the probability weighted ECL requires evaluating a range of diverse and relevant future economic conditions.

To accommodate this requirement, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. Those variables range from above-trend economic growth to severe recession. A weight is computed for each scenario by using a probabilistic econometric model that considers recent information as well as several decades of historical data. The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur. The scenarios, including the narratives, the macroeconomic and financial variables and the scenario weights, are further discussed, challenged and potentially refined by a team of UBS-internal experts. The baseline scenario is aligned to the economic and market assumptions used for UBS business planning purposes.

Macroeconomic and other factors

The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS projects the relevant economic factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Certain variables may only be relevant for specific types of exposures, such as house price indices for mortgage loans, while other variables have key relevance in the ECL calculation for all exposures. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS's key ECL-relevant portfolios.

For UBS, the following forward-looking macroeconomic variables represent the most relevant factors in the ECL calculation:

- GDP growth rates
- House price indices
- Unemployment rates
- Interest rates, specifically LIBOR and government bond yields
- Equity indices
- Consumer price indices

Note 1 Basis of accounting (continued)

The forward-looking macroeconomic assumptions used in the ECL calculation are developed by UBS economists, risk methodology personnel and credit risk officers. Assumptions and scenarios are validated and approved through a scenario committee and an operating committee, which also aim to ensure a consistent use of forward-looking information throughout UBS, including in the business planning process. ECL inputs are tested and reassessed for appropriateness at least each quarter and appropriate adjustments are made when needed.

ECL measurement period

The period for which lifetime ECL are determined is based on the maximum contractual period that UBS is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment where the contractual cancelation right does not limit UBS's exposure to credit risk to the contractual notice period as the client has the ability to draw down funds before UBS can take risk mitigating actions. In such cases, UBS is required to estimate the period over which it is exposed to credit risk. This applies to UBS's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one unit. The exposure arising from UBS's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS is exposed to credit risk. Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a Risk Officer, allowing for informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS has assessed these credit risk management practices and considers both the RbM approach and formal credit review as a substantive credit review providing for a re-origination of the facility. Following this, a 12 month measurement period is used for both types of facilities as an appropriate proxy of the period over which UBS is exposed to credit risk, with 12 months also used as a look back period for assessing SICR.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a 12-month ECL continues to be appropriate, it is assessed whether an SICR has occurred since initial recognition of the financial instrument. The assessment criteria include both quantitative and qualitative factors.

Primarily, UBS assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:

– at the reporting date and
– at inception of the instrument.

In both cases the respective PDs are determined for the residual lifetime of the instrument, i.e., the period between the reporting date and maturity. If, based on UBS's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL being recognized.

The threshold applied varies depending on the original credit quality of the borrower. For instruments with lower default probabilities at inception due to good credit quality of the counterparty, the SICR threshold is set at a higher level than for instruments with higher default probabilities at inception. This implies that for instruments with initially lower default probabilities a relatively higher deterioration in credit quality is needed to trigger an SICR than for those instruments with originally higher PDs. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, expressed in rating downgrades, together with the corresponding ratings at origination of an instrument is provided in the "SICR thresholds" table below. This simplified view is aligned to internal ratings as disclosed in the internal ratings table presented in "Credit risk" in the "Risk management and control" section of the Annual Report 2017. The actual SICR thresholds applied are defined on a more granular level interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

Note 1 Basis of accounting (continued)

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the borrower becomes more than 30 days past due on his contractual payments. This presumption is rebutted only where reasonable and supportable information is available that demonstrates that UBS is not exposed to an SICR even if contractual payments become more than 30 days past due.

For certain less material portfolios, specifically the Swiss credit card portfolio and the recruitment and retention loans to financial advisors within Global Wealth Management, the 30 days past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30 days past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking that are between 90 and 180 days past due, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR and hence for a transfer to stage 2. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected. Instruments for which an SICR since initial recognition is determined based on criteria other than changed default probabilities remain in stage 2 for at least six months post resolution of the stage 2 trigger event.

The overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions due to the risk management practices adopted, including daily monitoring processes with strict remargining requirements. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. ECL on these positions are not material.

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that involve significant uncertainty at the time they are made. Changes to these estimates and assumptions can result in significant changes to the timing and amount of ECL to be recognized.

Determination of a significant increase of credit risk
IFRS 9 does not include a definition of what constitutes an SICR. UBS assesses whether an SICR has occurred since initial recognition based on qualitative and quantitative reasonable and supportable forward-looking information that includes significant management judgment. More stringent criteria could significantly increase the number of instruments migrating to stage 2. An IFRS 9 Operating Committee has been established to review and challenge the SICR approach and any potential changes and determinations made in the quarter.

Scenarios, scenario weights and macroeconomic factors
ECL reflect an unbiased and probability-weighted amount, which UBS determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios and judges the suitability of respective weights to be applied. Each of the scenarios is based on management's assumptions around future economic conditions in the form of macroeconomic, market and other factors. Changes in the scenarios and weights, the corresponding set of macroeconomic variables and the assumptions made around those variables for the forecast horizon would have a significant effect on the ECL. An IFRS 9 Scenario Committee, in addition to the Operating Committee, has been established to derive, review and challenge the selection and weights.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. The ECL calculation is therefore sensitive to any extension of contractual maturities triggered by business decisions, consumer behaviors and an increased number of stage 2 positions. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period has been applied for master credit facilities.

Modeling and management adjustments
A number of complex models have been developed or modified to calculate ECL, with additional management adjustments required. Internal counterparty rating changes, new or revised models and data may significantly affect ECL. The models are governed by UBS's model validation controls, which aim to ensure independent verification, and are approved by the Group Model Governance Board (GMGB). The management adjustments are approved by the IFRS 9 Operating Committee and endorsed by the GMGB.

Note 1 Basis of accounting (continued)

h. Restructured and modified financial assets

When a counterparty is in financial difficulties or where default has already occurred, UBS may restructure financial assets by providing concessions that would otherwise not be considered and that are outside of UBS's normal risk appetite, such as preferential interest rates, extension of maturity and subordination. When a credit restructuring takes place, each case is considered individually and the counterparty is generally classified as defaulted until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions, or until the counterparty has recovered and the preferential conditions no longer exceed UBS's risk appetite.

Concessions granted when there is no evidence of financial difficulties, or where changes to terms and conditions are within UBS's usual risk appetite, are not considered to be a credit restructuring.

Modifications represent contract amendments that result in an alteration of future contractual cash flows and that can occur within UBS's normal risk appetite or as part of a credit restructuring where a counterparty is in financial difficulties.

A restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying value of a financial asset is recognized in profit or loss as a modification gain or loss. Further, the subsequent SICR assessment is made by comparing the risk of default at the reporting date based on the modified contractual terms of the financial asset with the risk of default at initial recognition based on the original, unmodified contractual terms of the financial asset.

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS once the commitments are communicated to the beneficiary or that are revocable only due to automatic cancelation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) *derivative loan commitments* measured at fair value through profit or loss, (ii) *loan commitments designated at fair value through profit or loss* or (iii) *other loan commitments*.

The Group recognizes ECL on non-cancelable other loan commitments. In addition, UBS also recognizes ECL on loan commitments that can be canceled at any time if UBS is exposed to credit risk (refer to item g in this Note). Corresponding ECL are presented within *Provisions* on the Group's balance sheet. ECL relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is presented within (i) *Financial assets at fair value held for trading*, consistent with the associated *derivative loan commitment*, (ii) *Financial assets at fair value not held for trading*, following *loan commitments designated at fair value through profit or loss* or (iii) *Loans and advances to customers*, when the associated loan commitment is accounted for as an *other loan commitment*.

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss. Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of:

- the amount of ECL (refer to item g in this Note) and
- the amount initially recognized less the cumulative amount of income recognized as of the reporting date.

ECL resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

q. Other net income from fair value changes of financial instruments

The line item *Other net income from fair value changes of financial instruments* substantially includes fair value gains and losses on financial instruments at fair value through profit or loss, as well as the effects at derecognition, trading gains and losses and intermediation income arising from certain client-driven Global Wealth Management and Personal & Corporate Banking financial transactions. In addition, foreign currency translation effects and income and expenses from precious metals are presented under this income statement line item.

Note 1 Basis of accounting (continued)

1.3.2 Update to Note 1a) to the Financial Statements 2017 mainly related to IFRS 15

Update to Note 1a) 4) Fee and commission income and expenses

UBS earns fee income from a diverse range of services it provides to its clients. Fee income can be divided into two broad categories:

- fees earned from services that are provided over a certain period of time, such as asset or portfolio management, custody services and certain advisory services and
- fees earned from point in time services such as underwriting fees and brokerage fees (e.g., securities and derivative execution and clearing).

→ **Refer to Note 3 for more information including the disaggregation of revenues**

Over time services

Fees earned from services that are provided over a certain period of time are recognized ratably over the service period provided the fees are not contingent on successfully meeting specified performance criteria that are beyond the control of UBS (see measurement below).

Costs to fulfill over time services are recorded in the income statement immediately because such services are considered to be a series of services that are substantially the same from day to day and have the same pattern of transfer. The costs to fulfill neither generate nor enhance the resources of UBS that will be used to satisfy future performance obligations and cannot be distinguished between those that relate to satisfied and unsatisfied performance obligations. Therefore, these costs do not qualify to be recognized as an asset. Where costs incurred relate to contracts that include variable consideration that is constrained by factors beyond UBS's control, e.g., successful mergers and acquisitions (M&A) activity, or where UBS has a history of not recovering such costs on similar transactions, then such costs are expensed immediately as incurred.

Point in time services

Fees earned from providing transaction-type services are recognized when the service has been completed provided such fees are not subject to refund or another contingency beyond the control of UBS.

Incremental costs to fulfill services provided at a point in time are typically incurred and recorded at the same time as the performance obligation is satisfied and revenue is earned, and are therefore not recognized as an asset, e.g., brokerage. Where recovery of costs to fulfill relates to an uncompleted point in time service for which the satisfaction of the performance obligation in the contract is dependent upon factors beyond the control of UBS, such as underwriting a successful securities issuance, or where UBS has a history of not recovering such costs through reimbursement on similar transactions, then such costs are expensed immediately as incurred.

Measurement

Fee and commission income is measured based on consideration specified in a legally enforceable contract with a customer, excluding amounts such as taxes collected on behalf of third parties. Consideration can include both fixed and variable amounts. Variable consideration includes refunds, discounts, performance bonuses and other amounts that are contingent on the occurrence or non-occurrence of a future event. Variable consideration that is contingent on an uncertain event can only be recognized to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue for a contract will not occur. This is referred to as the variable consideration constraint. UBS does not consider the highly probable criterion to be met where the contingency on which income is dependent is beyond the control of UBS. In such circumstances, UBS only recognizes revenue when the contingency has been resolved or an uncertain event has occurred. Examples include asset management performance-linked fees, which are only payable if the returns of a fund exceed a benchmark and are only recognized after the performance period has elapsed. Similarly, M&A advisory fees that are dependent on a successful client transaction are not recognized until the transaction on which the fees are dependent has been executed. Asset management fees (excluding performance-based fees) received on a periodic basis, typically quarterly, that are determined based on a fixed percentage of net asset value that has not been established at the reporting date are estimated and accrued ratably over the period to the next invoice date, except during periods in which market volatility indicates there is a risk of significant reversal. Research revenues earned by the Investment Bank under commission-sharing or research payment account agreements are not recognized until the client has provided a definitive allocation of amounts between research providers, as prior to this UBS generally does not have an enforceable right to a specified amount of consideration.

Note 1 Basis of accounting (continued)

Consideration received is allocated to the separately identifiable performance obligations in a contract. Due to the nature of UBS's revenues, which do not typically include multiple performance obligations or, where they do, are considered to be a series with the same pattern of transfer, e.g., asset management, significant judgment is not required to allocate a transaction price between performance obligations or in determining the timing of revenue recognition. UBS has taken the practical expedient to not disclose information on the allocation of the transaction price to remaining performance obligations in contracts. This is because contracts are typically less than one year in duration. Where contracts have a longer duration, they are either subject to the variable consideration constraint with fees calculated on future net asset value, which cannot be included within the transaction price for the contract, or result in revenue being recognized ratably using the output method corresponding directly to the value of the services completed to date and to which UBS would be entitled to invoice upon termination of the contract, e.g., loan commitments.

Presentation of fee and commission income and expense
Fee and commission income and expense are presented gross on the face of the income statement when UBS is considered to be principal in the contractual relationship with its customer and any suppliers used to fulfill such contracts. This occurs where UBS has control over such services and its relationship with suppliers prior to provision of the service to the client. UBS only considers itself to be an agent to services provided by third parties where its client controls the choice of supplier and the services to be provided, and UBS does not transform or integrate the service into a UBS product or service or take responsibility for the quality of the service, e.g., third-party execution costs for exchange-traded derivatives and fees payable to third-party research providers, where UBS is merely acting as a payment agent for its client. When UBS is acting as an agent, any costs incurred are directly offset against the associated income.

Presentation of expenses in the income statement
UBS presents expenses primarily in line with their nature in the income statement, differentiating between expenses that are incremental and incidental to revenues, which are presented within *Total operating income,* and those that are related to personnel, general and administrative expenses, which are presented within *Total operating expenses*

Contract assets, contract liabilities and capitalized expenses
UBS has applied the practical expedient that allows for costs incurred to obtain a contract to be expensed as incurred where the amortization period for any asset recognized would be less than 12 months.

Where UBS provides services to clients, consideration is due immediately upon satisfaction of a point in time service or at the end of a prespecified period for an over time service, e.g., certain asset management fees are collected monthly or quarterly, through deduction from a client account, deduction from fund assets or through separate invoicing. Where receivables are recorded, they are presented within *Other financial assets measured at amortized cost.*

Contract liabilities relate to prepayments received from customers where UBS is yet to satisfy its performance obligation.

Contract assets are recorded when an entity's right to consideration in exchange for services transferred is conditional on something other than the passage of time, e.g., the entity's future performance.

UBS has not recognized any material contract assets, contract liabilities or capitalized expenses during the period and has therefore not provided a contract balances reconciliation.

Note 1 Basis of accounting (continued)

1.4 Adoption of IFRS 9

1.4.1 Introduction

Effective 1 January 2018, UBS adopted IFRS 9, *Financial Instruments*, which replaces IAS 39, *Financial Instruments: Recognition and Measurement* and substantially changes accounting and financial reporting in three key areas: classification and measurement of financial assets, impairment and hedge accounting. In addition, UBS early adopted the Amendment to IFRS 9, *Prepayment Features with Negative Compensation*, issued in October 2017, which allows the Group to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs. The Group has retained hedge accounting under IAS 39 as permitted and early adopted the own credit requirements of IFRS 9 during the first quarter of 2016.

As permitted by the transitional provisions of IFRS 9, UBS elected not to restate comparative figures. Any effect on the carrying amounts of financial assets and liabilities at the date of transition to IFRS 9 was recognized as an adjustment to opening retained earnings. The detailed effects of the adoption of IFRS 9 on 1 January 2018 are presented in this Note and the updated accounting policies for classification and measurement of financial instruments and impairment of financial assets as applied from 1 January 2018 are presented in Note 1.3.

1.4.2 Transition impact

The adoption of IFRS 9 effective 1 January 2018 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of impairment requirements based on an ECL methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. Further detail is provided in section 1.4.5 of this Note.

UBS continues to test and refine the new accounting processes, internal controls and governance framework necessitated by the adoption of IFRS 9. Therefore, the estimation of ECL and related effects remain subject to change until finalization of the financial statements for the year ending 31 December 2018.

→ **Refer to the 31 March 2018 Pillar 3 report – UBS Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the effect of the IFRS 9 transition on UBS's capital adequacy**

1.4.3 Governance

The implementation of IFRS 9 has been a key strategic initiative for UBS implemented under the joint sponsorship of the Group Chief Financial Officer and the Group Chief Risk Officer. The incorporation of forward-looking information into the ECL calculation and the definition and assessment of what constitutes a significant increase in credit risk (SICR) are inherently subjective and involve the use of significant expert judgment. Therefore, UBS has developed a front-to-back governance framework over the ECL calculation process jointly owned by the Group Chief Financial Officer and the Group Chief Risk Officer and has designed controls to be in compliance with the requirements of the Sarbanes-Oxley Act. UBS has efficient credit risk management processes in place that continue to be applicable and aim to ensure the effects of economic developments are appropriately considered, mitigation actions are taken where required and risk appetite is reassessed and adjusted as needed.

→ **Refer to the "Risk management and control" section of the Annual Report 2017 for more information**

1.4.4 Retrospective amendments to UBS Group balance sheet presentation

Although the effect of IFRS 9 classification and measurement changes has been applied prospectively, UBS has made a series of changes to the presentation of its IFRS balance sheet to facilitate comparability and prior-period information is presented for periods ending before 1 January 2018 in this revised structure. The primary changes include:

- IAS 39-specific asset categories, such as "Financial assets held to maturity" and "Financial assets available for sale," have been superseded by the new categories "Financial assets measured at amortized cost" and "Financial assets measured at fair value through other comprehensive income."
- A new line, *Financial assets at fair value not held for trading*, has been created to accommodate in particular financial assets previously designated at fair value, all of which are mandatorily classified at fair value through profit or loss under IFRS 9.
- *Other assets* and *Other liabilities* have been split between measured at amortized cost, measured at fair value through profit or loss and other non-financial assets and liabilities.
- *Cash collateral on securities borrowed* and *Reverse repurchase agreements* have been combined into a single line, *Receivables from securities financing transactions.* Similarly, *Cash collateral on securities lent* and *Repurchase agreements* have been combined into a single line, *Payables from securities financing transactions.*
- Finance lease receivables, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost.*
- Precious metal positions previously presented in *Trading portfolio assets* are now presented within the new line *Other non-financial assets.*
- *Financial liabilities designated at fair value* have been split into two lines: *Debt issued designated at fair value* and *Other financial liabilities designated at fair value.*

Note 1 Basis of accounting (continued)

The table below illustrates the new balance sheet presentation of assets and liabilities as of 31 December 2017 in comparison with the presentation in the Annual Report 2017. The presentation of the components of equity has not changed, and therefore, for illustration purposes, total liabilities and equity are presented in a single line in the table. The table does not reflect any of the effects of adopting the classification and measurement requirements of IFRS 9, which are presented in section 1.4.5 under *Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9.*

Retrospective amendments to UBS Group balance sheet presentation as of 31 December 2017

CHF million		31.12.17	31.12.17
Assets	References	Former presentation	Revised presentation
Cash and balances at central banks		87,775	87,775
Loans and advances to banks (formerly: Due from banks)		13,739	13,739
Receivables from securities financing transactions (new line)	1		89,633
Cash collateral on securities borrowed (newly included in Receivables from securities financing transactions)	1	12,393	
Reverse repurchase agreements (newly included in Receivables from securities financing transactions)	1	77,240	
Cash collateral receivables on derivative instruments		23,434	23,434
Loans and advances to customers (formerly: Loans)	2	319,568	318,509
Financial assets held to maturity (superseded)	3	9,166	
Other financial assets measured at amortized cost (new line)	2,3,7		36,861
Total financial assets measured at amortized cost			569,950
Financial assets at fair value held for trading (formerly: Trading portfolio assets)	4	130,707	126,144
of which: assets pledged as collateral that may be sold or repledged by counterparties		*35,363*	*35,363*
Derivative financial instruments (formerly: Positive replacement values)		118,227	118,227
Brokerage receivables (new line, formerly included within Other assets)		n/a	n/a
Financial assets at fair value not held for trading (new line)	5		58,933
Financial assets designated at fair value	5	58,933	
Total financial assets measured at fair value through profit or loss			303,304
Financial assets available for sale (superseded)	6	8,665	
Financial assets measured at fair value through other comprehensive income (new line)	**6**		8,665
Investments in associates		1,018	1,018
Property, equipment and software		8,829	8,829
Goodwill and intangible assets		6,398	6,398
Deferred tax assets		9,844	9,844
Other non-financial assets (new line)	4,7		7,633
Other assets (superseded)	7	29,706	
Total assets		915,642	915,642
Liabilities			
Amounts due to banks		7,533	7,533
Payables from securities financing transactions (new line)	8		17,044
Cash collateral on securities lent (newly included in Payables from securities financing transactions)	8	1,789	
Repurchase agreements (newly included in Payables from securities financing transactions)	8	15,255	
Cash collateral payables on derivative instruments		30,247	30,247
Customer deposits (formerly: Due to customers)		408,999	408,999
Debt issued measured at amortized cost		139,551	139,551
Other financial liabilities measured at amortized cost (new line)	10		36,337
Total financial liabilities measured at amortized cost			639,711
Financial liabilities at fair value held for trading (formerly: Trading portfolio liabilities)		30,463	30,463
Derivative financial instruments (formerly: Negative replacement values)		116,133	116,133
Brokerage payables designated at fair value (new line, formerly included within Other liabilities)		n/a	n/a
Financial liabilities designated at fair value (superseded)	9	54,202	
Debt issued designated at fair value (new line)	9		49,502
Other financial liabilities designated at fair value (new line)	9,10		16,223
Total financial liabilities measured at fair value through profit or loss			212,322
Provisions		3,133	3,133
Other non-financial liabilities (new line)	10		9,205
Other liabilities (superseded)	10	57,064	
Total liabilities		864,371	864,371
Total liabilities and equity		915,642	915,642

Note 1 Basis of accounting (continued)

Explanatory footnotes to the table "Retrospective amendments to UBS Group balance sheet presentation"

Table ref.	Description of presentation changes applied retrospectively to the balance sheet as of 31 December 2017
Balance sheet assets	
1	Cash collateral on securities borrowed of CHF 12,393 million and reverse repurchase agreements of CHF 77,240 million as of 31 December 2017 are now presented as a total of CHF 89,633 within a single line, *Receivables from securities financing transactions*.
2	Finance lease receivables of CHF 1,059 million as of 31 December 2017, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
3	*Financial assets held to maturity* measured at amortized cost of CHF 9,166 million as of 31 December 2017 are now presented within *Other financial assets measured at amortized cost*.
4	Precious metal positions of CHF 4,563 million as of 31 December 2017, previously presented in *Trading portfolio assets*, are now presented within *Other non-financial assets*.
5	Financial assets designated at fair value through profit or loss of CHF 58,933 million as of 31 December 2017, previously presented in a separate line, are now presented within *Financial assets at fair value not held for trading*.
6	Debt and equity instruments of CHF 8,665 million as of 31 December 2017 previously presented in *Financial assets available for sale* are now presented within *Financial assets measured at fair value through other comprehensive income*.
7	The reporting line *Other assets* has been split into two new reporting lines, *Other financial assets measured at amortized cost* and *Other non-financial assets*. – Assets of CHF 29,706 million as of 31 December 2017, previously presented within Other assets, are now presented within Other assets measured at amortized cost (CHF 26,636 million) and Other non-financial assets (CHF 3,070 million). – Financial assets now presented within Other financial assets measured at amortized cost include brokerage receivables of CHF 19,080 million, debt securities of CHF 9,166 million, loans to financial advisors of CHF 3,118 million and other assets amounting to CHF 5,497 million. Refer to Note 12 a) for more information. – Refer to Note 12 b) for more information on assets now presented within *Other non-financial assets*.
Balance sheet liabilities	
8	Cash collateral on securities lent of CHF 1,789 million and repurchase agreements of CHF 15,255 million as of 31 December 2017 are now presented within a single line, *Payables from securities financing transactions*.
9	Financial liabilities designated at fair value through profit or loss of CHF 54,202 million as of 31 December 2017 are now presented within *Debt issued designated at fair value* (CHF 49,502 million) and *Other financial liabilities designated at fair value* (CHF 4,700 million).
10	The reporting line *Other liabilities* has been split into three new reporting lines, *Other financial liabilities measured at amortized cost*, *Other financial liabilities designated at fair value* and *Other non-financial liabilities*. – Liabilities amounting to CHF 57,064 million as of 31 December 2017, previously presented within *Other liabilities,* are now presented within *Other financial liabilities measured at amortized cost* (CHF 36,337 million, thereof CHF 29,646 million brokerage payables), within *Other financial liabilities designated at fair value* (amounts due under unit-linked investment contracts of CHF 11,523 million) and within *Other non-financial liabilities* (CHF 9,205 million). – Refer to note 12 c) for more information on financial liabilities now presented within *Other financial liabilities measured at amortized cost.* – Refer to note 12 d) for more information on financial liabilities now presented within *Other financial liabilities designated at fair value*. – Refer to note 12 e) for more information on liabilities now presented within *Other non-financial liabilities*.

Note 1 Basis of accounting (continued)

1.4.5 Transition to IFRS 9 as of 1 January 2018

Transition to Classification and measurement requirements

As set out in the amended accounting policies in Note 1.3, IFRS 9 requires all financial assets, except equity instruments and derivatives, to be classified at amortized cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL), based on the business model for managing the respective assets and their contractual cash flow characteristics.

Changes resulting from the application of IFRS 9 classification and measurement requirements as of 1 January 2018 have been applied as follows:

- Determination of the business model was made based on facts and circumstances as of the 1 January 2018 transition date;
- De-designations and new designations of financial instruments at FVTPL, pursuant to transition requirements of IFRS 9, have been carried out as of 1 January 2018. These reassessments resulted in:
  i. the de-designation of certain financial assets designated at FVTPL, as they are managed on a fair value basis, and therefore are mandatorily measured at fair value, or no longer managed on a fair value basis but held to collect the contractual cash flows and therefore are measured at amortized cost;
  ii. newly designated financial liabilities at FVTPL (e.g., brokerage payables) in order to achieve measurement consistency with associated financial assets that are mandatorily measured at FVTPL (e.g., brokerage receivables).

For UBS, the most significant IFRS 9 classification and measurement changes on transition to IFRS 9 are as follows:

- financial assets that no longer qualify for amortized cost accounting under IFRS 9 have been classified at FVTPL because their cash flow characteristics do not satisfy the solely payments of principal and interest criteria (e.g., auction rate securities and certain brokerage receivables);
- lending arrangements that no longer qualify for amortized cost accounting under IFRS 9 are classified at FVTPL because the business model within which they are managed does not have an objective to hold financial assets in order to collect the contractual cash flows or to collect contractual cash flows and sell (e.g., certain Investment Bank lending arrangements);
- equity instruments classified as available for sale under IAS 39 are classified at FVTPL under IFRS 9; and
- financial liabilities are newly designated under IFRS 9 at FVTPL, from amortized cost accounting, to align with conclusions reached for associated financial assets that will be measured at FVTPL (e.g., brokerage payables).

Effect on UBS Group income statement presentation

Upon adoption of IFRS 9, the reclassification of auction rate securities, certain loans in the Investment Bank, certain repurchase agreements and brokerage balances from amortized cost to FVTPL has resulted in the interest income from these instruments moving from Interest income (expense) from financial instruments measured at amortized cost to interest income (expense) from financial instruments measured at fair value through profit or loss. These changes have been applied prospectively from 1 January 2018.

Effect on UBS Group Statement of cash flows

Following the adoption of IFRS 9, changes have been made to the Statement of cash flows to reflect the changes arising from financial instruments that have been reclassified on the balance sheet. In particular, cash flows from certain financial assets previously measured as available-for-sale assets at fair value through other comprehensive income have been reclassified from investing activities to operating activities as the assets are fair valued through profit or loss effective 1 January 2018.

Transition to expected credit loss requirements

As set out in the Group's amended accounting policies in Note 1.3, IFRS 9 introduces a forward-looking ECL approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39 and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*.

The majority of ECL calculated as of the transition date relates to the private and commercial mortgage portfolio and corporate lending in Switzerland within Personal & Corporate Banking.

Note 1 Basis of accounting (continued)

Models at transition
For the purpose of implementing ECL under IFRS 9, UBS has leveraged existing Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models.

Existing models have been adapted and 29 new models have been developed for the ECL calculation that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III TTC parameters. Management adjustments have also been made. UBS has leveraged its existing model risk framework, including the key model validation control executed by Model Risk Management & Control. New and revised models have been approved by UBS's GMGB.

The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III remain unchanged.

→ **Refer to "Credit risk models" in the "Risk, treasury and capital management" section of our Annual Report 2017 for more information**
→ **Refer to "Significant accounting and financial reporting changes in 2018" in the "Operating environment and strategy" section of our Annual Report 2017 for more information**

Scenarios and scenario weights at transition
As outlined in Note 1.3, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL calculated on transition have been determined for each of the scenarios and subsequently weighted based on the probabilities in the table "Economic scenarios and weights applied."

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (1.1.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

UBS has established IFRS 9 ECL Scenario and Operating Committees to propose and approve the selection of the scenarios and weights to be applied and to monitor whether appropriate governance exists.

Macroeconomic and other factors: For each of the economic scenarios, UBS forecasts a wide range of forward-looking macroeconomic, market and other factors. Historical information was used to support the identification of the key factors and to project their development under the different scenarios. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS projected those factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS's key ECL-relevant portfolios.

The following represent the most significant macroeconomic factors for UBS and could substantially change the estimated ECL:

- GDP growth rates, given their significant effect on borrowers' performance
- House price indices, given their significant effect on mortgage collateral valuations
- Unemployment rates, given their significant effect on private clients' ability to meet contractual obligations
- Interest rates, given the significant effect on the counterparties' abilities to service their debt
- Equity indices, given their relevance for equity collateral valuation
- Consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability.

Macroeconomic and other factors at transition
Assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of the economic scenarios to determine ECL at the date of transition can be summarized as follows:

In the upside scenario, which assumes GDP growth rising above trend in most countries with only a moderate rise in inflation and ongoing accommodative monetary policies, GDP growth in Switzerland peaks at around 5% annually. Strong growth leads to a decline in unemployment to very low levels (below 1%) by 2020. Asset prices grow at robust pace, with equity prices increasing by approximately 10% annually and house prices (single-family homes) rising by approximately 4% annually. Policy and short-term interest rates remain low over the entire scenario, while government bond yields experience a sustained increase.

Note 1 Basis of accounting (continued)

In the US and the rest of the world, the scenario shows broadly similar features, with growth accelerating in Year 1 before steadily returning toward trend by Year 3. Specifically in the US, GDP growth accelerates at a slightly faster pace than in Switzerland, although the US experiences a slightly less substantial improvement in the unemployment rate by Year 3. The degree of policy tightening is marginally greater over the scenario horizon and, as in Switzerland, long-term government bond yields rise more significantly than short-term rates, and to a greater degree.

For the baseline scenario, which is modelled along our business plan assumptions of a continuation of overall important global growth, Swiss GDP growth remains between 1% and 2% annually over the three years of the scenario. Moderate growth results in a very mild increase of unemployment, which stabilizes at around 3.5%. Asset price growth is also moderate, with the Swiss equity price index rising by approximately 8% annually, while house prices grow by less than 1% annually. Policy rates, short-term interest rates and government bond yields increase very gradually over the three years of the scenario by approximately 50 basis points.

GDP growth in the US remains relatively stable, and faster than in Switzerland. Monetary policy tightens at a similar pace to Switzerland and, combined with a modest decline in the unemployment rate, helps to keep inflation in check. US equity prices slightly underperform their Swiss counterparts, while house prices outperform relatively stagnant Swiss house price growth. In the rest of the world, growth remains buoyant, with moderating growth in both Europe and China contrasting with accelerating growth in other emerging markets.

The mild downside scenario is based on a monetary policy tightening assumption, implemented to deflate a potential asset price bubble, causing Swiss GDP to decline by almost 1% in the first year of the scenario. The unemployment rate rises to roughly 5%. Equity prices fall by more than 20% over three years, while house prices decline by 15% over the same period. The fall of the nominal asking rent index is cushioned by higher interest rates, which register a more moderate decline than house prices. Short-term interest rates rise significantly due to monetary tightening, as well as government bond yields.

In this scenario, inflation in the US accelerates rapidly, leading to a sharp rise in short-term interest rates, similar to Switzerland. GDP growth averages a similar pace to Switzerland over three years, while equity and house prices also fall by a broadly similar degree to their Swiss equivalents. In the rest of the world, growth is also weighed down, particularly in more vulnerable emerging markets such as Russia, Turkey and Brazil, as interest rates and credit spreads rise sharply.

The severe downside scenario is modeled to mimic a severe recession caused by an event affecting Switzerland's competitiveness in key export markets, with Swiss GDP shrinking almost 7% in the first year of the scenario. The severe recession results in a substantial increase in unemployment, which peaks at around 9%. Asset prices plummet, with the Swiss equity index falling more than 55% over three years, and house prices declining 27% over the same period. Policy and short-term interest rates remain low over the entire scenario horizon.

US GDP and unemployment deteriorate by a lesser degree than in Switzerland, and while house and equity prices decline sharply, the effects are also less severe than in Switzerland. With more scope to cut rates than the SNB, short-term rates fall in the US. In the rest of the world, growth also slows sharply, particularly in the eurozone and neighboring emerging markets such as Turkey and Russia.

ECL measurement period at transition

As set out in Note 1.3, for the majority of ECL-relevant instruments, the contractual maturity is used to calculate the measurement period, with this capped at 12 months when stage 1 ECL are required. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit cards and 12 months for master credit facilities. UBS's ECL-relevant financial instruments have relatively short average maturities, which significantly contribute to the level of ECL on transition.

SICR determination at transition

The identification of instruments for which an SICR has been determined since initial recognition and the corresponding allocation to stage 2 at transition generally follow the principles described in the relevant accounting policy provided in Note 1.3. Furthermore, the following principles have been applied:

General: In estimating the retrospective lifetime PDs, we have considered the economic conditions over the relevant prior periods and the general significant uncertainty inherent in such approximation to determine the allocation of instruments to stage 2 at transition.

Note 1 Basis of accounting (continued)

Real estate financing: The Basel III rating methodology applied to the majority of income-producing real estate financings within Personal & Corporate Banking, which is leveraged for IFRS 9 ECL calculations, was significantly changed in 2017. As a consequence, there is no comparable rating on origination to determine whether an SICR has arisen over time. As permitted by the IFRS 9 transition requirements, a lifetime ECL allowance has therefore been recognized for certain real estate financing positions and will continue to be recognized until the positions are derecognized.

Other portfolios, including private mortgages and commercial SME clients: The Basel III rating models for other key portfolios in Personal & Corporate Banking, in particular for private client mortgages and commercial clients in the small and medium-sized enterprise (SME) segment, have recently been subject to a major redesign. While the methodology remained essentially the same and the calibration to the portfolios' average TTC PD value unchanged, the effect on the stage allocation is significant. This is due to the fact that the introduction of new models has led to a broader and different distribution of borrowers across the rating spectrum; while there was no material effect on those counterparties with an uplift in their rating, some of those that had a downward shift in their rating triggered the SICR threshold and a reclassification into stage 2 at transition.

The table on the following pages provides a detailed overview of the IFRS 9 transition effects as of 1 January 2018. This includes:
– reclassification of IAS 39 carrying amounts to the new categories applicable under IFRS 9;
– remeasurement of carrying amounts due to reclassification (any remeasurement to fair value and / or reversal of IAS 39 allowances or IAS 37 provisions for assets moving from amortized cost to fair value); and
– recognition of IFRS 9 ECL for in-scope assets, off-balance sheet positions and other credit lines.

The following table also includes the effects recognized for deferred tax assets and therefore the total impact provided in *Retained earnings* in the table is net of tax effects. Explanatory footnotes provided after the table provide additional details on these changes.

Note 1 Basis of accounting (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9

	31.12.17		1.1.18			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39/ IAS 37 allowances/ provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Assets						
Cash and balances at central banks	Loans and receivables	87,775			0	87,775
Loans and advances to banks	Loans and receivables	13,739	(17)		(3)[12]	13,719
to: Brokerage receivables	*Loans and receivables*		*(17)*[1]			
Receivables from securities financing transactions	Loans and receivables	89,633	(4,957)		(2)[12]	84,674
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(4,957)*[2]			
Cash collateral receivables on derivative instruments	Loans and receivables	23,434			0	23,434
Loans and advances to customers	Loans and receivables	318,509	(7,822)	0	(235)[12]	310,451
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(2,678)*[3]			
to: Brokerage receivables	*Loans and receivables*		*(4,691)*[1]			
to: Financial assets at fair value held for trading	*Loans and receivables*		*(468)*[4]			
from: Financial assets at fair value not held for trading	*FVTPL (designated)*		*8*[5]	*0*		
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*6*[5]			
Other financial assets measured at amortized cost	Loans and receivables, held to maturity	36,861	(18,525)	0	(35)[12]	18,302
to: Brokerage receivables	*Loans and receivables*		*(19,080)*[1]			
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*555*[6]	*0*		
Total financial assets measured at amortized cost		569,950	(31,321)	0	(275)	538,354
Financial assets at fair value held for trading	FVTPL (held for trading)	126,144	(10,854)	(15)		115,275
to: Loans and advances to customers	*FVTPL (held for trading)*		*(6)*[5]			
to: Financial assets at fair value not held for trading	*FVTPL (held for trading)*		*(11,316)*[7]			
from: Loans and advances to customers	*Loans and receivables*		*468*[4]	*(15)*[a]		
of which: assets pledged as collateral that may be sold or repledged by counterparties	*FVTPL (held for trading)*	*35,363*				*35,363*
Derivative financial instruments	FVTPL (derivatives)	118,227				118,227
Brokerage receivables	Loans and receivables		23,787			23,787
from: Loans and advances to banks	*Loans and receivables*		*17*[1]			
from: Loans and advances to customers	*Loans and receivables*		*4,691*[1]			
from: Other financial assets measured at amortized cost	*Loans and receivables*		*19,080*[1]			
Financial assets at fair value not held for trading	FVTPL (designated)	58,933[9]	20,297	(287)		78,943
to: Loans and advances to customers	*FVTPL (designated)*		*(8)*[5]			
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*11,316*[7]			
from: Receivables from securities financing transactions	*Loans and receivables*		*4,957*[2]	*(1)*		
from: Loans and advances to customers	*Loans and receivables*		*2,678*[3]	*(286)*[3]		
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*1,356*[8]			
Total financial assets measured at fair value through profit or loss		303,304	33,231	(303)		336,232
Financial assets measured at fair value through other comprehensive income	**Available-for-sale**	8,665	(1,911)			6,755[10]
to: Other financial assets measured at amortized cost	*Available-for-sale*		*(555)*[6]			
to: Financial assets at fair value not held for trading	*Available-for-sale*		*(1,356)*[8]			
Investments in associates		1,018				1,018
Property, equipment and software		8,829				8,829
Goodwill and intangible assets		6,398				6,398
Deferred tax assets		9,844		58[11]	64[11]	9,967
Other non-financial assets		7,633				7,633
Total assets		915,642		(245)	(211)	915,187

Note 1 Basis of accounting (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9 (continued)

	31.12.17		1.1.18			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39/ IAS 37 allowances/ provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Liabilities						
Amounts due to banks	Amortized cost	7,533				7,533
Payables from securities financing transactions	Amortized cost	17,044	(5,081)			11,963
to: Other financial liabilities designated at fair value	*Amortized cost*		*(5,081)*[13]			
Cash collateral payables on derivative instruments	Amortized cost	30,247				30,247
Customer deposits	Amortized cost	408,999	(5,268)			403,731
to: Brokerage payables designated at fair value	*Amortized cost*		*(5,268)*[14]			
Debt issued measured at amortized cost	Amortized cost	139,551				139,551
Other financial liabilities measured at amortized cost	Amortized cost	36,337	(29,646)	(4)		6,686
to: Brokerage payables designated at fair value	*Amortized cost*		*(29,646)*[14]			
Derecognition: deferred fees on other loan commitments	*Amortized cost*			*(4)*[4]		
Total financial liabilities measured at amortized cost		639,711	(39,996)	(4)		599,712
Financial liabilities at fair value held for trading	FVTPL (held for trading)	30,463				30,463
Derivative financial instruments	FVTPL (derivatives)	116,133		57		116,191
Recognition: Loan commitments	*Amortized cost – off-balance sheet*			*60*[4]		
Derecognition: Loan commitments	*FVTPL (derivatives)*			*(2)*[5]		
Brokerage payables designated at fair value	Amortized cost		34,915			34,915
from: Customer deposits	*Amortized cost*		*5,268*[14]			
from: Other financial liabilities measured at amortized cost	*Amortized cost*		*29,646*[14]			
Debt issued designated at fair value	FVTPL (designated)	49,502				49,502
Other financial liabilities designated at fair value	FVTPL (designated)	16,223	5,081	(5)		21,300
from: Payables from securities financing transactions	*Amortized cost*		*5,081*[13]	*(5)*[13]		
Total financial liabilities measured at fair value through profit or loss		212,322	39,996	53		252,370
Provisions		3,133			74[12]	3,207
Other non-financial liabilities		9,205				9,205
Total liabilities		864,371		49	74	864,494
Equity						
Share capital		385				385
Share premium		25,942				25,942
Treasury shares		(2,133)				(2,133)
Retained earnings		32,752	72[8,15]	(293)	(284)	32,247
Other comprehensive income recognized directly in equity, net of tax		(5,732)	(72)[8,15]			(5,804)
Equity attributable to shareholders		51,214	0	(293)[15]	(284)[15]	50,637
Equity attributable to non-controlling interests		57				57
Total equity		51,271	0	(293)	(284)	50,694
Total liabilities and equity		915,642	0	(245)	(211)	915,187

Note 1 Basis of accounting (continued)

Explanatory footnotes to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9"

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018
1	Certain customer and prime brokerage receivable balances, in the Investment Bank and Global Wealth Management, fail the solely payments of principal and interest (SPPI) criteria for measurement at amortized cost. This includes CHF 4,691 million previously included within *Loans and advances to customers*, CHF 17 million from *Loans and advances to banks* and CHF 19,080 million previously included within *Other financial assets measured at amortized cost*. The receivables are managed under a business model whose objective is to hold the assets to collect contractual cash flows. However, the reported receivables represent an aggregation of cash receivable and payable balances that form a single unit of account at the client level and generate a return that does not constitute consideration for the time value of money, credit risk and other basic lending risks. The SPPI criterion is therefore not met and under IFRS 9 the receivables are mandatorily measured at FVTPL and separately presented as *Brokerage receivables*. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
2	Based on the business model assessment under IFRS 9, certain reverse repurchase agreements with a carrying amount of CHF 4,957 million as of 31 December 2017 were determined to be managed on a fair value basis and were therefore reclassified from amortized cost to FVTPL measurement under IFRS 9. The carrying value has been reclassified from *Receivables from securities financing transactions* to *Financial assets at fair value not held for trading* as of 1 January 2018. A remeasurement loss of CHF 1 million has been recorded in *Retained earnings*. CHF 11,490 million of forward starting reverse repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
3	Certain positions previously included within *Loans and advances to customers* with a carrying amount of CHF 2,678 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* upon adoption of IFRS 9. This includes: – auction rate securities (CHF 2,114 million) that are held in Corporate Center and that contain an embedded leverage feature triggering the failure of the SPPI criteria. – certain loans in the Investment Bank (CHF 552 million) and in Corporate Center (CHF 12 million), which either fail the SPPI criteria or are held within a business model with an intent to sell or substantially hedge the primary risks. These assets are mandatorily measured at FVTPL under IFRS 9. A corresponding net remeasurement loss of CHF 286 million was recognized in *Retained earnings* related to these reclassifications. This remeasurement loss also included reversal of specific credit loss allowances (CHF 11 million).
4	Due to a change in the underlying business model, loans and advances to customers with a carrying amount of CHF 468 million as of 31 December 2017 have been reclassified to *Financial assets at fair value held for trading* as of 1 January 2018. A corresponding net remeasurement loss of CHF 15 million, which includes the reversal of specific IAS 39 credit loss allowances, was recognized in *Retained earnings* related to this reclassification. Irrevocable loan commitments that are contractually linked with these financial assets are now recognized as *Derivative financial instruments* (derivative liabilities) and are measured at FVTPL as of 1 January 2018. This reclassification resulted in a CHF 60 million loss with a corresponding entry to *Retained earnings*. Liabilities related to deferred fees of CHF 4 million related to these loan commitments recorded as *Other financial liabilities measured at amortized cost* at 31 December 2017 were derecognized with a corresponding entry to *Retained earnings*.
5	Financial assets with a carrying amount of CHF 14 million as of 31 December 2017 were reclassified to *Loans and advances to customers* from *Financial assets at fair value not held for trading* (CHF 8 million) and from *Financial assets at fair value held for trading* (CHF 6 million) given management's intent to hold these financial assets to collect contractual cash flows. Loan commitments related to these financial assets, which were recognized as derivative liabilities with a carrying value of CHF 2 million as of 31 December 2017, were accordingly derecognized on 1 January 2018 with a corresponding entry to *Retained earnings*.
6	Certain debt instruments with a carrying amount of CHF 555 million as of 31 December 2017 were formerly classified as available for sale and measured at FVOCI under IAS 39 but are measured at amortized cost under IFRS 9. Those positions, which are held to collect cash flows solely representing payment of principal and interest, are presented within *Other financial assets measured at amortized cost* as of 1 January 2018. The fair value of these assets was consistent with the amortized cost value as of 1 January 2018 and no remeasurement gain or loss has been recognized.
7	Upon adopting IFRS 9, UBS has elected to refine the assets classified within *Financial assets at fair value held for trading* to carve out those that are segregated from UBS's trading activities, where UBS's role is primarily to manage the assets on a fair value basis on behalf of others. Instead, such assets will be presented alongside others managed on a fair value basis within *Financial assets at fair value not held for trading*. As a consequence of this refinement, UBS has reclassified assets held to hedge unit linked investment contracts of CHF 11,316 million from *Financial assets at fair value held for trading* to *Financial assets at fair value not held for trading* as of 1 January 2018. No remeasurement gain or loss has been recognized.

Note 1 Basis of accounting (continued)

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018 (continued)
8	UBS holds certain global and local liquidity buffers that were determined to be managed on a fair value basis as management utilizes fair value information for reporting and decision making purposes. Therefore, assets previously classified as available for sale under IAS 39 with a carrying amount of CHF 620 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading*. An unrealized gain of CHF 5 million related to these positions was reclassified from *Other comprehensive income* to *Retained earnings*. Additionally, equity instruments and investment fund units previously classified as available for sale under IAS 39 with a carrying amount of CHF 736 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules. A related unrealized gain in OCI of CHF 199 million has been reclassified to *Retained earnings*. Additionally, a net tax expense of CHF 131 million was transferred from OCI to *Retained earnings* related to the positions above which were reclassified out of the IAS 39 available-for-sale category.
9	Assets previously designated at FVTPL with a carrying amount of CHF 58,933 million as of 31 December 2017 are no longer designated as such under IFRS 9, as it was determined that these assets were either held in a business model that is managed on a fair value basis, did not meet the SPPI criteria, or did meet the SPPI criteria and are held in a hold to collect business model. Of the total, assets with a carrying amount of CHF 58,924 million are now mandatorily measured at FVTPL and included within *Financial assets at fair value not held for trading*. The remaining assets with a carrying amount of CHF 8 million have been de-designated and were reclassified to *Loans and advances to customers* given a change in business model to hold to collect (refer to footnote 5).
10	Certain debt instruments with a carrying amount of CHF 6,755 million as of 31 December 2017, were formerly classified as available for sale under IAS 39 and are measured at FVOCI under IFRS 9. These instruments include U.S. government bonds and U.S. government sponsored mortgage-backed securities and other debt that are held in a business model whose objective is achieved by both collecting contractual cash flows and selling, and that meet the SPPI criteria. These positions are now presented within *Financial assets measured at fair value through other comprehensive income*.
11	Deferred tax assets of CHF 122 million have been recognized in connection with the adoption of IFRS 9. Of the total effect, CHF 64 million relates to the recognition of ECL and CHF 58 million relates to classification and measurement changes upon adoption of IFRS 9.
12	Upon adoption of the ECL requirements of IFRS 9, a transition impact of CHF 348 million was recognized, consisting of CHF 144 million of stage 1 allowances, CHF 188 million of stage 2 allowances and an incremental increase in stage 3 allowances of CHF 16 million. The effect was mainly recognized within *Loans and advances to customers* (CHF 235 million), with effects also recognized in *Other financial assets measured at amortized cost* (CHF 35 million), *Loans and advances to banks* (CHF 3 million), *Receivables from securities financing transactions* (CHF 2 million) and *Provisions* (CHF 74 million).
13	Certain repurchase agreements with a carrying amount of CHF 5,081 million as of 31 December 2017 have been designated at FVTPL as they are managed in conjunction with reverse repurchase agreements that are mandatorily measured at FVTPL under IFRS 9. These amounts are included within *Other financial liabilities designated at fair value* as of 1 January 2018. A remeasurement gain of CHF 5 million has been recognized in *Retained earnings* as of 1 January 2018 related to this reclassification. CHF 7,730 million of forward starting repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
14	To achieve measurement consistency with reclassified customer and prime brokerage receivables that are measured at FVTPL following adoption of IFRS 9, certain customer deposits with a carrying amount of CHF 5,268 million and prime brokerage payables with a carrying amount of CHF 29,646 million as of 31 December 2017 have been designated at FVTPL and are presented within *Brokerage payables designated at fair value* as of 1 January 2018. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
15	The adoption of IFRS 9 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of ECL credit loss methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. In addition, CHF 72 million has been reclassified from *Other comprehensive income* recognized directly in equity, net of tax, to *Retained earnings* (refer to footnote 8 above), with no overall impact on equity attributable to shareholders.

Note 1 Basis of accounting (continued)

Reconciliation of allowances and provisions on adoption of IFRS 9 as of 1 January 2018

The table below provides a reconciliation from the IAS 39 allowances / IAS 37 provisions to the IFRS 9 ECL allowances / provisions recognized as of 1 January 2018 upon adoption of IFRS 9.

Reconciliation of allowances and provisions on adoption of IFRS 9

	31.12.17	1.1.18		
CHF million	Loss allowances and provisions (IAS 39 / IAS 37)	Reversal of allowances (IAS 39)	Recognition of ECL (IFRS 9)[1]	Allowances for ECL / Provisions for ECL (IFRS 9)
On-balance sheet				
Cash and balances at central banks			0	0
Loans and advances to banks	(3)		(3)	(5)
Receivables from securities financing transactions			(2)	(2)
Cash collateral receivables on derivative instruments			0	
Loans and advances to customers	(658)	26[2]	(235)[3]	(867)
Other financial assets measured at amortized cost	(101)[4]		(35)	(136)
Financial assets measured at fair value through other comprehensive income				
Total on-balance sheet	(761)	26	(275)	(1,011)
Off-balance sheet financial instruments and other credit lines				
Guarantees	(29)		(8)	(37)
Loan commitments	(4)		(32)	(36)
Forward starting reverse repurchase and securities borrowing agreements				
Other credit lines			(34)	(34)
Total off-balance sheet financial instruments and other credit lines	(33)		(74)	(107)
Total	(794)	26	(348)	(1,117)
of which Stage 1			*(144)*	*(144)*
of which Stage 2			*(188)*	*(188)*
of which Stage 3			*(16)*[5]	*(785)*

1 Includes stage 1 and stage 2 expected credit losses and additional stage 3 expected credit losses. 2 The reversal of CHF 26 million of IAS 39 loss allowances relates to instruments reclassified from amortized cost to fair value through profit or loss on transition to IFRS 9. Refer also to footnotes 3 and 4 to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9." 3 Includes the reversal of collective allowances of CHF 13 million. 4 Includes CHF 82 million related to loans to financial advisors for which an allowance was reported as a direct reduction of the carrying amount as of 31 December 2017. 5 The incremental increase in stage 3 allowances of CHF 16 million arises from additional consideration of forward looking scenarios under IFRS 9.

Note 1 Basis of accounting (continued)

IFRS 9 transition impact on other comprehensive income and retained earnings as of 1 January 2018

The table below presents the transition effects recognized in OCI and retained earnings upon adoption of IFRS 9.

IFRS 9 impact on other comprehensive income and retained earnings

CHF million	
Other comprehensive income recognized directly in equity, net of tax	
Reclassification of financial assets (available for sale to fair value through profit or loss) – equity instruments	(199)
Reclassification of financial assets (available for sale to fair value through profit or loss) – debt instruments	(5)
Tax (expense) / benefit	131
Total change in other comprehensive income	(72)
Retained earnings	
Remeasurement of financial assets (reclassified from amortized cost to fair value through profit or loss)	(303)
Reclassification of financial assets (reclassified from available for sale to fair value through profit or loss)	204
Recognition of ECL for on-balance sheet financial assets	(275)
Remeasurement of financial liabilities (reclassified from amortized cost to designated at fair value through profit or loss)	5
Recognition of derivative loan commitments measured at fair value through profit or loss	(60)
Derecognition of liabilities for deferred fees on other loan commitments	4
Derecognition of derivative loan commitments measured at fair value through profit or loss	2
Recognition of ECL for off-balance sheet positions	(74)
Tax (expense) / benefit	(9)
Total change in retained earnings	(505)
Total change in equity due to the adoption of IFRS 9	(577)

Note 1 Basis of accounting (continued)

1.4.6 Information on IFRS 9 exposures and allowances / provisions as of 1 January 2018

Key balance sheet and off-balance sheet positions as of 1 January 2018

The opening balances for certain key balance sheet and off-balance sheet positions subject to ECL, broken down by segments and stages, are presented in Note 9b. UBS has established ECL disclosure segments or "ECL segments" to disaggregate portfolios based on shared risk characteristics and on the same or similar rating methods applied. These segments are presented in the table below.

Segment	Private clients with mortgages	Real estate financing	Large corporate clients	SME clients	Financial interme-diaries and hedge funds[1]	Sovereigns and public non-profit organiz-ations[1]	Lombard	Other[1]
Segment description	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Rental or income-producing real estate financing to corporate clients secured by real estate	Lending to large corporate and multinational clients	Lending to small- and medium-sized corporate clients	Financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Public and (sub-) sovereign partners, including cantons, cities and non-profit organizations	Loans secured by pledges of marketable securities, guarantees and other forms of collateral	Remaining smaller segments including commodity trade finance, credit cards and aircraft lending
Description of credit risk sensitivity	Sensitive to the interest rate environment, employment status and influence from regional effects (e.g., property values)	Sensitive to GDP development, the interest rate environment and regional effects (e.g., property values)	Sensitive to GDP development, seasonality and business cycles, collateral values (diverse collateral including real estate and other collateral types)	Sensitive to GDP development, the interest rate environment and to some extent, seasonality and business cycles, collateral values (diverse collateral including real estate and other collateral types)	Sensitive to GDP development, the interest rate environment, regulatory changes and political risk	Sensitive to (geo-) political events and GDP development (through tax revenues)	Sensitive to the market (e.g., changes in collateral, as well as in invested assets)	Sensitivity based on specific lending conditions
Personal & Corporate Banking	●	●	●	●	●	●	●	●
Global Wealth Management	●	●					●	●
Investment Bank			●		●	●		●
Corporate Center					●			●

1 Not subject to separate disclosure in Note 9.

Note 1 Basis of accounting (continued)

1.5 Other new accounting standards and changes in accounting policies effective first quarter 2018

IFRS 7, *Financial Instruments: Disclosures*

IFRS 7, *Financial Instruments: Disclosures* was updated in line with IFRS 9, *Financial Instruments*. UBS adopted the revised standard on 1 January 2018. Given the first quarter of 2018 includes the date of initial application of IFRS 9, and to meet the general disclosure requirements for interim periods to describe the nature and effects of changes to policies and methods made since the last annual reporting, UBS provides the IFRS 9 transition disclosures as set out by IFRS 7 in the first quarter of 2018. Those transition disclosures are presented in Note 1.4. A full set of disclosures as required by revised IFRS 7 will be provided in UBS's annual Financial Statements as of and for the year ended 31 December 2018.

In line with amendments to IFRS 7, from 1 January 2018, UBS separately presents hedging gains and losses recognized during the period in the statement of comprehensive income and the amounts reclassified to the income statement. More specifically, the effective portion of changes in fair value of hedging instruments designated in net investment hedges (before tax) recognized in other comprehensive income and the amounts reclassified to income statement, previously included within *Foreign currency translation movements, before tax* and *Foreign exchange amounts reclassified to the income statement from equity*, are now presented in *Effective portion of changes in fair value of hedging instruments designated in net investment hedges, before tax*, and *Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to income statement*, respectively. Furthermore, the line *Foreign exchange amounts reclassified to the income statement from equity* was renamed to *Foreign currency translation differences on foreign operations reclassified to income statement*, and the line *Income tax relating to foreign currency translation movements* was renamed to *Income tax relating to foreign currency translations, including the impact of net investment hedges.*

IFRS 15 *Revenue from Contracts with Customers*

Effective from 1 January 2018, UBS adopted IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue* and establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied.

IFRS 15 now specifies that variable consideration is only recognized when the related performance obligation has been satisfied and to the extent that it is highly probable that a significant reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

IFRS 15 also provides guidance on when revenues and expenses should be presented on a gross or net basis and establishes a cohesive set of disclosure requirements for information on the nature, amount, timing and uncertainty of revenue and cash flows from contracts with customers.

As permitted by the transitional provisions of IFRS 15, UBS elected not to restate comparative figures. Instead, the cumulative effect of initially applying the standard was recognized as an adjustment to the opening balance of retained earnings. A transition adjustment of CHF 27 million on a pre-tax basis and CHF 24 million net of tax was posted to retained earnings to reverse income recognized prior to 1 January 2018 under IAS 18 that must be deferred under IFRS 15 either due to the variable consideration constraint (asset management performance fees of CHF 16 million) or because UBS does not have an enforceable right to a specified amount of consideration (commission-sharing agreements for research services of CHF 11 million).

The adoption of IFRS 15 resulted in changes to UBS's accounting policies applicable from 1 January 2018. Accounting policies set out in Note 1.3.2 replace item 4 of Note 1a) in the UBS Group AG consolidated annual Financial Statements for the year ended 31 December 2017.

Following the adoption of IFRS 15, fee and commission income is presented in the income statement separately from fee and commission expense.

Where UBS is acting as principal as defined by IFRS 15, costs of fulfilling contracts are required by IFRS 15 to be presented separately in the income statement within fee and commission expense. Where UBS is acting as agent as defined by IFRS 15, costs of fulfilling contracts are required to be presented as a reduction in *Fee and commission income*. This resulted in a reclassification of certain brokerage fees paid in an agency capacity from *Fee and commission expense* to *Fee and commission income* from 1 January 2018**,** primarily relating to third-party execution costs for exchange traded derivative transactions and fees payable to third-party research providers on behalf of clients

Other presentational changes

In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, presented within *Fee and commission income* have been reclassified between reporting lines in Note 3 to better reflect the nature of the revenues, with comparative period information restated accordingly. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from *General and administrative expenses* to *Fee and commission expense* to improve the alignment of transaction-based costs with the associated revenue stream, primarily affecting clearing costs, client loyalty costs, fund and custody expenses. As the effect of this reclassification was not material, prior-period information was not restated.

Note 1 Basis of accounting (continued)

Further information on the nature, amount, timing and uncertainty of revenues and cash flows from contracts with customers is provided in the accounting policy in item 1.3.

→ **Refer to Note 3 for more information**

IAS 28, *Investments in Associates and Joint Ventures*

In October 2017, the IASB issued an amendment to IAS 28, *Investments in Associates and Joint Ventures* that clarified that IFRS 9 must be applied when accounting for long-term interests in an associate or joint venture that are not accounted for under the equity method. The amendment is mandatorily effective for accounting periods beginning on or after 1 January 2019. UBS early adopted this amendment from 1 January 2018 to align with the mandatory application date of IFRS 9. The adoption of this amendment did not have a material effect on the Group's financial statements.

Amendments to IFRS 2, *Share-based Payment*

In June 2016, the IASB issued amendments to IFRS 2, *Share-based Payment*, which are mandatorily effective as of 1 January 2018. The amendments clarify that the approach used to account for vesting and non-vesting conditions when measuring cash-settled share-based payments is consistent with that used for equity-settled share-based payments. The amendments also clarify the classification of share-based payments settled net of withholding tax as well as the accounting consequences resulting from a modification of share-based payments from cash-settled to equity-settled. The adoption of these amendments did not have a material effect on the Group's financial statements.

IFRIC 22, *Foreign Currency Transactions and Advance Consideration*

In December 2016, the IFRS Interpretations Committee of the IASB issued IFRIC Interpretation 22, *Foreign Currency Transactions and Advance Consideration* (IFRIC 22), which clarifies that in circumstances when an advance consideration is received or paid before the recognition of an associated asset, expense or income, the exchange rate to be used on initial recognition of the related asset, expense or income is the rate determined as of the date of transaction – i.e., the date of initial recognition of the non-monetary asset or non-monetary liability arising from the receipt or payment of advance consideration. UBS, as required, applied IFRIC 22 from 1 January 2018. The adoption of this IFRS Interpretation did not have a material effect on the Group's financial statements.

Amendments to IAS 1, *Presentation of Financial Statements*

In line with amendments to IAS 1, *Presentation of Financial Statements*, from 1 January 2018, UBS presents interest income and interest expense, calculated using the effective interest method, on financial instruments measured at amortized cost and financial assets measured at FVOCI separately from interest income and expense on financial instruments measured at FVTPL in the income statement.

Conceptual Framework

In March 2018, the IASB issued a revised version of its Conceptual Framework for Financial Reporting (the "Framework"). The Framework sets out the fundamental concepts of financial reporting that guide the IASB in developing IFRS Standards. The amended Framework seeks to improve the concepts for reporting assets, liabilities, income and expenses, explains how to decide when asset and liabilities should be measured using historical cost and when they should be measured at current value, and provides up-to-date tools that will help the IASB in setting IFRS Standards. It underpins existing IFRS Standards but does not override them. Preparers use the Framework as a point of reference to develop accounting policies in rare instances where a particular business transaction is not covered by existing IFRS Standards.

The IASB and the IFRS Interpretations Committee will begin to use the new Framework immediately in developing new, or amending existing, financial reporting standards and interpretations. For UBS, the Framework becomes effective in annual periods beginning on 1 January 2020. UBS is currently assessing the effect of the amended Framework on its financial accounting policies.

Change in presentation of forward points of certain long duration foreign exchange contracts transacted as economic hedges

In addition to changes resulting from new or amended accounting standards, effective from 1 January 2018, UBS refined the presentation of forward points on certain long-duration foreign exchange contracts transacted as economic hedges, transferring the forward points from *Other net income from fair value changes on financial instruments* (prior to 1 January 2018: *Net trading income*) to *Interest income from financial instruments measured at fair value through profit or loss* to align with the presentation of forward points on certain short-dated foreign exchange contracts. The amount of forward points on certain long-duration foreign exchange contracts recognized in *Interest income from financial instruments measured at fair value through profit or loss* in the first quarter of 2018 did not have a material effect on the Group's financial statements and prior periods have not been restated.

Note 2 Segment reporting

UBS's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which are supported by Corporate Center. The four business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center and its units, reflect the management structure of the Group. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Refer to "Note 1a Significant accounting policies" item 2 and "Note 2 Segment reporting" in the "Consolidated financial statements" section of the Annual Report 2017 for more information on the Group's reporting segments.

	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS
CHF million					Services	Group ALM	Non-core and Legacy Portfolio	
For the quarter ended 31 March 2018[1]								
Net interest income	954	488	(7)	511	(83)	(128)	6	1,743
Non-interest income	3,183	454	444	1,916	23	(95)	56	5,979
Allocations from CC – Group ALM	55	18	4	(104)	23	19	(15)	0
Income	4,192	960	441	2,323	(37)	(204)	49	7,723
Credit loss (expense) / recovery	3	(13)	0	(15)	0	0	0	(25)
Total operating income	4,195	947	441	2,308	(38)	(204)	49	7,698
Personnel expenses	1,861	178	167	897	888	9	14	4,014
General and administrative expenses	287	59	49	143	877	10	(1)	1,424
Services (to) / from CC and other BDs	905	288	118	674	(2,033)	(1)	48	0
of which: services from CC – Services	*878*	*311*	*129*	*651*	*(2,052)*	*42*	*41*	*0*
Depreciation and impairment of property, equipment and software	1	3	0	2	265	0	0	272
Amortization and impairment of intangible assets	12	0	0	2	0	0	0	16
Total operating expenses	3,067	528	335	1,719	(2)	18	61	5,725
Operating profit / (loss) before tax	**1,129**	**419**	**106**	**589**	**(35)**	**(222)**	**(12)**	**1,973**
Tax expense / (benefit)								457
Net profit / (loss)								**1,516**
As of 31 March 2018								
Total assets	**193,522**	**135,876**	**27,079**	**252,419**	**20,792**	**249,140**	**40,533**	**919,361**
For the quarter ended 31 March 2017[1]								
Net interest income	864	457	(7)	383	(74)	66	6	1,696
Non-interest income	3,013	435	452	1,806	26	87	16	5,836
Allocations from CC – Group ALM	104	59	5	(86)	30	(88)	(23)	0
Income	3,980	951	450	2,104	(18)	65	0	7,532
Credit loss (expense) / recovery	(1)	7	0	(6)	0	0	0	0
Total operating income	3,979	958	450	2,098	(18)	65	0	7,532
Personnel expenses	1,878	213	162	818	966	8	15	4,060
General and administrative expenses	275	59	57	130	965	4	17	1,506
Services (to) / from CC and other BDs	873	265	127	665	(1,981)	(10)	61	0
of which: services from CC – Services	*844*	*292*	*135*	*641*	*(1,993)*	*29*	*51*	*0*
Depreciation and impairment of property, equipment and software	1	3	0	3	249	0	0	255
Amortization and impairment of intangible assets	12	0	1	3	5	0	0	21
Total operating expenses	3,039	540	347	1,619	204	2	93	5,842
Operating profit / (loss) before tax	**940**	**418**	**103**	**480**	**(222)**	**63**	**(93)**	**1,690**
Tax expense / (benefit)								375
Net profit / (loss)								**1,315**
As of 31 December 2017								
Total assets	**190,074**	**135,556**	**14,269**	**262,931**	**20,875**	**245,737**	**46,200**	**915,642**

1 Prior period information may not be comparable as a result of the adoption of IFRS 9, Financial Instruments and IFRS 15, Revenue from Contracts with Customers, both effective 1 January 2018. Refer to Note 1 for more information on these changes.

Note 3 Net fee and commission income[1]

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Underwriting fees	224	197	278
of which: equity underwriting fees	*118*	*104*	*161*
of which: debt underwriting fees	*106*	*93*	*117*
M&A and corporate finance fees	194	162	177
Brokerage fees	968	911	1,022
Investment fund fees	1,207	1,080	1,061
Portfolio management and related services	1,837	1,982	1,793
Other	452	441	458
Total fee and commission income[2]	4,882	4,772	4,789
of which: recurring	*3,071*		
of which: transaction-based	*1,793*		
of which: performance-based	*17*		
Brokerage fees paid	85	155	166
Other	324	323	271
Total fee and commission expense	409	478	436
Net fee and commission income	4,473	4,294	4,353
of which: net brokerage fees	*884*	*756*	*857*

1 Upon adoption of IFRS 15, certain brokerage fees paid in an agency capacity have been reclassified from Fee and commission expense to Fee and commission income on a prospective basis from 1 January 2018, primarily relating to third-party execution costs for exchange traded derivative transactions and fees payable to third-party research providers on behalf of clients. In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, have been reclassified between reporting lines to better reflect the nature of the revenues with prior period information restated accordingly. This resulted in the following impacts: for the quarter ended 31 December 2017, CHF 77 million was reclassified from Underwriting fees to Brokerage fees and CHF 258 million was reclassified from Portfolio management and related services to Investment fund fees. For the quarter ended 31 March 2017, CHF 81 million was reclassified from total Underwriting fees to Brokerage fees and CHF 247 million was reclassified from Portfolio management and related services to Investment fund fees. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from General and administrative expenses to Fee and commission expense to improve the alignment of transaction-based costs with the associated revenue stream, primarily impacting clearing costs, client loyalty costs, fund and custody expenses. As the impact of this reclassification was not material, prior period information was not restated. 2 Reflects third-party fee and commission income for the first quarter of 2018 of CHF 2,891 million for Global Wealth Management, CHF 300 million for Personal & Corporate Banking, CHF 777 million for Asset Management, CHF 900 million for the Investment Bank and CHF 14 million for Corporate Center.

Note 4 Other income

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Associates, joint ventures and subsidiaries			
Net gains / (losses) from disposals of subsidiaries[1]	0	55	(4)
Share of net profits of associates and joint ventures	15	19	19
Total	15	74	15
Financial assets measured at fair value through other comprehensive income			
Net gains / (losses) from disposals	0	46	6
Impairments	0	(2)	(14)
Total	0	45	(8)
Net gains / (losses) from disposals of financial assets measured at amortized cost	0	(3)	17
Net income from properties (excluding net gains / (losses) from disposals)[2]	6	6	6
Other	19	135	12
Total other income	40	257	43

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to disposed foreign subsidiaries and branches. 2 Includes net rent received from third parties and net operating expenses.

Note 5 Personnel expenses

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Salaries and variable compensation	2,585	2,213	2,443
Financial advisor variable compensation[1]	974	1,031	987
Contractors	116	134	93
Social security	229	204	202
Pension and other post-employment benefit plans	(30)	171	199
Other personnel expenses	141	170	136
Total personnel expenses	4,014	3,923	4,060

1 Financial advisor variable compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated on the basis of financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements.

Changes to the Pension Fund of UBS in Switzerland

As a result of the effects of continuing low and in some cases negative interest rates, diminished investment return expectations and increasing life expectancy, the Pension Fund of UBS in Switzerland and UBS have agreed measures that will take effect from the start of 2019 to support the long-term financial stability of the Swiss pension fund. As a result, the conversion rate will be lowered, the regular retirement age and employee contributions will be increased, and savings contributions will start earlier. These measures will have no effect on current pensioners of UBS.

To mitigate the effects of the reduction of the conversion rate on future pensions, UBS will make a payment to employees' retirement assets in the Swiss pension fund of up to CHF 720 million in three installments in 2020, 2021 and 2022. In accordance with International Financial Reporting Standards (IFRS), these measures, including the portion of the payment to be made by UBS that is attributable to past service, have resulted in a reduction in the pension obligation recognized by UBS, resulting in a pre-tax gain of CHF 225 million recognized in the income statement in the first quarter of 2018, with no overall effect on total equity. The change has also resulted in a reduced pension service cost starting from January 2018. The gain was recognized as a reduction in personnel expense, with a corresponding effect in *Other comprehensive income* to reflect the effect of the IFRS asset ceiling. If the Swiss pension plan remains in an asset ceiling position, the annual payments adjusted for expected forfeitures are expected to reduce total equity by approximately CHF 200 million per year over the installment period, with no effect on the income statement.

Note 6 General and administrative expenses

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Occupancy	219	237	221
Rent and maintenance of IT and other equipment	150	149	144
Communication and market data services	152	155	155
Administration	135	254	99
of which: UK bank levy[1]	*0*	*88*	*(25)*
Marketing and public relations	80	137	92
Travel and entertainment	93	120	88
Professional fees	231	366	256
Outsourcing of IT and other services	340	429	383
Litigation, regulatory and similar matters[2]	(11)	181	33
Other	34	26	34
Total general and administrative expenses	1,424	2,054	1,506

1 The credit presented for the first quarter of 2017 related to 2016. The net expense presented for the fourth quarter of 2017 included a CHF 11 million credit related to 2016. 2 Reflects the net increase / (decrease) in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 15 for more information. Also includes recoveries from third parties (first quarter of 2018: CHF 17 million; fourth quarter of 2017: CHF 2 million; first quarter of 2017: CHF 1 million).

Note 7 Income taxes

The Group recognized an income tax expense of CHF 457 million for the first quarter of 2018 compared with an income tax expense of CHF 375 million for the first quarter of 2017.

Deferred tax expenses were CHF 257 million in the first quarter of 2018 compared with CHF 131 million in the first quarter of 2017 and mainly related to the amortization of deferred tax assets previously recognized in relation to tax losses carried forward and deductible temporary differences to reflect their offset against profits for the quarter.

The current tax expense was CHF 200 million compared with CHF 244 million in the same quarter a year earlier and related to taxable profits of UBS Switzerland AG and other legal entities in the UBS Group.

Note 8 Earnings per share (EPS) and shares outstanding

	As of or for the quarter ended		
	31.3.18	31.12.17	31.3.17
Basic earnings (CHF million)			
Net profit / (loss) attributable to shareholders	1,514	(2,336)	1,269
Diluted earnings (CHF million)			
Net profit / (loss) attributable to shareholders	1,514	(2,336)	1,269
Less: (profit) / loss on own equity derivative contracts	(1)	0	0
Net profit / (loss) attributable to shareholders for diluted EPS	1,513	(2,336)	1,269
Weighted average shares outstanding			
Weighted average shares outstanding for basic EPS	3,728,701,542	3,719,192,967	3,712,946,691
Effect of dilutive potential shares resulting from notional shares, in-the-money options and warrants outstanding	128,521,488	13[1]	123,710,692
Weighted average shares outstanding for diluted EPS	3,857,223,030	3,719,192,980	3,836,657,383
Earnings per share (CHF)			
Basic	0.41	(0.63)	0.34
Diluted	0.39	(0.63)	0.33
Shares outstanding			
Shares issued	3,854,297,125	3,853,096,603	3,851,255,128
Treasury shares	93,077,090	132,301,550	137,116,350
Shares outstanding	3,761,220,035	3,720,795,053	3,714,138,778

The table below outlines the potential shares that could dilute basic earnings per share in the future, but were not dilutive for the periods presented.

Number of shares	31.3.18	31.12.17	31.3.17
Potentially dilutive instruments			
Employee share-based compensation awards	7,283,110	155,972,370[1]	31,976,718
Other equity derivative contracts	7,757,622	9,191,987	9,117,655
Total	15,040,732	165,164,357	41,094,373

1 Due to the net loss in the fourth quarter of 2017, a weighted average of 127,252,442 potential shares from unvested notional share awards and options outstanding were not included in the calculation of diluted EPS as they were anti-dilutive for the quarter ended 31 December 2017. Such shares are only taken into account for the diluted EPS calculation when their conversion to ordinary shares would decrease earnings per share or increase loss per share, in accordance with IAS 33, Earnings per Share.

Note 9 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses amounted to CHF 25 million in the first quarter of 2018, reflecting net losses of CHF 15 million related to credit impaired (stage 3) positions and expected credit losses of CHF 10 million related to stages 1 and 2 positions.

Stage 3 net losses of CHF 15 million were recognized across a number of defaulted positions and included a recovery of CHF 7 million on a position that was previously fully written-off.

Stage 1 and 2 expected credit losses (ECL) have been recognized in the period across P&C, GWM and IB primarily related to new loans and facilities.

There have not been any material changes to models used to calculate ECL and to determine stage allocation.

As outlined in Note 1.3, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL as of 31 March 2018 have been determined based on the same scenario selection and scenario weights as of 1 January 2018, the date of transition to IFRS 9.

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (31.3.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

Further, assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of those economic scenarios to determine ECL at the reporting date have not changed from the date of transition to IFRS 9. The point-in-time probability of default values applied to the ECL calculation at the reporting date reflect, however, market data updates, such as house price and equity indices and foreign exchange rates. Details on assumptions applied around the most important forward-looking economic factors are discussed in Note 1.4.

b) ECL-relevant balance sheet and off-balance sheet positions including ECL allowances and provisions

The table on the next page provides information on financial instruments and certain non-financial instruments that are subject to ECL. For amortized cost instruments, the net carrying value represents the maximum exposure to credit risk, taking into account the allowance for credit losses. Financial assets measured at fair value through other comprehensive income (FVOCI) are also subject to ECL; however, unlike amortized cost instruments, the allowance does not reduce the carrying value of these financial assets. The carrying value of financial assets measured at FVOCI represents the maximum exposure to credit risk.

In addition to on-balance sheet financial assets, certain off-balance sheet and other credit lines are also subject to ECL. The maximum exposure to credit risk for off-balance sheet financial instruments is calculated based on notional amounts.

Note 9 Expected credit loss measurement (continued)

CHF million	31.3.18							
	Carrying amount				ECL allowance			
	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	92,800	92,800	0	0	0	0	0	0
Loans and advances to banks	13,338	13,300	38	0	(5)	(3)	0	(2)
Receivables from securities financing transactions	77,016	77,016	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,271	24,271	0	0	0	0	0	0
Loans and advances to customers	316,195	287,107	27,543	1,545	(838)	(54)	(162)	(622)
of which: Private clients with mortgage	*120,535*	*104,614*	*15,149*	*772*	*(127)*	*(11)*	*(71)*	*(44)*
of which: Real estate financing	*36,003*	*26,415*	*9,553*	*36*	*(62)*	*(3)*	*(51)*	*(8)*
of which: Large corporate clients	*11,610*	*10,828*	*684*	*97*	*(62)*	*(7)*	*(2)*	*(54)*
of which: SME clients	*10,072*	*7,893*	*1,629*	*550*	*(281)*	*(9)*	*(24)*	*(248)*
of which: Lombard	*114,436*	*114,423*	*0*	*13*	*(86)*	*(4)*	*0*	*(82)*
Other financial assets measured at amortized cost	19,129	18,371	271	488	(146)	(35)	(5)	(106)
of which: loans to financial advisors	*3,326*	*3,104*	*74*	*149*	*(115)*	*(28)*	*(2)*	*(85)*
Total financial assets measured at amortized cost[1]	**542,749**	**512,865**	**27,851**	**2,033**	**(992)**	**(94)**	**(168)**	**(730)**
Financial assets measured at fair value through other comprehensive income	**6,758**	**6,758**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**549,507**	**519,623**	**27,851**	**2,033**	**(992)**	**(94)**	**(168)**	**(730)**

	Total exposure				ECL provision			
	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,404	16,624	577	203	(40)	(7)	(2)	(31)
Irrevocable loan commitments	29,746	29,181	547	18	(32)	(24)	(7)	(1)
of which: Large corporate clients	*22,234*	*21,693*	*535*	*7*	*(26)*	*(20)*	*(5)*	*(1)*
Forward starting reverse repurchase and securities borrowing agreements	1,231	1,231	0	0	0	0	0	0
Committed unconditionally revocable credit lines	35,892	33,937	1,879	75	(34)	(17)	(17)	0
of which: Real estate financing	*2,942*	*2,134*	*808*	*0*	*(12)*	*(2)*	*(9)*	*0*
of which: SME clients	*4,617*	*4,065*	*496*	*56*	*(7)*	*(4)*	*(3)*	*0*
Irrevocable committed prolongation of existing loans	1,912	1,912	0	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	**86,184**	**82,885**	**3,003**	**296**	**(106)**	**(49)**	**(26)**	**(32)**
Total allowances and provisions					**(1,098)**	**(143)**	**(194)**	**(762)**

1 The carrying value of financial assets at amortized cost are net of the respective ECL allowances.

Note 9 Expected credit loss measurement (continued)

CHF million	1.1.18							
	Carrying amount				ECL allowance			
	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	87,775	87,775	0	0	0	0	0	0
Loans and advances to banks	13,719	13,701	18	0	(5)	(2)	0	(3)
Receivables from securities financing transactions	84,674	84,674	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	23,434	23,434	0	0	0	0	0	0
Loans and advances to customers	310,451	281,149	27,812	1,491	(867)	(61)	(163)	(644)
of which: Private clients with mortgage	*119,560*	*103,867*	*15,006*	*686*	*(124)*	*(12)*	*(69)*	*(44)*
of which: Real estate financing	*35,896*	*26,210*	*9,657*	*29*	*(62)*	*(3)*	*(53)*	*(6)*
of which: Large corporate clients	*11,004*	*10,358*	*557*	*88*	*(69)*	*(6)*	*0*	*(63)*
of which: SME clients	*10,322*	*8,218*	*1,518*	*585*	*(287)*	*(8)*	*(23)*	*(256)*
of which: Lombard	*111,748*	*111,731*	*0*	*17*	*(84)*	*(5)*	*0*	*(79)*
Other financial assets measured at amortized cost	18,302	17,805	32	465	(136)	(29)	(1)	(106)
of which: loans to financial advisors	*3,086*	*2,874*	*32*	*179*	*(115)*	*(28)*	*(1)*	*(87)*
Total financial assets measured at amortized cost[1]	**538,354**	**508,538**	**27,862**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
Financial assets measured at fair value through other comprehensive income	**6,755**	**6,755**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**545,110**	**515,293**	**27,862**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**

	Total exposure				ECL provision			
	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,152	16,331	633	189	(37)	(6)	(2)	(29)
Irrevocable loan commitments	30,852	30,153	662	37	(36)	(24)	(8)	(4)
of which: Large corporate clients	*21,999*	*21,344*	*629*	*26*	*(27)*	*(19)*	*(4)*	*(4)*
Forward starting reverse repurchase and securities borrowing agreements	1,216	1,216	0	0	0	0	0	0
Committed unconditionally revocable credit lines	36,690	34,471	2,157	62	(34)	(19)	(15)	0
of which: Real estate financing	*3,103*	*2,097*	*1,007*	*0*	*(9)*	*(2)*	*(7)*	*0*
of which: SME clients	*4,770*	*4,311*	*406*	*53*	*(7)*	*(5)*	*(2)*	*0*
Irrevocable committed prolongation of existing loans	1,635	1,634	0	1	0	0	0	0
Total off-balance sheet financial instruments and other credit lines	**87,545**	**83,805**	**3,452**	**288**	**(107)**	**(49)**	**(24)**	**(33)**
Total allowances and provisions					**(1,117)**	**(144)**	**(188)**	**(785)**

1 The carrying value of financial assets at amortized cost are net of the respective ECL allowances.

Note 10 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and should be read in conjunction with "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017, which provides more information on valuation principles, valuation governance, fair value hierarchy classification, valuation adjustments, valuation techniques and inputs, sensitivity of fair value measurements and methods applied to calculate fair values for financial instruments not measured at fair value.

Adoption of IFRS 9

Upon adoption of IFRS 9 on 1 January 2018, certain classification and measurement changes were made, primarily resulting in a reclassification of certain financial assets and liabilities from amortized cost to fair value through profit or loss. This included:

- Brokerage receivables and payables held in the Investment Bank and Global Wealth Management;
- Auction rate securities held in Corporate Center; and
- Certain loans held in the Investment Bank.

Certain financial assets and liabilities which have been newly classified at fair value through profit or loss are designated as Level 3 in the fair value hierarchy. Refer to the tables and text within this Note for more information.

An immaterial amount of financial assets were reclassified from *Financial assets at fair value held for trading* and *Financial assets at fair value not held for trading* to *Loans and advances to customers* upon adoption of IFRS 9. An immaterial amount of associated loan commitments, which were recognized as derivative liabilities as of 31 December 2017 were also derecognized. No material fair value gains and losses would have been recognized in the income statement in the first quarter of 2018 had those instruments not been reclassified. Similarly, no material fair value gains or losses would have been recognized in *Other comprehensive income* related to debt instruments that were reclassified from *Financial assets available for sale* to *Other financial assets measured at amortized cost* upon adoption of IFRS 9.

→ **Refer to Note 1.4 for more information on the adoption of IFRS 9**

Note 10 Fair value measurement (continued)

a) Fair value hierarchy

The fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value is summarized in the table below.

Determination of fair values from quoted market prices or valuation techniques[1]

	31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis								
Financial assets at fair value held for trading	89,273	14,344	1,937	105,554	108,962	15,211	1,972	126,144
of which:								
Government bills / bonds	*13,769*	*1,115*	*0*	*14,885*	*11,935*	*918*	*0*	*12,854*
Corporate and municipal bonds	*342*	*8,157*	*233*	*8,731*	*37*	*7,974*	*552*	*8,563*
Loans	*0*	*3,005*	*606*	*3,611*	*0*	*3,346*	*501*	*3,847*
Investment fund units	*6,951*	*1,560*	*704*	*9,215*	*7,223*	*1,839*	*571*	*9,632*
Asset-backed securities	*0*	*169*	*157*	*326*	*0*	*194*	*174*	*368*
Equity instruments	*68,211*	*338*	*237*	*68,787*	*79,274*	*186*	*105*	*79,565*
Financial assets for unit-linked investment contracts[2]					*10,492*	*755*	*69*	*11,316*
Derivative financial instruments	853	111,135	1,344	113,333	458	116,221	1,549	118,227
of which:								
Interest rate contracts	*8*	*41,153*	*35*	*41,196*	*1*	*43,913*	*135*	*44,049*
Credit derivative contracts	*0*	*1,894*	*458*	*2,352*	*0*	*2,266*	*550*	*2,816*
Foreign exchange contracts	*385*	*42,025*	*239*	*42,649*	*207*	*46,748*	*189*	*47,143*
Equity / index contracts	*21*	*24,374*	*608*	*25,002*	*16*	*21,541*	*675*	*22,232*
Commodity contracts	*0*	*1,379*	*0*	*1,379*	*0*	*1,727*	*0*	*1,727*
Financial assets mandatorily measured at fair value on a recurring basis								
Brokerage receivables[3]	0	20,250	0	20,250				
Financial assets at fair value not held for trading	44,989	47,876	4,667	97,532	23,032	34,481	1,419	58,933
of which:								
Government bills / bonds	*24,255*	*3,646*	*0*	*27,901*	*22,062*	*3,900*	*0*	*25,961*
Corporate and municipal bonds	*760*	*23,265*	*0*	*24,025*	*765*	*20,702*	*0*	*21,467*
Financial assets for unit-linked investment contracts[2]	*19,655*	*4,528*	*0*	*24,183*				
Loans (including structured loans)	*0*	*8,353*	*1,924*	*10,277*	*0*	*9,385*	*758*	*10,143*
Structured securities financing transactions[4]	*0*	*7,621*	*140*	*7,760*	*0*	*118*	*173*	*291*
Auction-rate securities[3]	*0*	*0*	*1,713*	*1,713*				
Investment fund units	*167*	*415*	*107*	*689*	*205*	*377*	*0*	*582*
Equity instruments[5]	*151*	*47*	*369*	*567*				
Other	*0*	*1*	*413*	*415*	*0*	*0*	*489*	*489*
Financial assets measured at fair value through other comprehensive income on a recurring basis								
Financial assets measured at fair value through other comprehensive income	2,560	4,197	0	6,758	3,000	5,157	507	8,665
of which:								
Government bills / bonds	*2,515*	*118*	*0*	*2,634*	*2,733*	*133*	*0*	*2,866*
Corporate and municipal bonds	*45*	*428*	*0*	*473*	*121*	*1,060*	*9*	*1,189*
Asset-backed securities	*0*	*3,651*	*0*	*3,651*	*0*	*3,880*	*0*	*3,880*
Other[5]	*0*	*0*	*0*	*0*	*146*	*85*	*499*	*730*
Non-financial assets measured at fair value on a recurring basis								
Other non-financial assets								
Precious metals and other physical commodities	4,032	0	0	4,032	4,563	0	0	4,563
Non-financial assets measured at fair value on a non-recurring basis								
Other non-financial assets[6]	0	58	9	67	0	54	42	95
Total assets measured at fair value	141,707	197,861	7,957	347,525	140,015	171,125	5,489	316,629

Note 10 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis								
Financial liabilities at fair value held for trading	29,657	4,999	91	34,747	26,037	4,309	117	30,463
of which:								
Government bills / bonds	*7,574*	*398*	*0*	*7,972*	*5,153*	*256*	*0*	*5,409*
Corporate and municipal bonds	*11*	*4,133*	*31*	*4,176*	*50*	*3,453*	*35*	*3,538*
Investment fund units	*291*	*67*	*4*	*362*	*541*	*263*	*16*	*820*
Equity instruments	*21,781*	*392*	*56*	*22,229*	*20,293*	*336*	*66*	*20,695*
Derivative financial instruments	837	108,437	2,671	111,945	398	112,928	2,807	116,133
of which:								
Interest rate contracts	*12*	*36,125*	*212*	*36,349*	*5*	*38,196*	*186*	*38,387*
Credit derivative contracts	*0*	*2,777*	*629*	*3,407*	*0*	*3,196*	*601*	*3,797*
Foreign exchange contracts	*343*	*41,891*	*118*	*42,353*	*213*	*45,150*	*122*	*45,485*
Equity / index contracts	*6*	*26,131*	*1,708*	*27,845*	*42*	*24,803*	*1,896*	*26,741*
Commodity contracts	*0*	*1,227*	*1*	*1,227*	*0*	*1,561*	*1*	*1,562*
Financial liabilities designated at fair value on a recurring basis								
Brokerage payables designated at fair value[3]	0	34,793	0	34,793				
Debt issued designated at fair value	0	40,213	11,846	52,059	0	38,617	10,885	49,502
Other financial liabilities designated at fair value	2	33,061	1,375	34,438	0	14,282	1,941	16,223
of which:								
Amounts due under unit-linked investment contracts	*0*	*24,348*	*0*	*24,348*	*0*	*11,523*	*0*	*11,523*
Structured securities financing transactions[4]	*0*	*5,812*	*1*	*5,812*	*0*	*372*	*4*	*376*
Over-the-counter debt instruments	*2*	*2,898*	*1,371*	*4,270*	*0*	*2,385*	*1,930*	*4,315*
Non-financial liabilities measured at fair value on a non-recurring basis								
Other non-financial liabilities	0	0	0	0	0	1	0	1
Total liabilities measured at fair value	30,495	221,504	15,984	267,983	26,435	170,138	15,750	212,323

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The fair value of these derivatives was not material for the periods presented. 2 Financial assets for unit-linked investment contracts were reclassified from Financial assets at fair value held for trading to Financial assets at fair value not held for trading as of 1 January 2018. Refer to Note 1.4 for more information. 3 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information. 4 The increases in Structured securities financing transactions primarily relate to the reclassification of certain balances from amortized cost to fair value through profit or loss upon adoption of IFRS 9. Refer to Note 1.4 for more information. 5 Upon adoption of IFRS 9, equity instruments that were formerly classified as available for sale under IAS 39 have been reclassified to Financial assets at fair value not held for trading. Refer to Note 1.4 for more information. 6 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
- Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Note 10 Fair value measurement (continued)

Product description, valuation and classification in the fair value hierarchy for products newly classified at fair value upon adoption of IFRS 9

Product description, valuation and fair value hierarchy information is provided below for significant products classified at fair value which are not described in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Auction rate securities

There are two types of auction rate securities (ARS): auction preferred securities (APS) and auction rates certificates (ARC). ARC are issued by municipalities and are used by investors as tax-exempt alternatives to money market instruments. Interest rates for these instruments are reset through a periodic Dutch auction. APS are similar to ARC with the primary difference being that they are issued from closed-end funds. ARS are valued directly using market prices that reflect recent transactions after applying an adjustment for trade size or quoted dealer prices where available. Suitably deep and liquid pricing information is generally not available for ARS securities. As a result, these securities are classified as Level 3.

Brokerage receivables and payables

Callable, on-demand balances, including long cash credits, short cash debits, margin debit balances and short sale proceeds. The business model for these accounts is similar to any current or on demand account, with account holders using the account to house subscriptions, redemptions and billed amounts. Fair value is determined based on value of the underlying balances. Due to the on-demand nature of its underlying, these receivables and payables are designated as Level 2.

b) Valuation adjustments

Day-1 reserves

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss is generally released into *Other net income from fair value changes on financial instruments* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

Deferred day-1 profit or loss

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Balance at the beginning of the period	329	351	371
Profit / (loss) deferred on new transactions	187	50	51
(Profit) / loss recognized in the income statement	(53)	(76)	(53)
Foreign currency translation	(6)	4	(3)
Balance at the end of the period	457	329	365

c) Transfers between Level 1 and Level 2

The amounts disclosed reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets and liabilities transferred from Level 2 to Level 1 during the first three months of 2018 were not material. Assets totaling approximately CHF 0.5 billion, which were mainly comprised of financial assets at fair value held for trading, primarily equity instruments, were transferred from Level 1 to Level 2 during the first three months of 2018, generally due to diminished levels of trading activity observed within the market. Transfers of financial liabilities from Level 1 to Level 2 recorded during the first three months of 2018 were not material.

Note 10 Fair value measurement (continued)

d) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Further, the ranges and weighted averages of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

The significant unobservable inputs disclosed in the table below are generally consistent with those included in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017. A description of the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown, is also provided in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				31.3.18			31.12.17			
CHF billion	31.3.18	31.12.17	31.3.18	31.12.17	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading, Financial assets at fair value not held for trading[3]													
Corporate and municipal bonds	0.2	0.6	0.0	0.0	Relative value to market comparable	Bond price equivalent	0	132	91	0	133	92	points
Traded loans, loans mandatorily at fair value, loan commitments and guarantees	2.9	1.7	0.0	0.0	Relative value to market comparable	Loan price equivalent	20	101	98	50	102	98	points
					Discounted expected cash flows	Credit spread	118	153		23	124		basis points
					Market comparable and securitization model	Discount margin	0	14	2	0	14	2	%
Auction-rate securities[4]	1.7		0.0		Relative value to market comparable	Price	77	97					points
Investment fund units[5]	0.8	0.7	0.0	0.0	Relative value to market comparable	Net asset value							
Equity instruments[5]	0.6	0.5	0.1	0.1	Relative value to market comparable	Price							
Debt issued designated at fair value[6]			11.8	10.9									
Other financial liabilities designated at fair value[6]			1.4	1.9									
Derivative financial instruments													
Interest rate contracts	0.0	0.1	0.2	0.2	Option model	Volatility of interest rates[7]	53	76		28	70		basis points
Credit derivative contracts	0.5	0.5	0.6	0.6	Discounted expected cash flows	Credit spreads	5	303		6	550		basis points
						Bond price equivalent	1	103		2	102		points
Equity / index contracts	0.6	0.7	1.7	1.9	Option model	Equity dividend yields	0	13		0	13		%
						Volatility of equity stocks, equity and other indices	0	85		0	172		%
						Equity-to-FX correlation	(45)	71		(39)	70		%
						Equity-to-equity correlation	(50)	97		(50)	97		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 Comparative period information includes equity instruments that were formerly classified as available for sale under IAS 39 and have been reclassified to Financial assets at fair value not held for trading upon adoption of IFRS 9. Refer to Note 1.4 for more information. 4 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information. 5 The range of inputs is not disclosed due to the dispersion of values given the diverse nature of the investments. 6 Valuation techniques, significant unobservable inputs and the respective input ranges for Debt issued designated at fair value and Other financial liabilities designated at fair value, which is primarily comprised of over-the-counter debt instruments, are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table. 7 Effective 31 March 2018, the range of inputs reported for this significant unobservable input is based on normal volatility and the unit has been updated to basis points. Log-normal volatility with the unit as points was reported previously. Prior-period information has been restated to reflect this change in presentation.

Note 10 Fair value measurement (continued)

e) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity of fair value measurements for debt issued designated at fair value and over-the-counter debt instruments designated at fair value is reported with the equivalent derivative or structured financing instrument within the table below.

The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and does not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Further, direct interrelationships between the Level 3 parameters are not a significant element of the valuation uncertainty.

Sensitivity of fair value measurements to changes in unobservable input assumptions

	31.3.18		31.12.17	
CHF million	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	83	(18)	79	(11)
Structured securities financing transactions	65	(65)	34	(34)
Auction-rate securities[1]	87	(87)		
Asset-backed securities	31	(26)	19	(15)
Equity instruments	134	(106)	79	(53)
Interest rate derivative contracts, net	12	(28)	13	(26)
Credit derivative contracts, net	33	(36)	64	(99)
Foreign exchange derivative contracts, net	8	(5)	12	(6)
Equity / index derivative contracts, net	189	(205)	190	(193)
Other	14	(14)	13	(13)
Total	656	(591)	502	(450)

1 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information.

f) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Upon adoption of IFRS 9 on 1 January 2018, certain financial assets and liabilities were designated as Level 3 in the fair value hierarchy and are presented in the table on the following pages, including the associated effect upon adoption of IFRS 9 on 1 January 2018. This includes auction rate securities held in Corporate Center and certain loans held in the Investment Bank.

In addition to various financial assets and liabilities being newly classified at fair value through profit or loss, certain equity investments and investment fund units measured at fair value through other comprehensive income were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules, which resulted in an opening balance reclassification between reporting lines in the table on the following pages.

Note 10 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2016	Total gains / losses included in comprehensive income: Net gains / losses included in income[1]	Total gains / losses included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 31 March 2017
Financial assets at fair value held for trading	**1.7**	**0.1**	***0.0***	**0.3**	**(1.1)**	**0.6**	**0.0**	**0.1**	**(0.2)**	**0.0**	**1.5**
of which:											
Corporate and municipal bonds	*0.6*	*0.1*	*0.1*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.7*
Loans	*0.7*	*0.0*	*0.0*	*0.1*	*(0.9)*	*0.6*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.4*
Investment fund units	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other	*0.4*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.3*
Financial assets at fair value not held for trading	**2.1**	**0.1**	***0.0***	**0.0**	**0.0**	**0.5**	**(1.0)**	**0.0**	**(0.1)**	**0.0**	**1.6**
of which:											
Loans (including structured loans)	*1.2*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*(0.7)*	*0.0*	*(0.1)*	*0.0*	*0.6*
Auction-rate securities[3]											
Equity instruments											
Other	*0.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*	*(0.3)*	*0.0*	*0.0*	*0.0*	*1.0*
Financial assets measured at fair value through other comprehensive income	**0.5**	**0.0**	***0.0***	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**
Derivative financial instruments – assets	**2.5**	**(0.3)**	***(0.1)***	**0.0**	**0.0**	**1.1**	**(0.9)**	**0.2**	**(0.3)**	**0.0**	**2.3**
of which:											
Credit derivative contracts	*1.3*	*(0.1)*	*0.1*	*0.0*	*0.0*	*0.9*	*(0.7)*	*0.1*	*(0.2)*	*0.0*	*1.2*
Equity / index contracts	*0.7*	*0.0*	*0.0*	*0.0*	*0.0*	*0.2*	*(0.1)*	*0.0*	*(0.1)*	*0.0*	*0.7*
Other	*0.5*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.4*
Derivative financial instruments – liabilities	**4.0**	**0.0**	***0.1***	**0.0**	**0.0**	**0.5**	**(0.3)**	**0.0**	**(0.7)**	**0.0**	**3.6**
of which:											
Credit derivative contracts	*1.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*	*0.0*	*0.0*	*(0.3)*	*0.0*	*1.5*
Equity / index contracts	*1.9*	*0.1*	*0.1*	*0.0*	*0.0*	*0.2*	*(0.3)*	*0.0*	*(0.4)*	*0.0*	*1.6*
Other	*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
Debt issued designated at fair value	**9.7**	**0.7**	***0.6***	**0.0**	**0.0**	**1.4**	**(1.1)**	**0.6**	**(1.1)**	**(0.1)**	**10.2**
Other financial liabilities designated at fair value	**1.3**	**0.3**	**0.2**	**0.0**	**0.0**	**1.1**	**(0.7)**	**0.2**	**0.0**	**0.0**	**2.1**

1 Net gains / losses included in comprehensive income comprise of Net interest income, Other net income from fair value changes on financial instruments and Other income. 2 Total Level 3 assets as of 31 March 2018 were CHF 8.0 billion (31 December 2017: CHF 5.5 billion). Total Level 3 liabilities as of 31 March 2018 were CHF 16.0 billion (31 December 2017: CHF 15.7 billion). 3 Comparative period information is not disclosed for items that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information.

Note 10 Fair value measurement (continued)

Balance as of 31 December 2017	Reclassifications and remeasurements upon adoption of IFRS 9	Balance as of 1 January 2018	Total gains / losses included in comprehensive income: Net gains / losses included in income[1]	Total gains / losses included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 31 March 2018[2]
2.0	0.4	2.4	(0.2)	*(0.1)*	0.4	(1.4)	0.4	0.0	0.3	0.0	0.1	1.9
0.6		*0.6*	*0.0*	*0.0*	*0.1*	*(0.5)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.2*
0.5	*0.4*	*0.9*	*(0.1)*	*0.0*	*0.1*	*(0.8)*	*0.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
0.6		*0.6*	*(0.2)*	*(0.2)*	*0.1*	*0.0*	*0.0*	*0.0*	*0.2*	*0.0*	*0.0*	*0.7*
0.3		*0.3*	*0.1*	*0.1*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
1.4	2.9	4.3	(0.3)	*(0.3)*	0.8	(0.4)	0.0	0.0	0.1	0.0	0.2	4.7
0.8	*0.6*	*1.3*	*(0.3)*	*(0.2)*	*0.8*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.1*	*1.9*
	1.8	*1.8*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*1.7*
	0.4	*0.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
0.7	*0.1*	*0.8*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.7*
0.5	(0.5)											
1.5		1.5	(0.1)	*(0.1)*	0.0	0.0	0.2	(0.4)	0.0	0.0	0.1	1.3
0.5		*0.5*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.5*
0.7		*0.7*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.2*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.6*
0.3		*0.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.3*
2.8	0.0	2.8	(0.2)	*(0.2)*	0.0	0.0	0.4	(0.6)	0.2	(0.1)	0.1	2.7
0.6		*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
1.9		*1.9*	*(0.3)*	*(0.3)*	*0.0*	*0.0*	*0.4*	*(0.4)*	*0.1*	*(0.1)*	*0.1*	*1.7*
0.3	*0.0*	*0.3*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.1*	*0.0*	*0.0*	*0.3*
10.9		10.9	(0.3)	*(0.3)*		0.0	2.5	(1.5)	0.4	(0.6)	0.4	11.8
1.9		1.9	(0.3)	(0.3)	0.0	0.0	0.2	(0.6)	0.0	0.0	0.1	1.4

Note 10 Fair value measurement (continued)

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into Level 3 totaled CHF 0.4 billion and were primarily comprised of investment fund units and corporate and municipal bonds, mainly due to decreased observability of the respective net asset value and bond price equivalent inputs. Assets transferred out of Level 3 during the first three months of 2018 were not significant.

Liabilities transferred into and out of Level 3 totaled CHF 0.6 billion and CHF 0.7 billion, respectively. Transfers into Level 3 were primarily comprised of equity-linked issued debt instruments and interest rate derivatives contracts, due to decreased observability of the respective equity volatility and rates volatility inputs. Transfers out of Level 3 were primarily comprised of equity-linked and credit-linked issued debt instruments resulting from changes in the availability of the observable equity volatility and credit spread inputs used to determine the fair value of the options embedded in these structures.

g) Financial instruments not measured at fair value

The table below reflects the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	31.3.18		31.12.17	
CHF billion	Carrying value	Fair value	Carrying value	Fair value
Assets				
Cash and balances at central banks	92.8	92.8	87.8	87.8
Loans and advances to banks	13.3	13.3	13.7	13.7
Receivables from securities financing transactions	77.0	77.0	89.6	89.6
Cash collateral receivables on derivative instruments	24.3	24.3	23.4	23.4
Loans and advances to customers	316.2	317.0	318.5	319.9
Other financial assets measured at amortized cost	19.1	18.9	36.9	36.7
Liabilities				
Amounts due to banks	9.0	9.0	7.5	7.5
Payables from securities financing transactions	9.2	9.2	17.0	17.0
Cash collateral payables on derivative instruments	29.4	29.4	30.2	30.2
Customer deposits	398.6	398.6	409.0	409.0
Debt issued measured at amortized cost	137.9	140.9	139.6	143.5
Other financial liabilities measured at amortized cost	5.9	5.9	36.3	36.3

The fair values included in the table above were calculated for disclosure purposes only. The fair value valuation techniques and assumptions relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another.

Note 11 Derivative instruments

a) Derivative instruments

As of 31.3.18, CHF billion	Derivative financial assets	Notional values related to derivative financial assets[3]	Derivative financial liabilities	Notional values related to derivative financial liabilities[3]	Other notional values[4]
Derivative financial instruments[1,2]					
Interest rate contracts	41.2	1,231	36.3	1,103	11,173
Credit derivative contracts	2.4	88	3.4	93	0
Foreign exchange contracts	42.6	2,547	42.4	2,445	0
Equity / index contracts	25.0	412	27.8	474	91
Commodity contracts	1.4	39	1.2	39	9
Unsettled purchases of non-derivative financial instruments[5]	0.4	36	0.3	15	
Unsettled sales of non-derivative financial instruments[5]	0.3	28	0.5	28	
Total derivative financial instruments, based on IFRS netting[6]	113.3	4,382	111.9	4,197	11,273
Further netting potential not recognized on the balance sheet[7]	(99.3)		(96.8)		
of which: netting of recognized financial liabilities / assets	*(80.7)*		*(80.7)*		
of which: netting with collateral received / pledged	*(18.6)*		*(16.1)*		
Total derivative financial instruments, after consideration of further netting potential	14.1		15.2		
As of 31.12.17, CHF billion					
Derivative financial instruments[1]					
Interest rate contracts	44.0	1,142	38.4	1,044	10,462
Credit derivative contracts	2.8	92	3.8	98	1
Foreign exchange contracts	47.1	2,389	45.5	2,193	0
Equity / index contracts	22.2	380	26.7	487	83
Commodity contracts	1.7	33	1.6	37	8
Unsettled purchases of non-derivative financial instruments[5]	0.1	12	0.1	11	
Unsettled sales of non-derivative financial instruments[5]	0.1	15	0.1	9	
Total derivative financial instruments, based on IFRS netting[6]	118.2	4,063	116.1	3,878	10,555
Further netting potential not recognized on the balance sheet[7]	(104.2)		(98.5)		
of which: netting of recognized financial liabilities / assets	*(83.5)*		*(83.5)*		
of which: netting with collateral received / pledged	*(20.7)*		*(15.0)*		
Total derivative financial instruments, after consideration of further netting potential	14.0		17.7		

1 Derivative financial liabilities as of 31 March 2018 include CHF 0.1 billion related to derivative loan commitments (31 December 2017: CHF 0.0 billion). No notional amounts related to these commitments are included in this table but are disclosed within Note 16 under Loan commitments with a committed amount of CHF 3.9 billion as of 31 March 2018 (31 December 2017: CHF 5.3 billion). 2 Upon adoption of IFRS 9 on 1 January 2018, certain forward starting transactions have been classified as measured at fair value through profit or loss and are recognized within derivative instruments. Derivative financial assets and Derivative financial liabilities each include CHF 0.0 billion as of 31 March 2018 related to forward starting transactions. No notional amounts related to these assets and liabilities are included in this table but are disclosed within Note 16 under Forward starting transactions. 3 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional values of the netted derivative financial instruments are still presented on a gross basis. 4 Other notional values relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for all periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously. 7 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

b) Cash collateral on derivative instruments

CHF billion	Receivables 31.3.18	Payables 31.3.18	Receivables 31.12.17	Payables 31.12.17
Cash collateral on derivative instruments, based on IFRS netting[1]	24.3	29.4	23.4	30.2
Further netting potential not recognized on the balance sheet[2]	(13.5)	(14.4)	(12.5)	(17.4)
of which: netting of recognized financial liabilities / assets	*(12.9)*	*(13.3)*	*(11.7)*	*(16.3)*
of which: netting with collateral received / pledged	*(0.6)*	*(1.2)*	*(0.7)*	*(1.2)*
Cash collateral on derivative instruments, after consideration of further netting potential	10.7	15.0	11.0	12.8

1 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS or its counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 2 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of our Annual Report 2017 for more information.

Note 12 Other assets and liabilities

a) Other financial assets measured at amortized cost

CHF million	31.3.18	31.12.17
Prime brokerage receivables[1]		19,080
Debt securities	10,610	9,166
of which: government bills / bonds	*7,775*	*6,465*
Loans to financial advisors[2]	3,326	3,118
Fee and commission related receivables	1,679	1,780
Finance lease receivables	1,070	1,059
Settlement and clearing accounts	557	716
Accrued interest income	609	577
Other	1,279	1,365
Total other financial assets measured at amortized cost	19,129	36,861

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 1.4 for more information. 2 Related to financial advisors in the US and Canada.

b) Other non-financial assets

CHF million	31.3.18	31.12.17
Precious metals and other physical commodities	4,032	4,563
Bail deposit[1]	1,336	1,337
Prepaid expenses	1,065	1,013
VAT and other tax receivables	365	359
Properties and other non-current assets held for sale	67	95
Other	460	266
Total other non-financial assets	7,324	7,633

1 Refer to item 1 in Note 15b for more information.

Note 12 Other assets and liabilities (continued)

c) Other financial liabilities measured at amortized cost

CHF million	31.3.18	31.12.17
Prime brokerage payables[1]		29,646
Other accrued expenses	2,277	2,444
Accrued interest expenses	1,291	1,513
Settlement and clearing accounts	1,067	1,395
Other	1,276	1,338
Total other financial liabilities measured at amortized cost	5,911	36,337

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 1.4 for more information.

d) Other financial liabilities designated at fair value

CHF million	31.3.18	31.12.17
Amounts due under unit-linked investment contracts	24,348	11,523
Structured securities financing transactions	5,812	375
Over-the-counter debt instruments	4,270	4,317
of which: life-to-date own credit (gain) / loss	5	36
Loan commitments and guarantees	7	9
Total other financial liabilities designated at fair value	34,438	16,223

e) Other non-financial liabilities

CHF million	31.3.18	31.12.17
Compensation-related liabilities	5,224	7,674
of which: accrued expenses	*1,141*	*2,670*
of which: Deferred Contingent Capital Plan	*1,629*	*1,993*
of which: other deferred compensation plans	*1,627*	*2,086*
of which: net defined benefit pension and post-employment liabilities	*828*	*925*
Current and deferred tax liabilities	947	912
VAT and other tax payables	534	415
Deferred income	244	150
Other	67	53
Total other non-financial liabilities	7,016	9,205

Note 13 Debt issued designated at fair value

CHF million	31.3.18	31.12.17
Issued debt instruments		
Equity-linked[1]	36,107	34,162
Rates-linked	5,972	5,811
Credit-linked	2,933	2,937
Fixed-rate	4,187	3,921
Other	2,860	2,671
Total debt issued designated at fair value	52,059	49,502
of which: life-to-date own credit (gain) / loss	*14*	*159*

1 Includes investment fund unit-linked instruments issued.

Note 14 Debt issued measured at amortized cost

CHF million	31.3.18	31.12.17
Certificates of deposit	18,779	23,831
Commercial paper	23,304	23,532
Other short-term debt	4,078	3,590
Short-term debt[1]	46,162	50,953
Senior unsecured debt	34,729	32,268
Senior unsecured debt that contributes to total loss-absorbing capacity	26,431	27,233
Covered bonds	4,105	4,112
Subordinated debt	18,030	16,555
of which: high-trigger loss-absorbing additional tier 1 capital instruments	*6,898*	*5,187*
of which: low-trigger loss-absorbing additional tier 1 capital instruments	*2,342*	*2,383*
of which: low-trigger loss-absorbing tier 2 capital instruments	*8,097*	*8,286*
of which: non-Basel III-compliant tier 2 capital instruments	*694*	*700*
Debt issued through the Swiss central mortgage institutions	8,349	8,345
Other long-term debt	77	87
Long-term debt[2]	91,721	88,599
Total debt issued measured at amortized cost[3]	137,883	139,551

1 Debt with an original maturity of less than one year. 2 Debt with original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

Note 15 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions recognized under both IAS 37 and IFRS 9.

CHF million	31.3.18	31.3.17
Provisions recognized under IAS 37	2,937	3,100
Provisions for off-balance sheet financial instruments[1]	72	33
Provisions for other credit lines[1]	35	0
Total provisions	3,044	3,133

1 Provisions recognized as of 31 March 2018 relate to exposures in the scope of the expected credit loss requirements of IFRS 9. Refer to Notes 1.4 and 9 for more information. Comparative period provisions for off-balance sheet financial instruments relate to loss provisions recognized under IAS 37.

The following table presents additional information for provisions recognized under IAS 37.

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restructuring	Real estate	Employee benefits[5]	Other	Total
Balance as of 31 December 2017	43	2,444	322	134	68	89	3,100
Increase in provisions recognized in the income statement	5	37	40	0	1	7	89
Release of provisions recognized in the income statement	(2)	(31)	(7)	0	(2)	(4)	(45)
Provisions used in conformity with designated purpose	(5)	(81)	(71)	0	0	(7)	(164)
Foreign currency translation / unwind of discount	0	(39)	(4)	1	(1)	0	(43)
Balance as of 31 March 2018	41	2,331	280[3]	134[4]	66	85	2,937

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Primarily consists of personnel-related restructuring provisions of CHF 63 million as of 31 March 2018 (31 December 2017: CHF 83 million) and provisions for onerous lease contracts of CHF 212 million as of 31 March 2018 (31 December 2017: CHF 235 million). 4 Consists of reinstatement costs for leasehold improvements of CHF 92 million as of 31 March 2018 (31 December 2017: CHF 92 million) and provisions for onerous lease contracts of CHF 42 million as of 31 March 2018 (31 December 2017: CHF 41 million). 5 Includes provisions for sabbatical and anniversary awards as well as provisions for severance that are not part of restructuring provisions.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 15b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

The Group operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS Group AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where the Group may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which the Group believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. The Group makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against the Group, but are nevertheless expected to be, based on the Group's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

Note 15 Provisions and contingent liabilities (continued)

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 15a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of this report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	UBS
Balance as of 31 December 2017	555	79	1	345	240	0	1,224	2,444
Increase in provisions recognized in the income statement	35	0	0	2	0	0	0	37
Release of provisions recognized in the income statement	(4)	0	0	(3)	(24)	0	0	(31)
Provisions used in conformity with designated purpose	(33)	0	0	(15)	0	0	(33)	(81)
Foreign currency translation / unwind of discount	(8)	0	0	(6)	0	0	(26)	(39)
Balance as of 31 March 2018	546	79	1	323	216	0	1,166	2,331

1 Provisions, if any, for the matters described in this Note are recorded in Global Wealth Management (item 3 and item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this Note in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio.

Note 15 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders.

Since 2013, UBS (France) S.A. and UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory and regarding the laundering of proceeds of tax fraud and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). In March 2017, the investigating judges issued the trial order ("*ordonnance de renvoi*") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and which transfers the case to court. The trial schedule has not yet been announced. In October 2017, the Investigation Chamber of the Court of Appeals decided that UBS (France) S.A. shall not be constituted as a civil party in the guilty plea proceedings against the former UBS (France) S.A. Head of Front Office. UBS (France) S.A. has appealed this decision to the French Supreme Court ("*Cour de cassation*"). The appeal is pending, although the criminal court subsequently found the individual's guilty plea to be invalid.

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud and of banking, financial solicitation by unauthorized persons and serious tax fraud.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 31 March 2018 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Note 15 Provisions and contingent liabilities (continued)

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action (Trustee Suit) in the US District Court for the Southern District of New York (SDNY) seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations with an original principal balance of approximately USD 2 billion. Approximately 9,000 loans were at issue in a bench trial in the SDNY in 2016, following which the court issued an order ruling on numerous legal and factual issues and applying those rulings to 20 exemplar loans. The court further ordered that a lead master be appointed to apply the court's rulings to the loans that remain at issue following the trial. In October 2017, UBS and certain holders of the RMBS in the Trustee Suit entered into an agreement under which UBS has agreed to pay an aggregate of USD 543 million into the relevant RMBS trusts, plus certain attorneys' fees. A portion of UBS's settlement costs will be borne by other parties that indemnified UBS. The agreement was subject to the trustee for the RMBS trusts becoming a party thereto by 9 March 2018. The trustee for the RMBS trusts has informed UBS that it would not accept the proposed settlement under the agreement between UBS and the RMBS holders. UBS has been in discussions with the trustee about the terms on which it would become a party to a settlement, although there can be no assurance that the trustee will agree to a settlement on terms that are acceptable to UBS. Other than the Trustee Suit, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS also received and responded to subpoenas from the New York State Attorney General (NYAG) and other state attorneys general relating to UBS's RMBS business. In March 2018, UBS and the NYAG reached an agreement to resolve the NYAG's investigation, whereby UBS will pay USD 41 million and provide consumer relief in a stated amount of USD 189 million calculated as set forth in the settlement agreement. UBS has also responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the US Securities and Exchange Commission (SEC) relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

Our balance sheet at 31 March 2018 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

Note 15 Provisions and contingent liabilities (continued)

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed. In 2014, several claims, including a purported class action, were filed in the US by BMIS customers against UBS entities, asserting claims similar to those made by the BMIS Trustee, and seeking unspecified damages. These claims have either been voluntarily withdrawn or dismissed on the basis that the courts did not have jurisdiction to hear the claims against the UBS entities. In 2016, the plaintiff in one of those claims appealed the dismissal. In February 2018, the United States Court of Appeals for the Second Circuit affirmed the dismissal of the plaintiff's claim.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.5 billion, of which claims with aggregate claimed damages of USD 1.5 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims are filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans. A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied. Defendants' requests for permission to appeal that ruling were denied by the Puerto Rico Court of Appeals and the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In 2016, defendants' motion to dismiss was granted in part and denied in part. In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA in December 2013 based on plaintiffs' allegation that the loans are not valid. The trial court denied defendant's motion for summary judgment based on a forum selection clause in the loan agreements. The Puerto Rico Supreme Court reversed that decision and remanded the case back to the trial court for reconsideration. On reconsideration the trial court granted defendant's motion and dismissed the action.

In 2014, UBS reached a settlement with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI) in connection with OCFI's examination of UBS's operations from January 2006 through September 2013, pursuant to which UBS is paying up to an aggregate of USD 7.7 million in investor education contributions and restitution.

In 2015, the SEC and the Financial Industry Regulatory Authority (FINRA) announced settlements with UBS PR of their separate investigations stemming from the 2013 market events. Without admitting or denying the findings in either matter, UBS PR agreed in the SEC settlement to pay USD 15 million and USD 18.5 million in the FINRA matter. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Note 15 Provisions and contingent liabilities (continued)

Beginning in 2015, and continuing through 2017, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. The funds hold significant amounts of those bonds and the defaults on interest payments have had, and are expected to continue to have, an adverse effect on dividends from the funds. Executive orders of the Governor that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of creditors' rights. In May and June 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 31 March 2018 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Following an initial media report in 2013 of widespread irregularities in the foreign exchange markets, UBS immediately commenced an internal review of its foreign exchange business, which includes our precious metals and related structured products businesses. Numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority (FCA) and the US Commodity Futures Trading Commission (CFTC) in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System (Federal Reserve Board) and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In addition, the DOJ's Criminal Division (Criminal Division) terminated the 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. In January 2018, UBS reached a settlement with the CFTC in connection with the CFTC's precious metals investigations. As part of that settlement, UBS paid a USD 15 million civil monetary penalty. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. They allege collusion by the defendants and assert claims under the antitrust laws and for unjust enrichment. In 2015, additional putative class actions were filed in federal court in New York against UBS and other banks on behalf of a putative class of persons who entered into or held any foreign exchange futures contracts and options on foreign exchange futures contracts since 2003. The complaints assert claims under the Commodity Exchange Act (CEA) and the US antitrust laws. In 2015, a consolidated complaint was filed on behalf of both putative classes of persons covered by the US federal court class actions described above. UBS has entered into a settlement agreement that would resolve all of these US federal court class actions. The settlement agreement, which has been preliminarily approved by the court and is subject to final court approval, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

Note 15 Provisions and contingent liabilities (continued)

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign currency exchange transactional services, exercised discretionary authority or discretionary control over management of such ERISA plan, or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. The parties filed a stipulation to dismiss the case with prejudice. The plaintiffs have appealed the dismissal. The appeals court heard oral argument in June 2017.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and their co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint. In 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017. In March 2018, the court dismissed the consolidated complaint. Plaintiffs have filed a motion seeking leave to file an amended complaint. Putative class actions are also pending against UBS and other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits assert claims under the antitrust laws and the CEA, and other claims. In 2016, the court in New York granted UBS's motions to dismiss the putative class actions relating to gold and silver. Plaintiffs in those cases sought to amend their complaints to add new allegations about UBS, which the court granted. The plaintiffs filed amended complaints in 2017. In March 2017, the court in New York granted UBS's motion to dismiss the platinum and palladium action. In May 2017, plaintiffs in the platinum and palladium action filed an amended complaint that did not allege claims against UBS.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office (SFO), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the FSA, the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission (WEKO) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of individual actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

Note 15 Provisions and contingent liabilities (continued)

USD LIBOR class and individual actions in the US. In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims. Although, the Second Circuit vacated the district court's judgment dismissing antitrust claims, the district court again dismissed antitrust claims against UBS in 2016. Certain plaintiffs have appealed that decision to the Second Circuit. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims. UBS entered into an agreement in 2016 with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs have sought permission to appeal that ruling to the Second Circuit.

Other benchmark class actions and ISDAFIX class action in the US. In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including federal antitrust claims for lack of standing. In 2015, this court dismissed plaintiff's federal racketeering claims on the same basis and affirmed its previous dismissal of plaintiff's antitrust claims against UBS. In 2017, this court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR / SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR / SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2017, the district court preliminarily approved a settlement agreement under which UBS would pay USD 14 million to resolve putative class actions filed in federal court in New York and New Jersey against UBS and other financial institutions, among others, on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX.

Government bonds: Putative class actions have been filed in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. The complaints generally allege that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction. They assert claims under the antitrust laws and the CEA and for unjust enrichment. The cases have been consolidated in the SDNY, and a consolidated complaint was filed in 2017. Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 31 March 2018 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 31 March 2018 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong-listed initial public offerings for 18 months. UBS has appealed the decision.

Note 16 Guarantees, commitments and forward starting transactions

The table below presents the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

	31.3.18			31.12.17		
CHF million	Gross	Sub-participations	Net	Gross	Sub-participations	Net
Total guarantees	19,009	(2,923)	16,086	18,854	(2,867)	15,987
Loan commitments	34,534	(866)	33,667	39,069	(1,074)	37,995
Forward starting transactions[1]						
Reverse repurchase agreements	16,905			12,683		
Securities borrowing agreements	35			23		
Repurchase agreements	13,763			8,187		

1 Cash to be paid in the future by either UBS or the counterparty.

Note 17 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS's foreign operations into Swiss francs.

	Spot rate			Average rate[1]		
	As of			For the quarter ended		
	31.3.18	31.12.17	31.3.17	31.3.18	31.12.17	31.3.17
1 USD	0.95	0.97	1.00	0.94	0.98	1.00
1 EUR	1.17	1.17	1.07	1.16	1.17	1.07
1 GBP	1.34	1.32	1.25	1.32	1.32	1.25
100 JPY	0.90	0.86	0.90	0.88	0.87	0.89

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a quarter represent an average of three month-end rates, weighted according to the income and expense volumes of all foreign operations of the Group with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for the Group.

Appendix 6 – Excerpts from the UBS AG First Quarter 2018 Report

It should be noted that the term "pro-forma" as used in this Appendix 6 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

UBS AG interim consolidated financial statements (unaudited)

Income statement

		For the quarter ended		
CHF million	Note	31.3.18	31.12.17	31.3.17
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income		2,253	2,722	2,437
Interest expense from financial instruments measured at amortized cost		(1,330)	(1,489)	(1,194)
Interest income from financial instruments measured at fair value through profit or loss		1,594	893	955
Interest expense from financial instruments measured at fair value through profit or loss		(790)	(467)	(510)
Net interest income		1,727	1,658	1,688
Fee and commission income		4,900	4,772	4,807
Fee and commission expense		(409)	(478)	(436)
Net fee and commission income	3	4,491	4,294	4,371
Other net income from fair value changes on financial instruments		1,466	984	1,441
Credit loss (expense) / recovery	8	(25)	(89)	0
Other income	4	164	395	60
Total operating income		7,823	7,242	7,560
Personnel expenses	5	3,556	3,420	4,044
General and administrative expenses	6	2,236	2,817	1,601
Depreciation and impairment of property, equipment and software		232	233	253
Amortization and impairment of intangible assets		16	17	21
Total operating expenses		6,040	6,487	5,919
Operating profit / (loss) before tax		1,783	755	1,641
Tax expense / (benefit)	7	411	3,140	364
Net profit / (loss)		1,371	(2,385)	1,277
Net profit / (loss) attributable to preferred noteholders		0	26	46
Net profit / (loss) attributable to non-controlling interests		1	0	1
Net profit / (loss) attributable to shareholders		1,370	(2,412)	1,231

Statement of comprehensive income

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Comprehensive income attributable to shareholders			
Net profit / (loss)	1,370	(2,412)	1,231
Other comprehensive income that may be reclassified to the income statement			
Foreign currency translation			
Foreign currency translation movements, before tax (revaluation of net investment)	(479)	350	(317)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax	94	(112)	(57)
Foreign currency translation differences on foreign operations reclassified to the income statement	0	0	4
Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to the income statement	0	(6)	0
Income tax relating to foreign currency translations, including the impact of net investment hedges	1	(32)	2
Subtotal foreign currency translation, net of tax	(383)	200	(368)
Financial assets measured at fair value through other comprehensive income			
Net unrealized gains / (losses), before tax	(71)	(11)	44
Impairment charges reclassified to the income statement from equity	0	2	14
Realized gains reclassified to the income statement from equity	0	(51)	(8)
Realized losses reclassified to the income statement from equity	0	4	2
Income tax relating to net unrealized gains / (losses)	19	17	(8)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax	(51)	(39)	43
Cash flow hedges of interest rate risk			
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	(441)	(150)	(30)
Net (gains) / losses reclassified to the income statement from equity	(127)	(187)	(220)
Income tax relating to cash flow hedges	114	66	52
Subtotal cash flow hedges, net of tax	(454)	(270)	(198)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(889)	(109)	(522)
Other comprehensive income that will not be reclassified to the income statement			
Defined benefit plans			
Gains / (losses) on defined benefit plans, before tax	(34)	0	49
Income tax relating to defined benefit plans	21	11	2
Subtotal defined benefit plans, net of tax	(13)	10	51
Own credit on financial liabilities designated at fair value			
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	171	(23)	(181)
Income tax relating to own credit on financial liabilities designated at fair value	(2)	0	0
Subtotal own credit on financial liabilities designated at fair value, net of tax	170	(23)	(181)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	157	(13)	(129)
Total other comprehensive income	(732)	(122)	(652)
Total comprehensive income attributable to shareholders	638	(2,534)	579

Statement of comprehensive income (continued)

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Comprehensive income attributable to preferred noteholders			
Net profit / (loss)	0	26	46
Other comprehensive income that will not be reclassified to the income statement			
Foreign currency translation movements, before tax	0	307	(2)
Income tax relating to foreign currency translation movements	0	0	0
Subtotal foreign currency translation, net of tax	0	307	(2)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	307	(2)
Total comprehensive income attributable to preferred noteholders	0	333	44
Comprehensive income attributable to non-controlling interests			
Net profit / (loss)	1	1	1
Other comprehensive income that will not be reclassified to the income statement			
Foreign currency translation movements, before tax	0	2	2
Income tax relating to foreign currency translation movements	0	0	0
Subtotal foreign currency translation, net of tax	0	2	2
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	2	2
Total comprehensive income attributable to non-controlling interests	1	3	2
Total comprehensive income			
Net profit / (loss)	1,371	(2,385)	1,277
Other comprehensive income	(732)	187	(651)
of which: other comprehensive income that may be reclassified to the income statement	*(889)*	*(109)*	*(522)*
of which: other comprehensive income that will not be reclassified to the income statement	*157*	*296*	*(129)*
Total comprehensive income	639	(2,198)	626

Balance sheet

CHF million	Note	31.3.18	31.12.17
Assets			
Cash and balances at central banks		92,800	87,775
Loans and advances to banks		13,284	13,693
Receivables from securities financing transactions		77,016	89,633
Cash collateral receivables on derivative instruments	10	24,271	23,434
Loans and advances to customers	8	318,394	320,659
Other financial assets measured at amortized cost	11	19,235	36,935
Total financial assets measured at amortized cost		545,000	572,129
Financial assets at fair value held for trading	9	105,785	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties		*34,536*	*35,363*
Derivative financial instruments	9,10	113,334	118,229
Brokerage receivables	9	20,250	
Financial assets at fair value not held for trading	9	97,213	58,556
Total financial assets measured at fair value through profit or loss		336,581	303,028
Financial assets measured at fair value through other comprehensive income	9	6,758	8,665
Investments in associates		1,037	1,018
Property, equipment and software		8,015	7,985
Goodwill and intangible assets		6,235	6,398
Deferred tax assets		9,671	9,783
Other non-financial assets	11	6,984	7,358
Total assets		920,280	916,363

Balance sheet (continued)

CHF million	Note	31.3.18	31.12.17
Liabilities			
Amounts due to banks		9,024	7,533
Payables from securities financing transactions		9,167	17,044
Cash collateral payables on derivative instruments	10	29,426	30,247
Customer deposits		401,514	412,392
Funding from UBS Group AG and its subsidiaries		35,925	34,749
Debt issued measured at amortized cost	13	102,213	104,749
Other financial liabilities measured at amortized cost	11	6,372	37,133
Total financial liabilities measured at amortized cost		593,640	643,847
Financial liabilities at fair value held for trading	9	34,747	30,463
Derivative financial instruments	9,10	111,945	116,134
Brokerage payables designated at fair value	9	34,793	
Debt issued designated at fair value	9,12	52,059	49,502
Other financial liabilities designated at fair value	9,11	34,438	16,223
Total financial liabilities measured at fair value through profit or loss		267,983	212,323
Provisions	14	2,999	3,084
Other non-financial liabilities	11	4,808	6,335
Total liabilities		869,430	865,588
Equity			
Share capital		386	386
Share premium		26,998	26,966
Retained earnings		30,099	29,102
Other comprehensive income recognized directly in equity, net of tax		(6,696)	(5,736)
Equity attributable to shareholders		50,788	50,718
Equity attributable to non-controlling interests		62	57
Total equity		50,850	50,775
Total liabilities and equity		920,280	916,363

Statement of changes in equity

CHF million	Share capital	Share premium	Retained earnings	Other comprehensive income recognized directly in equity, net of tax[1]
Balance as of 1 January 2017	**386**	**29,505**	**28,265**	**(4,494)**
Issuance of share capital				
Premium on shares issued and warrants exercised		6		
Tax (expense) / benefit		3		
Dividends		(2,250)		
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		(9)		
Total comprehensive income for the period			1,102	(522)
of which: net profit / (loss)			*1,231*	
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				*(522)*
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans			*51*	
of which: OCI that will not be reclassified to the income statement, net of tax – own credit			*(181)*	
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 March 2017	**386**	**27,254**	**29,367**	**(5,017)**
Balance as of 1 January 2018 before the adoption of IFRS 9 and IFRS 15	386	26,966	29,102	(5,736)
Effect of adoption of IFRS 9			(505)	(72)
Effect of adoption of IFRS 15			(24)	
Balance as of 1 January 2018 after the adoption of IFRS 9 and IFRS 15	386	26,966	28,573	(5,808)
Issuance of share capital				
Premium on shares issued and warrants exercised		19		
Tax (expense) / benefit		0		
Dividends				
New consolidations / (deconsolidations) and other increases / (decreases)		14		
Total comprehensive income for the period			1,527	(889)
of which: net profit / (loss)			*1,370*	
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				*(889)*
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans			*(13)*	
of which: OCI that will not be reclassified to the income statement, net of tax – own credit			*170*	
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 31 March 2018	386	26,998	30,099	(6,696)

1 Excludes defined benefit plans and own credit that are recorded directly in Retained earnings.

of which: foreign currency translation	*of which: financial assets measured at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Preferred noteholders	Non-controlling interests	Total equity
(5,564)	*98*	*972*	53,662	**642**	**40**	**54,343**
			0			0
			6			6
			3			3
			(2,250)	(46)	(4)	(2,300)
			0	0		0
			(9)		1	(9)
(368)	*43*	*(198)*	579	44	2	626
			1,231	*46*	*1*	*1,277*
(368)	*43*	*(198)*	*(522)*			*(522)*
			51			*51*
			(181)			*(181)*
			0	*(2)*	*2*	*0*
(5,932)	*141*	*774*	51,990	**641**	**38**	**52,669**
(6,099)	*12*	*351*	50,718		57	50,775
	(72)		(577)			(577)
			(24)			(24)
(6,099)	*(60)*	*351*	50,117		57	50,174
			0			0
			19			19
			0			0
			0		(4)	(4)
			14		8	22
(383)	*(51)*	*(454)*	638		1	639
			1,370		*1*	*1,371*
(383)	*(51)*	*(454)*	*(889)*			*(889)*
			(13)			*(13)*
			170			*170*
			0		*0*	*0*
(6,482)	*(110)*	*(103)*	50,788		62	50,850

Statement of cash flows[1]

	Year-to-date	
CHF million	31.3.18	31.3.17
Cash flow from / (used in) operating activities		
Net profit / (loss)	1,371	1,277
Non-cash items included in net profit and other adjustments:		
Depreciation and impairment of property, equipment and software	232	253
Amortization and impairment of intangible assets	16	21
Credit loss expense / (recovery)	25	0
Share of net profits of associates / joint ventures and impairment of associates	(15)	(19)
Deferred tax expense / (benefit)	228	128
Net loss / (gain) from investing activities	149	141
Net loss / (gain) from financing activities	(3,647)	449
Other net adjustments	(590)	(562)
Net change in operating assets and liabilities:		
Loans and advances to banks / amounts due to banks	1,651	(2,192)
Securities financing transactions	4,839	(10,223)
Cash collateral on derivative instruments	(1,763)	(1,396)
Loans and advances to customers	(7,029)	(4,420)
Customer deposits	(3,822)	(368)
Financial assets and liabilities at FV held for trading and derivative financial instruments	14,202	(2,080)
Brokerage receivables and payables	3,226	
Financial assets at fair value not held for trading, other financial assets and liabilities	(4,639)	13,297
Provisions, other non-financial assets and liabilities	(1,384)	(1,523)
Income taxes paid, net of refunds	(133)	(50)
Net cash flow from / (used in) operating activities	2,919	(7,267)
Cash flow from / (used in) investing activities		
Purchase of subsidiaries, associates and intangible assets	(5)	(1)
Disposal of subsidiaries, associates and intangible assets[2]	29	3
Purchase of property, equipment and software	(327)	(306)
Disposal of property, equipment and software	29	21
Purchase of financial assets measured at fair value through other comprehensive income	(422)	(2,227)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	225	2,102
Net (purchase) / redemption of debt securities measured at amortized cost	(1,061)	
Net (purchase) / redemption of financial assets held to maturity		199
Net cash flow from / (used in) investing activities	(1,533)	(208)

Table continues on the next page.

Statement of cash flows (continued)[1]

Table continued from previous page.

	Year-to-date	
CHF million	31.3.18	31.3.17
Cash flow from / (used in) financing activities		
Net short-term debt issued / (repaid)	(4,507)	9,432
Distributions paid on UBS shares		(2,250)
Issuance of long-term debt, including debt issued designated at fair value[3]	19,203	14,195
Repayment of long-term debt, including debt issued designated at fair value[3]	(10,107)	(10,803)
Net changes in non-controlling interests	17	(4)
Net cash flow from / (used in) financing activities	4,605	10,569
Total cash flow		
Cash and cash equivalents at the beginning of the period	102,154	121,107
Net cash flow from / (used in) operating, investing and financing activities	5,991	3,094
Effects of exchange rate differences on cash and cash equivalents	(17)	(57)
Cash and cash equivalents at the end of the period[4]	108,128	124,145
of which: cash and balances with central banks	*92,723*	*108,931*
of which: due from banks	*12,178*	*12,638*
of which: money market paper[5]	*3,227*	*2,576*
Additional information		
Net cash flow from / (used in) operating activities includes:		
Interest received in cash	3,197	2,759
Interest paid in cash	1,898	1,658
Dividends on equity investments, investment funds and associates received in cash[6]	541	436

1 Upon adoption of IFRS 9 cash flows from certain financial instruments have been reclassified from investing to operating activities. Refer to Note 1 for more information. 2 Includes dividends received from associates. 3 Includes funding from UBS Group AG and its subsidiaries. 4 CHF 3,428 million and CHF 2,314 million of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 31 March 2018 and 31 March 2017, respectively. Refer to "Note 23 Restricted and transferred financial assets" in the "Consolidated financial statements" section in the Annual Report 2017 for more information. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading and Other financial assets measured at amortized cost. 6 Includes dividends received from associates reported within Cash flow from / (used in) investing activities.

Notes to the UBS AG interim consolidated financial statements (unaudited)

Note 1 Basis of accounting

1.1 Basis of preparation

The consolidated financial statements (the Financial Statements) of UBS AG and its subsidiaries (together "UBS AG") are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), which is also the functional currency of UBS AG's Head Office and its Swiss-based operations.[1] These interim Financial Statements are prepared in accordance with IAS 34, *Interim Financial Reporting*.

In preparing these interim Financial Statements, the same accounting policies and methods of computation have been applied as in the UBS AG consolidated annual Financial Statements for the period ended 31 December 2017, except for the changes described in this note. These interim Financial Statements are unaudited and should be read in conjunction with UBS AG's audited consolidated Financial Statements included in the Annual Report 2017. In the opinion of management, all necessary adjustments were made for a fair presentation of UBS AG's financial position, results of operations and cash flows.

Preparation of these interim Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities. These estimates and assumptions are based on the best available information. Actual results in the future could differ from such estimates and such differences may be material to the Financial Statements. Revisions to estimates, based on regular reviews, are recognized in the period in which they occur. For more information on areas of estimation uncertainty considered to require critical judgment, refer to "Note 1a) Significant accounting policies" in the "Consolidated financial statements" section of the Annual Report 2017 and in Note 1.3 in this report.

1.2 Changes to segment reporting effective first quarter 2018

Effective 1 February 2018, UBS AG integrated its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division, which is managed on an integrated basis, with a single set of key performance indicators, performance targets, operating plan and management structure. Consistent with this, the operating results of Global Wealth Management are presented and assessed on an integrated basis in internal reporting to management. Consequently, beginning from the first quarter of 2018, Global Wealth Management qualifies as an operating and reportable segment for the purposes of segment reporting and is presented in these Financial Statements alongside Personal & Corporate Banking, Asset Management, the Investment Bank and Corporate Center (with its units Services, Group Asset and Liability Management (Group ALM) and Non-core and Legacy Portfolio). Following the change in the composition of UBS AG's operating segments and corresponding reportable segments, previously reported segment information has been restated. The change has no effect on the recognized goodwill of both former segments.

1 As explained in the Annual Report 2017 of UBS Group AG and UBS AG, in light of cumulative changes in UBS's legal structure, business activities and evolving changes to its structural currency management strategy, it is anticipated that during the second half of 2018 the functional currency of UBS AG's Head Office in Switzerland will change from Swiss francs to US dollars, and the functional currency of UBS AG's London Branch operations will change from British pounds to US dollars, where such changes would be made on a prospective basis. As a consequence, it is also expected that management would change the presentation currency of UBS AG's consolidated financial statements from Swiss francs to US dollars to align to the change in functional currency, with prior periods restated.

Note 1 Basis of accounting (continued)

1.3 Update to significant accounting policies disclosed in Note 1a) to the Financial Statements 2017

The adoption of IFRS 9, *Financial Instruments* (IFRS 9) and IFRS 15, *Revenue from Contracts with Customers* (IFRS 15) resulted in changes to UBS AG's accounting policies applicable from 1 January 2018. Accounting polices set out in section 1.3.1 replace item 3) b, c, g, h, i, l, o and p in Note 1a) in the UBS AG consolidated annual Financial Statements for the year ended 31 December 2017 and those set out in section 1.3.2 replace item 4) in Note 1a) in the UBS AG consolidated annual Financial Statements for the year ended 31 December 2017.

As permitted by the transition provisions of IFRS 9 and IFRS 15, UBS AG elected not to restate comparative period information, and the accounting policies as set out in Note 1 in the UBS AG consolidated annual Financial Statements for the period ended 31 December 2017 apply to comparative periods.

1.3.1 Update to Note 1a) to the Financial Statements 2017 mainly related to IFRS 9

Update to Note 1a) 3) Financial instruments

b. Classification, measurement and presentation

On initial recognition, financial assets are classified as measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL).

A debt instrument is measured at amortized cost if it meets the following conditions:

- it is held within a business model that has an objective to hold financial assets to collect contractual cash flows; and
- the contractual terms of the financial asset result in cash flows that are solely payments of principal and interest on the principal amount outstanding (SPPI).

A debt instrument is measured at FVOCI if it meets both of the following conditions:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms of the financial asset result in cash flows that are SPPI.

Equity instruments are accounted for at FVTPL. All other financial assets are measured at FVTPL and consist of held for trading assets, assets mandatorily measured on a fair value basis and derivatives, except to the extent that they are designated in a hedging relationship, in which case the IAS 39 hedge accounting requirements continue to apply.

Business model assessment

UBS AG determines the nature of the business model, for example if the objective is to hold the financial asset and collect the contractual cash flows, by considering the way in which the financial assets are managed to achieve a particular business objective as determined by management.

Financial assets that are held for trading or managed on a fair value basis are measured at FVTPL insofar as the associated business model is neither to hold the financial assets to collect contractual cash flows nor to hold to collect contractual cash flows and sell.

UBS AG originates loans to hold to maturity and to sell or sub-participate to other parties, resulting in a transfer of substantially all the risks and rewards, and derecognition of the loan or portions of it. UBS AG considers the activities of lending to hold and lending to sell or sub-participate as two separate business models, with financial assets within the former considered to be within a business model that has an objective to hold the assets to collect contractual cash flows, and those within the latter included in a trading portfolio. In certain cases, it may not be possible on origination to identify whether loans or portions of loans will be sold or sub-participated and certain loans may be managed on a fair value basis through, for instance, using credit derivatives. These financial assets are mandatorily measured at FVTPL.

Critical accounting estimates and judgments

UBS AG exercises judgment to determine the appropriate level at which to assess its business models. In general the assessment is performed at the product level, e.g., retail and commercial mortgages. In other cases the assessment is carried out at a more granular level, e.g., loan portfolios by region, and, if required, further disaggregation is performed by business strategy. In addition, UBS AG exercises judgment in determining the effect of sales of financial instruments on the business model assessment.

Note 1 Basis of accounting (continued)

Contractual cash flow characteristics

In assessing whether the contractual cash flows are SPPI, UBS AG considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument, which could affect whether the instrument is considered to meet the SPPI criteria.

For example, UBS AG holds portfolios of private mortgage contracts and corporate loans in Personal & Corporate Banking that commonly contain clauses that provide for two-way compensation if prepayment occurs. The amount of compensation paid by or to UBS AG reflects the effect of changes in market interest rates. UBS AG has determined that the inclusion of the change in market interest rates in the compensation amount is reasonable for the early termination of the contract, and therefore results in contractual cash flows that are SPPI.

Critical accounting estimates and judgments

UBS AG applies judgment when considering whether certain contractual features, such as interest rate reset frequency or non-recourse features, significantly affect future cash flows. Furthermore, judgment is required when assessing whether compensation paid or received on early termination of lending arrangements results in cash flows that are not SPPI.

All financial instruments are initially measured at fair value. In the case of financial instruments subsequently measured at amortized cost or FVOCI, the initial fair value is adjusted for directly attributable transaction costs.

After initial recognition, UBS AG classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9 as described in the table on the following pages.

Note 1 Basis of accounting (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		A debt financial asset is measured at amortized cost if: – it is held in a business model that has an objective to hold assets to collect contractual cash flows, and – the contractual terms give rise to cash flows that are SPPI. This classification includes: – cash and balances at central banks – loans and advances to banks – cash collateral receivable on securities borrowed – receivables on reverse repurchase agreements – cash collateral receivables on derivative instruments – residential and commercial mortgages – corporate loans – secured loans, including Lombard loans, and unsecured loans – loans to financial advisors – debt securities held as high-quality liquid assets (HQLA) – fee and lease receivables.	Measured at amortized cost using the effective interest rate (EIR) method less allowances for expected credit losses (ECL) (refer to items 3c and 3g in this Note for more information). The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments – when it is probable that UBS AG will enter into a specific lending relationship – are deferred and amortized over the life of the loan using the EIR method. When the financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amounts arising from exchange-traded derivatives (ETD) and certain over-the-counter (OTC) derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral receivables on derivative instruments.*
Measured at FVOCI	Debt instruments measured at FVOCI	A debt financial asset is measured at FVOCI if: – it is held in a business model whose objective is achieved by both holding assets to collect contractual cash flows and selling the assets, and – the contractual terms give rise to cash flows that are SPPI. This classification primarily includes debt securities and certain asset-backed securities held as HQLA for which the contractual cash flows meet the SPPI conditions.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized (when sold, collected or otherwise disposed). Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses. The amounts recognized in the income statement are determined on the same basis as for financial assets measured at amortized cost.

Note 1 Basis of accounting (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at FVTPL	Held for trading	Financial assets held for trading include: – all derivatives with a positive replacement value, except those that are designated as effective hedging instruments – other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans) and equity instruments.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Other net income from fair value changes on financial instruments*, except interest and dividend income on instruments other than derivatives (refer to item 3c in this Note for more information), interest on derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain long- and short-duration foreign exchange contracts, which are reported in *Net interest income*. Derivative assets are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives which are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral receivables on derivative instruments.* The presentation of fair value changes on derivatives that are designated and effective as hedging instruments depends on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information). Financial assets held for trading (other than derivatives) are presented as *Financial assets at fair value held for trading*. Other financial assets mandatorily measured at fair value through profit or loss are presented as *Financial assets at fair value not held for trading*, except for brokerage receivables, which are presented as a separate line item on UBS AG's balance sheet.
	Mandatorily measured at FVTPL – Other	A financial asset is mandatorily measured at FVTPL if: – it is not held in a business model whose objective is to hold assets to collect contractual cash flows or to hold them to collect contractual cash flows and sell, and / or – the contractual terms give rise to cash flows that are not SPPI, and / or – it is not held for trading. The following financial assets are mandatorily measured at FVTPL: – Certain structured loans, certain commercial loans, receivables under reverse repurchase and cash collateral on securities borrowing agreements that are managed on a fair value basis – Loans, managed on a fair value basis and hedged with credit derivatives – Certain debt securities held as HQLA and managed on a fair value basis – Certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets represent holdings in investments funds, whereby the contractual cash flows do not meet the SPPI conditions because the entry and exit price is based on the fair value of the fund's assets – Brokerage receivables, for which contractual cash flows do not meet the SPPI conditions due to the aggregate balance being accounted for as a single unit of account, with interest being calculated on the individual components – Auction rate securities, for which contractual cash flows do not meet the SPPI conditions because interest may be reset at rates that contain leverage – Equity instruments – Assets held under unit-linked investment contracts.	

Note 1 Basis of accounting (continued)

Financial liabilities classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – Demand and time deposits, retail savings / deposits, amounts payable under repurchase agreements, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit and covered bonds and obligations against funding from UBS Group AG and its subsidiaries – Cash collateral payables on derivative instruments.	Measured at amortized cost using the EIR method. Upfront fees and direct costs relating to the issuance or origination of the liability are deferred and amortized over the life of the liability using the EIR method. When the financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amortized cost liabilities are presented on the balance sheet primarily as *Amounts due to banks, Customer deposits, Payables from securities financing transactions* , *Debt issued measured at amortized cost* and *Funding from UBS Group AG and its subsidiaries*. Amounts arising from ETD and certain OTC derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral payables on derivative instruments.*
Measured at fair value through profit or loss	Held for trading	Financial liabilities held for trading include: – All derivatives with a negative replacement value (including certain loan commitments) except those that are designated and effective hedging instruments – Obligations to deliver financial instruments, such as debt and equity instruments, that UBS AG has sold to third parties, but does not own (short positions).	Measurement of financial liabilities classified at FVTPL follows the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of the financial liability that is attributable to changes in UBS AG's own credit risk is presented in OCI. Financial liabilities measured at FVTPL are presented as *Financial liabilities at fair value held for trading* and *Other financial liabilities designated at fair value*, respectively, except for brokerage payables and debt issued, which are presented as separate sub-totals on UBS AG's balance sheet. Derivative liabilities are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives which are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral payables on derivative instruments.* Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective as hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information).
	Designated at FVTPL	UBS AG designated at FVTPL the following financial liabilities: – Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes – Issued debt instruments managed on a fair value basis – Certain payables under repurchase agreements and cash collateral on securities lending agreements that are managed in conjunction with associated reverse repurchase agreements and cash collateral on securities borrowed – Loan commitments that are hedged predominantly with credit derivatives and those managed on a fair value basis – Amounts due under unit-linked investment contracts whose cash flows are linked to financial assets measured at FVTPL and eliminate an accounting mismatch – Brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.	

c. Interest income and expense

Interest income and expense are recognized in the income statement applying the EIR method.

In determining interest income and expense, the EIR is applied to the gross carrying amount of the financial asset (unless the asset is credit-impaired) or the amortized cost of a financial liability, based on estimated future cash flows that take into account all contractual cash flows, except those related to ECL. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying EIR to the amortized cost of the instrument. Furthermore, for financial assets that were credit-impaired on initial recognition, interest is determined by applying a credit-adjusted EIR to the amortized cost of the instrument.

Note 1 Basis of accounting (continued)

UBS AG also presents interest income and expense on financial instruments (excluding derivatives) measured at FVTPL separately from the rest of the fair value changes in the income statement. Interest income or expense on financial instruments measured at amortized cost and financial assets measured at FVOCI are presented separately within *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* and *Interest expense from financial instruments measured at amortized cost,* with interest on financial instruments at FVTPL presented in *Interest income (or expense) from financial instruments measured at fair value through profit or loss*. All are part of *Net interest income*.

Interest income from financial instruments measured at fair value through profit or loss includes forward points on certain short- and long-duration foreign exchange contracts and dividend income.

Furthermore, interest income and expense on derivatives designated as hedging instruments in effective hedge relationships are presented consistently with the interest income and expense of the respective hedged item.

→ **Refer to "Note 1a) Significant Accounting Policies" in the "UBS AG consolidated financial statements" section of the Annual Report 2017 for more information**

g. Expected credit losses

Expected credit losses (ECL) are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees and loan commitments. ECL are also recognized on the undrawn portion of revolving revocable credit lines, which include UBS AG's credit card limits and master credit facilities, which are customary in the Swiss market for corporate and commercial clients. UBS AG refers to both as "other credit lines," with clients allowed to draw down on demand balances (with the Swiss master credit facilities also allowing for term products) and which can be terminated by UBS AG at any time. Though these other credit lines are revocable, UBS AG is exposed to credit risk because the client has the ability to draw down funds before UBS AG can take credit risk mitigation actions.

Recognition of expected credit losses

ECL represent the difference between contractual cash flows and those UBS AG expects to receive, discounted at the EIR. For loan commitments and other credit facilities in scope of ECL, expected cash shortfalls are determined by considering expected future draw downs.

ECL are recognized on the following basis:

- A maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 1. For instruments with a remaining maturity of less than 12 months, ECL are determined for this shorter period.
- Lifetime ECL are recognized if a significant increase in credit risk (SICR) is detected subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 2. Where an SICR is no longer observed, the instrument will move back to stage 1.
- Lifetime ECL are always recognized for credit-impaired financial instruments, referred to as instruments in stage 3. The IFRS 9 determination of whether an instrument is credit-impaired is based on the occurrence of one or more loss events, with lifetime ECL generally derived by estimating expected cash flows based on a chosen recovery strategy with additional consideration given to forward-looking economic scenarios. Credit-impaired exposures may include positions for which no loss has occurred or no allowance has been recognized, for example, because they are expected to be fully recoverable through the collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired financial assets (POCI). POCI are initially recognized at fair value with interest income subsequently being recognized based on a credit-adjusted EIR. POCI include financial instruments that are newly recognized following a substantial restructuring and remain a separate category until maturity.

Note 1 Basis of accounting (continued)

UBS AG does not apply the low-credit-risk practical expedient that allows a lifetime ECL for lease or fee receivables to be recognized irrespective of whether a significant increase in credit risk has occurred. Instead, UBS AG has incorporated lease and fee receivables into the standard ECL calculation.

A write-off is made when all or part of a financial asset is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / recovery*. Write-offs and partial write-offs represent derecognition / partial derecognition events.

ECL are recognized in profit or loss with a corresponding ECL allowance reported as a decrease in the carrying value of financial assets measured at amortized cost on the balance sheet. For financial assets measured at fair value through OCI, the carrying value is not reduced, but an accumulated amount is recognized in OCI. For off-balance sheet financial instruments and other credit lines, provisions for ECL are reported in *Provisions*. ECL are recognized within the income statement in *Credit loss expense / recovery.*

Default and credit impairment

The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for the Personal & Corporate Banking and Swiss wealth management portfolios. Counterparties are also classified as defaulted when bankruptcy, insolvency proceedings or enforced liquidation have commenced, obligations have been restructured on preferential terms or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If a counterparty is defaulted, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is POCI. An instrument is POCI if it has been purchased with a material discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCIs), it remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit-restructured, and there is general evidence of credit recovery. A minimum period of three months is applied whereby most instruments remain in stage 3 for a longer period.

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on either loss expectations resulting from default events over a maximum 12-month period from the reporting date or over the remaining life of a financial instrument. The method used to calculate individual probability-weighted unbiased ECL is based on a combination of the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). PDs and LGDs used in the ECL calculation are point in time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For each instrument or group of instruments, parameter time series are generated consisting of the instruments' PD, LGD and EAD profiles considering the respective period of exposure to credit risk.

For the purpose of determining the ECL-relevant parameters, UBS AG leverages its Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and new IFRS 9-related models have been developed, which consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III through the cycle (TTC) parameters. The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III are not affected by the IFRS 9 ECL calculation.

Probability of default (PD): The PD represents the likelihood of a default over a specified time period. A 12-month PD represents the likelihood of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. The lifetime PD calculation is based on a series of 12-month PIT PDs that are derived from TTC PDs and scenario forecasts. This modeling is region-, industry- and client segment-specific and considers both scenario-systematic and client-idiosyncratic information. To derive the cumulative lifetime PD per scenario, the series of 12-month PIT PDs are transformed into marginal PIT PDs taking any assumed default events from previous periods into account.

Note 1 Basis of accounting (continued)

Exposure at default (EAD): The EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring during the life of a financial instrument. It represents the cash flows outstanding at the time of default, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios. IFRS 9-specific CCFs have been modeled to capture client segment- and product-specific patterns after removing Basel standard-specific limitations, i.e., conservativism and focus on a 12-month period prior to default.

Loss given default (LGD): The LGD represents an estimate of the loss at the time of a potential default occurring during the life of a financial instrument. The determination of the LGD takes into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. The LGD is commonly expressed as a percentage of the EAD.

PD and LGD are determined for four different scenarios whereas EAD projections are treated as scenario independent.

Parameters are generally determined on an individual financial asset level. For credit card exposures in Switzerland, personal account overdrafts and certain loans to financial advisors, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio.

Scenarios and scenario weights

The determination of the probability weighted ECL requires evaluating a range of diverse and relevant future economic conditions.

To accommodate this requirement, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. Those variables range from above-trend economic growth to severe recession. A weight is computed for each scenario by using a probabilistic econometric model that considers recent information as well as several decades of historical data. The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur. The scenarios, including the narratives, the macroeconomic and financial variables and the scenario weights, are further discussed, challenged and potentially refined by a team of UBS AG-internal experts. The baseline scenario is aligned to the economic and market assumptions used for UBS AG business planning purposes.

Macroeconomic and other factors

The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS AG projects the relevant economic factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Certain variables may only be relevant for specific types of exposures, such as house price indices for mortgage loans, while other variables have key relevance in the ECL calculation for all exposures. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS AG's key ECL-relevant portfolios.

For UBS AG, the following forward-looking macroeconomic variables represent the most relevant factors in the ECL calculation:

- GDP growth rates
- House price indices
- Unemployment rates
- Interest rates, specifically LIBOR and government bond yields
- Equity indices
- Consumer price indices

Note 1 Basis of accounting (continued)

The forward-looking macroeconomic assumptions used in the ECL calculation are developed by UBS AG economists, risk methodology personnel and credit risk officers. Assumptions and scenarios are validated and approved through a scenario committee and an operating committee, which also aim to ensure a consistent use of forward-looking information throughout UBS AG, including in the business planning process. ECL inputs are tested and reassessed for appropriateness at least each quarter and appropriate adjustments are made when needed.

ECL measurement period

The period for which lifetime ECL are determined is based on the maximum contractual period that UBS AG is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS AG has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment where the contractual cancelation right does not limit UBS AG 's exposure to credit risk to the contractual notice period as the client has the ability to draw down funds before UBS AG can take risk mitigating actions. In such cases, UBS AG is required to estimate the period over which it is exposed to credit risk. This applies to UBS AG's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one unit. The exposure arising from UBS AG's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS AG is exposed to credit risk. Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a Risk Officer, allowing for informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS AG has assessed these credit risk management practices and considers both the RbM approach and formal credit review as a substantive credit review providing for a re-origination of the facility. Following this, a 12 month measurement period is used for both types of facilities as an appropriate proxy of the period over which UBS AG is exposed to credit risk, with 12 months also used as a look back period for assessing SICR.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a 12-month ECL continues to be appropriate, it is assessed whether an SICR has occurred since initial recognition of the financial instrument. The assessment criteria include both quantitative and qualitative factors.

Primarily, UBS AG assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:

– at the reporting date and
– at inception of the instrument.

In both cases the respective PDs are determined for the residual lifetime of the instrument, i.e., the period between the reporting date and maturity. If, based on UBS AG's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL being recognized.

The threshold applied varies depending on the original credit quality of the borrower. For instruments with lower default probabilities at inception due to good credit quality of the counterparty, the SICR threshold is set at a higher level than for instruments with higher default probabilities at inception. This implies that for instruments with initially lower default probabilities a relatively higher deterioration in credit quality is needed to trigger an SICR than for those instruments with originally higher PDs. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, expressed in rating downgrades, together with the corresponding ratings at origination of an instrument is provided in the "SICR thresholds" table below. This simplified view is aligned to internal ratings as disclosed in the internal ratings table presented in "Credit risk" in the "Risk management and control" section of the Annual Report 2017. The actual SICR thresholds applied are defined on a more granular level interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

Note 1 Basis of accounting (continued)

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the borrower becomes more than 30 days past due on his contractual payments. This presumption is rebutted only where reasonable and supportable information is available that demonstrates that UBS AG is not exposed to an SICR even if contractual payments become more than 30 days past due.

For certain less material portfolios, specifically the Swiss credit card portfolio and the recruitment and retention loans to financial advisors within Global Wealth Management, the 30 days past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30 days past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking that are between 90 and 180 days past due, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR and hence for a transfer to stage 2. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected. Instruments for which an SICR since initial recognition is determined based on criteria other than changed default probabilities remain in stage 2 for at least six months post resolution of the stage 2 trigger event.

The overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions due to the risk management practices adopted, including daily monitoring processes with strict remargining requirements. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. ECL on these positions are not material.

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that involve significant uncertainty at the time they are made. Changes to these estimates and assumptions can result in significant changes to the timing and amount of ECL to be recognized.

Determination of a significant increase of credit risk
IFRS 9 does not include a definition of what constitutes an SICR. UBS AG assesses whether an SICR has occurred since initial recognition based on qualitative and quantitative reasonable and supportable forward-looking information that includes significant management judgment. More stringent criteria could significantly increase the number of instruments migrating to stage 2. An IFRS 9 Operating Committee has been established to review and challenge the SICR approach and any potential changes and determinations made in the quarter.

Scenarios, scenario weights and macroeconomic factors
ECL reflect an unbiased and probability-weighted amount, which UBS AG determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios and judges the suitability of respective weights to be applied. Each of the scenarios is based on management's assumptions around future economic conditions in the form of macroeconomic, market and other factors. Changes in the scenarios and weights, the corresponding set of macroeconomic variables and the assumptions made around those variables for the forecast horizon would have a significant effect on the ECL. An IFRS 9 Scenario Committee, in addition to the Operating Committee, has been established to derive, review and challenge the selection and weights.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. The ECL calculation is therefore sensitive to any extension of contractual maturities triggered by business decisions, consumer behaviors and an increased number of stage 2 positions. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS AG must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period has been applied for master credit facilities.

Modeling and management adjustments
A number of complex models have been developed or modified to calculate ECL, with additional management adjustments required. Internal counterparty rating changes, new or revised models and data may significantly affect ECL. The models are governed by UBS AG's model validation controls, which aim to ensure independent verification, and are approved by the Group Model Governance Board (GMGB). The management adjustments are approved by the IFRS 9 Operating Committee and endorsed by the GMGB.

Note 1 Basis of accounting (continued)

h. Restructured and modified financial assets

When a counterparty is in financial difficulties or where default has already occurred, UBS AG may restructure financial assets by providing concessions that would otherwise not be considered and that are outside of UBS AG's normal risk appetite, such as preferential interest rates, extension of maturity and subordination. When a credit restructuring takes place, each case is considered individually and the counterparty is generally classified as defaulted until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions, or until the counterparty has recovered and the preferential conditions no longer exceed UBS AG's risk appetite.

Concessions granted when there is no evidence of financial difficulties, or where changes to terms and conditions are within UBS AG's usual risk appetite, are not considered to be a credit restructuring.

Modifications represent contract amendments that result in an alteration of future contractual cash flows and that can occur within UBS AG's normal risk appetite or as part of a credit restructuring where a counterparty is in financial difficulties.

A restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying value of a financial asset is recognized in profit or loss as a modification gain or loss. Further, the subsequent SICR assessment is made by comparing the risk of default at the reporting date based on the modified contractual terms of the financial asset with the risk of default at initial recognition based on the original, unmodified contractual terms of the financial asset.

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS AG at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS AG once the commitments are communicated to the beneficiary or that are revocable only due to automatic cancelation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) *derivative loan commitments* measured at fair value through profit or loss, (ii) *loan commitments designated at fair value through profit or loss* or (iii) *other loan commitments*. UBS AG recognizes ECL on non-cancelable other loan commitments. In addition, UBS AG also recognizes ECL on loan commitments that can be canceled at any time if UBS is exposed to credit risk (refer to item g in this Note). Corresponding ECL are presented within *Provisions* on the UBS AG's balance sheet. ECL relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is presented within (i) *Financial assets at fair value held for trading*, consistent with the associated *derivative loan commitment*, (ii) *Financial assets at fair value not held for trading*, following *loan commitments designated at fair value through profit or loss* or (iii) *Loans and advances to customers*, when the associated loan commitment is accounted for as an *other loan commitment*.

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS AG issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss. Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of:

- the amount of ECL (refer to item g in this Note) and
- the amount initially recognized less the cumulative amount of income recognized as of the reporting date.

ECL resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

q. Other net income from fair value changes of financial instruments

The line item *Other net income from fair value changes of financial instruments* substantially includes fair value gains and losses on financial instruments at fair value through profit or loss, as well as the effects at derecognition, trading gains and losses and intermediation income arising from certain client-driven Global Wealth Management and Personal & Corporate Banking financial transactions. In addition, foreign currency translation effects and income and expenses from precious metals are presented under this income statement line item.

Note 1 Basis of accounting (continued)

1.3.2 Update to Note 1a) to the Financial Statements 2017 mainly related to IFRS 15

Update to Note 1a) 4) Fee and commission income and expenses

UBS AG earns fee income from a diverse range of services it provides to its clients. Fee income can be divided into two broad categories:

- fees earned from services that are provided over a certain period of time, such as asset or portfolio management, custody services and certain advisory services and
- fees earned from point in time services such as underwriting fees and brokerage fees (e.g., securities and derivative execution and clearing).

→ **Refer to Note 3 for more information including the disaggregation of revenues**

Over time services

Fees earned from services that are provided over a certain period of time are recognized ratably over the service period provided the fees are not contingent on successfully meeting specified performance criteria that are beyond the control of UBS AG (see measurement below).

Costs to fulfill over time services are recorded in the income statement immediately because such services are considered to be a series of services that are substantially the same from day to day and have the same pattern of transfer. The costs to fulfill neither generate nor enhance the resources of UBS AG that will be used to satisfy future performance obligations and cannot be distinguished between those that relate to satisfied and unsatisfied performance obligations. Therefore, these costs do not qualify to be recognized as an asset. Where costs incurred relate to contracts that include variable consideration that is constrained by factors beyond UBS AG's control, e.g., successful mergers and acquisitions (M&A) activity, or where UBS AG has a history of not recovering such costs on similar transactions, then such costs are expensed immediately as incurred.

Point in time services

Fees earned from providing transaction-type services are recognized when the service has been completed provided such fees are not subject to refund or another contingency beyond the control of UBS AG.

Incremental costs to fulfill services provided at a point in time are typically incurred and recorded at the same time as the performance obligation is satisfied and revenue is earned, and are therefore not recognized as an asset, e.g., brokerage. Where recovery of costs to fulfill relates to an uncompleted point in time service for which the satisfaction of the performance obligation in the contract is dependent upon factors beyond the control of UBS AG, such as underwriting a successful securities issuance, or where UBS AG has a history of not recovering such costs through reimbursement on similar transactions, then such costs are expensed immediately as incurred.

Measurement

Fee and commission income is measured based on consideration specified in a legally enforceable contract with a customer, excluding amounts such as taxes collected on behalf of third parties. Consideration can include both fixed and variable amounts. Variable consideration includes refunds, discounts, performance bonuses and other amounts that are contingent on the occurrence or non-occurrence of a future event. Variable consideration that is contingent on an uncertain event can only be recognized to the extent that it is highly probable that a significant reversal in the amount of cumulative revenue for a contract will not occur. This is referred to as the variable consideration constraint. UBS AG does not consider the highly probable criterion to be met where the contingency on which income is dependent is beyond the control of UBS AG. In such circumstances, UBS AG only recognizes revenue when the contingency has been resolved or an uncertain event has occurred. Examples include asset management performance-linked fees, which are only payable if the returns of a fund exceed a benchmark and are only recognized after the performance period has elapsed. Similarly, M&A advisory fees that are dependent on a successful client transaction are not recognized until the transaction on which the fees are dependent has been executed. Asset management fees (excluding performance-based fees) received on a periodic basis, typically quarterly, that are determined based on a fixed percentage of net asset value that has not been established at the reporting date are estimated and accrued ratably over the period to the next invoice date, except during periods in which market volatility indicates there is a risk of significant reversal. Research revenues earned by the Investment Bank under commission-sharing or research payment account agreements are not recognized until the client has provided a definitive allocation of amounts between research providers, as prior to this UBS AG generally does not have an enforceable right to a specified amount of consideration.

Note 1 Basis of accounting (continued)

Consideration received is allocated to the separately identifiable performance obligations in a contract. Due to the nature of UBS AG's revenues, which do not typically include multiple performance obligations or, where they do, are considered to be a series with the same pattern of transfer, e.g., asset management, significant judgment is not required to allocate a transaction price between performance obligations or in determining the timing of revenue recognition. UBS AG has taken the practical expedient to not disclose information on the allocation of the transaction price to remaining performance obligations in contracts. This is because contracts are typically less than one year in duration. Where contracts have a longer duration, they are either subject to the variable consideration constraint with fees calculated on future net asset value, which cannot be included within the transaction price for the contract, or result in revenue being recognized ratably using the output method corresponding directly to the value of the services completed to date and to which UBS AG would be entitled to invoice upon termination of the contract, e.g., loan commitments.

Presentation of fee and commission income and expense
Fee and commission income and expense are presented gross on the face of the income statement when UBS AG is considered to be principal in the contractual relationship with its customer and any suppliers used to fulfill such contracts. This occurs where UBS AG has control over such services and its relationship with suppliers prior to provision of the service to the client. UBS AG only considers itself to be an agent to services provided by third parties where its client controls the choice of supplier and the services to be provided, and UBS AG does not transform or integrate the service into a UBS AG product or service or take responsibility for the quality of the service, e.g., third-party execution costs for exchange-traded derivatives and fees payable to third-party research providers, where UBS AG is merely acting as a payment agent for its client. When UBS AG is acting as an agent, any costs incurred are directly offset against the associated income.

Presentation of expenses in the income statement
UBS AG presents expenses primarily in line with their nature in the income statement, differentiating between expenses that are incremental and incidental to revenues, which are presented within *Total operating income,* and those that are related to personnel, general and administrative expenses, which are presented within *Total operating expenses*

Contract assets, contract liabilities and capitalized expenses
UBS AG has applied the practical expedient that allows for costs incurred to obtain a contract to be expensed as incurred where the amortization period for any asset recognized would be less than 12 months.

Where UBS AG provides services to clients, consideration is due immediately upon satisfaction of a point in time service or at the end of a prespecified period for an over time service, e.g., certain asset management fees are collected monthly or quarterly, through deduction from a client account, deduction from fund assets or through separate invoicing. Where receivables are recorded, they are presented within *Other financial assets measured at amortized cost.*

Contract liabilities relate to prepayments received from customers where UBS AG is yet to satisfy its performance obligation.

Contract assets are recorded when an entity's right to consideration in exchange for services transferred is conditional on something other than the passage of time, e.g., the entity's future performance.

UBS AG has not recognized any material contract assets, contract liabilities or capitalized expenses during the period and has therefore not provided a contract balances reconciliation.

Note 1 Basis of accounting (continued)

1.4 Adoption of IFRS 9

1.4.1 Introduction

Effective 1 January 2018, UBS AG adopted IFRS 9, *Financial Instruments*, which replaces IAS 39, *Financial Instruments: Recognition and Measurement* and substantially changes accounting and financial reporting in three key areas: classification and measurement of financial assets, impairment and hedge accounting. In addition, UBS AG early adopted the Amendment to IFRS 9, *Prepayment Features with Negative Compensation*, issued in October 2017, which allows UBS AG to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs. UBS AG has retained hedge accounting under IAS 39 as permitted and early adopted the own credit requirements of IFRS 9 during the first quarter of 2016.

As permitted by the transitional provisions of IFRS 9, UBS AG elected not to restate comparative figures. Any effect on the carrying amounts of financial assets and liabilities at the date of transition to IFRS 9 was recognized as an adjustment to opening retained earnings. The detailed effects of the adoption of IFRS 9 on 1 January 2018 are presented in this Note and the updated accounting policies for classification and measurement of financial instruments and impairment of financial assets as applied from 1 January 2018 are presented in Note 1.3.

1.4.2 Transition impact

The adoption of IFRS 9 effective 1 January 2018 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of impairment requirements based on an ECL methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. Further detail is provided in section 1.4.5 of this Note.

UBS AG continues to test and refine the new accounting processes, internal controls and governance framework necessitated by the adoption of IFRS 9. Therefore, the estimation of ECL and related effects remain subject to change until finalization of the financial statements for the year ending 31 December 2018.

→ **Refer to the 31 March 2018 Pillar 3 report – UBS Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the effect of the IFRS 9 transition on UBS's capital adequacy**

1.4.3 Governance

The implementation of IFRS 9 has been a key strategic initiative for UBS implemented under the joint sponsorship of the Group Chief Financial Officer and the Group Chief Risk Officer. The incorporation of forward-looking information into the ECL calculation and the definition and assessment of what constitutes a significant increase in credit risk (SICR) are inherently subjective and involve the use of significant expert judgment. Therefore, UBS AG has developed a front-to-back governance framework over the ECL calculation process jointly owned by the Group Chief Financial Officer and the Group Chief Risk Officer and has designed controls to be in compliance with the requirements of the Sarbanes-Oxley Act. UBS AG has efficient credit risk management processes in place that continue to be applicable and aim to ensure the effects of economic developments are appropriately considered, mitigation actions are taken where required and risk appetite is reassessed and adjusted as needed.

→ **Refer to the "Risk management and control" section of the Annual Report 2017 for more information**

1.4.4 Retrospective amendments to UBS AG balance sheet presentation

Although the effect of IFRS 9 classification and measurement changes has been applied prospectively, UBS AG has made a series of changes to the presentation of its IFRS balance sheet to facilitate comparability and prior-period information is presented for periods ending before 1 January 2018 in this revised structure. The primary changes include:

- IAS 39-specific asset categories, such as "Financial assets held to maturity" and "Financial assets available for sale," have been superseded by the new categories "Financial assets measured at amortized cost" and "Financial assets measured at fair value through other comprehensive income."
- A new line, *Financial assets at fair value not held for trading*, has been created to accommodate in particular financial assets previously designated at fair value, all of which are mandatorily classified at fair value through profit or loss under IFRS 9.

Note 1 Basis of accounting (continued)

Other assets and *Other liabilities* have been split between measured at amortized cost, measured at fair value through profit or loss and other non-financial assets and liabilities.

- *Cash collateral on securities borrowed* and *Reverse repurchase agreements* have been combined into a single line, *Receivables from securities financing transactions.* Similarly, *Cash collateral on securities lent* and *Repurchase agreements* have been combined into a single line, *Payables from securities financing transactions.*
- Finance lease receivables, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost.*
- Precious metal positions previously presented in *Trading portfolio assets* are now presented within the new line *Other non-financial assets.*
- *Financial liabilities designated at fair value* have been split into two lines: *Debt issued designated at fair value* and *Other financial liabilities designated at fair value.*
- Obligations of UBS AG from funding received from UBS Group AG or its subsidiaries, which are not within the UBS AG scope of consolidation, previously included within *Due to customers, are* now presented separately within *Funding from UBS Group AG and its subsidiaries.*

Note 1 Basis of accounting (continued)

The table below illustrates the new balance sheet presentation of assets and liabilities as of 31 December 2017 in comparison with the presentation in the Annual Report 2017. The presentation of the components of equity has not changed, and therefore, for illustration purposes, total liabilities and equity are presented in a single line in the table. The table does not reflect any of the effects of adopting the classification and measurement requirements of IFRS 9, which are presented in section 1.4.5 under *Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9.*

Retrospective amendments to UBS AG's balance sheet presentation as of 31 December 2017

CHF million		31.12.17	31.12.17
Assets	References	Former presentation	Revised presentation
Cash and balances at central banks		87,775	87,775
Loans and advances to banks (formerly: Due from banks)		13,693	13,693
Receivables from securities financing transactions (new line)	1		89,633
Cash collateral on securities borrowed (newly included in Receivables from securities financing transactions)	1	12,393	
Reverse repurchase agreements (newly included in Receivables from securities financing transactions)	1	77,240	
Cash collateral receivables on derivative instruments		23,434	23,434
Loans and advances to customers (formerly: Loans)	2	321,718	320,659
Financial assets held to maturity (superseded)	3	9,166	
Other financial assets measured at amortized cost (new line)	2,3,7		36,935
Total financial assets measured at amortized cost			572,129
Financial assets at fair value held for trading (formerly: Trading portfolio assets)	4	130,807	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties		*35,363*	*35,363*
Derivative financial instruments (formerly: Positive replacement values)		118,229	118,229
Brokerage receivables (new line, formerly included within Other assets)		n/a	n/a
Financial assets at fair value not held for trading (new line)	5		58,556
Financial assets designated at fair value	5	58,556	
Total financial assets measured at fair value through profit or loss			303,028
Financial assets available for sale (superseded)	6	8,665	
Financial assets measured at fair value through other comprehensive income (new line)	6		8,665
Investments in associates		1,018	1,018
Property, equipment and software		7,985	7,985
Goodwill and intangible assets		6,398	6,398
Deferred tax assets		9,783	9,783
Other non-financial assets (new line)	4,7		7,358
Other assets (superseded)	7	29,505	
Total assets		916,363	916,363
Liabilities			
Amounts due to banks		7,533	7,533
Payables from securities financing transactions (new line)	8		17,044
Cash collateral on securities lent (newly included in Payables from securities financing transactions)	8	1,789	
Repurchase agreements (newly included in Payables from securities financing transactions)	8	15,255	
Cash collateral payables on derivative instruments		30,247	30,247
Customer deposits (formerly: Due to customers)	9	447,141	412,392
Funding from UBS Group AG and its subsidiaries (new line, formerly included within Due to customers)	9		34,749
Debt issued measured at amortized cost		104,749	104,749
Other financial liabilities measured at amortized cost (new line)	11		37,133
Total financial liabilities measured at amortized cost			643,847
Financial liabilities at fair value held for trading (formerly: Trading portfolio liabilities)		30,463	30,463
Derivative financial instruments (formerly: Negative replacement values)		116,134	116,134
Brokerage payables designated at fair value (new line, formerly included within Other liabilities)		n/a	n/a
Financial liabilities designated at fair value (superseded)	10	54,202	
Debt issued designated at fair value (new line)	10		49,502
Other financial liabilities designated at fair value (new line)	10,11		16,223
Total financial liabilities measured at fair value through profit or loss			212,323
Provisions		3,084	3,084
Other non-financial liabilities (new line)	11		6,335
Other liabilities (superseded)	11	54,990	
Total liabilities		865,588	865,588
Total liabilities and equity		916,363	916,363

Note 1 Basis of accounting (continued)

Explanatory footnotes to the table "Retrospective amendments to UBS AG balance sheet presentation"

Table ref.	Description of presentation changes applied retrospectively to the balance sheet as of 31 December 2017
Balance sheet assets	
1	Cash collateral on securities borrowed of CHF 12,393 million and reverse repurchase agreements of CHF 77,240 million as of 31 December 2017 are now presented as a total of CHF 89,633 within a single line, *Receivables from securities financing transactions*.
2	Finance lease receivables of CHF 1,059 million as of 31 December 2017, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
3	*Financial assets held to maturity* measured at amortized cost of CHF 9,166 million as of 31 December 2017 are now presented within *Other financial assets measured at amortized cost*.
4	Precious metal positions of CHF 4,563 million as of 31 December 2017, previously presented in *Trading portfolio assets*, are now presented within *Other non-financial assets*.
5	Financial assets designated at fair value through profit or loss of CHF 58,556 million as of 31 December 2017, previously presented in a separate line, are now presented within *Financial assets at fair value not held for trading*.
6	Debt and equity instruments of CHF 8,665 million as of 31 December 2017 previously presented in *Financial assets available for sale* are now presented within *Financial assets measured at fair value through other comprehensive income*.
7	The reporting line *Other assets* has been split into two new reporting lines, *Other financial assets measured at amortized cost* and *Other non-financial assets*. – Assets of CHF 29,505 million as of 31 December 2017, previously presented within Other assets, are now presented within Other assets measured at amortized cost (CHF 26,710 million) and Other non-financial assets (CHF 2,795 million). – Financial assets now presented within Other financial assets measured at amortized cost include brokerage receivables of CHF 19,080 million, debt securities of CHF 9,166 million, loans to financial advisors of CHF 3,118 million and other assets amounting to CHF 5,571 million. Refer to Note 11 a) for more information. – Refer to Note 11 b) for more information on assets now presented within *Other non-financial assets*.
Balance sheet liabilities	
8	Cash collateral on securities lent of CHF 1,789 million and repurchase agreements of CHF 15,255 million as of 31 December 2017 are now presented within a single line, *Payables from securities financing transactions*.
9	Obligations of UBS AG from funding received from UBS Group AG or its subsidiaries of CHF 34,749 million as of 31 December 2017, which are not within the UBS AG scope of consolidation and were previously included within *Due to customers*, are now presented separately within *Funding from UBS Group AG and its subsidiaries*.
10	Financial liabilities designated at fair value through profit or loss of CHF 54,202 million as of 31 December 2017 are now presented within *Debt issued designated at fair value* (CHF 49,502 million) and *Other financial liabilities designated at fair value* (CHF 4,700 million).
11	The reporting line *Other liabilities* has been split into three new reporting lines, *Other financial liabilities measured at amortized cost*, *Other financial liabilities designated at fair value* and *Other non-financial liabilities*. – Liabilities amounting to CHF 54,990 million as of 31 December 2017, previously presented within *Other liabilities,* are now presented within *Other financial liabilities measured at amortized cost* (CHF 37,133 million, thereof CHF 29,646 million brokerage payables), within *Other financial liabilities designated at fair value* (amounts due under unit-linked investment contracts of CHF 11,523 million) and within *Other non-financial liabilities* (CHF 6,335 million). – Refer to note 11 c) for more information on financial liabilities now presented within *Other financial liabilities measured at amortized cost.* – Refer to note 11 d) for more information on financial liabilities now presented within *Other financial liabilities designated at fair value*. – Refer to note 11 e) for more information on liabilities now presented within *Other non-financial liabilities*.

Note 1 Basis of accounting (continued)

1.4.5 Transition to IFRS 9 as of 1 January 2018

Transition to Classification and measurement requirements

As set out in the amended accounting policies in Note 1.3, IFRS 9 requires all financial assets, except equity instruments and derivatives, to be classified at amortized cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL), based on the business model for managing the respective assets and their contractual cash flow characteristics.

Changes resulting from the application of IFRS 9 classification and measurement requirements as of 1 January 2018 have been applied as follows:

- Determination of the business model was made based on facts and circumstances as of the 1 January 2018 transition date;
- De-designations and new designations of financial instruments at FVTPL, pursuant to transition requirements of IFRS 9, have been carried out as of 1 January 2018. These reassessments resulted in:
  i. the de-designation of certain financial assets designated at FVTPL, as they are managed on a fair value basis, and therefore are mandatorily measured at fair value, or no longer managed on a fair value basis but held to collect the contractual cash flows and therefore are measured at amortized cost;
  ii. newly designated financial liabilities at FVTPL (e.g., brokerage payables) in order to achieve measurement consistency with associated financial assets that are mandatorily measured at FVTPL (e.g., brokerage receivables).

For UBS AG, the most significant IFRS 9 classification and measurement changes on transition to IFRS 9 are as follows:

- financial assets that no longer qualify for amortized cost accounting under IFRS 9 have been classified at FVTPL because their cash flow characteristics do not satisfy the solely payments of principal and interest criteria (e.g., auction rate securities and certain brokerage receivables);
- lending arrangements that no longer qualify for amortized cost accounting under IFRS 9 are classified at FVTPL because the business model within which they are managed does not have an objective to hold financial assets in order to collect the contractual cash flows or to collect contractual cash flows and sell (e.g., certain Investment Bank lending arrangements);
- equity instruments classified as available for sale under IAS 39 are classified at FVTPL under IFRS 9; and
- financial liabilities are newly designated under IFRS 9 at FVTPL, from amortized cost accounting, to align with conclusions reached for associated financial assets that will be measured at FVTPL (e.g., brokerage payables).

Effect on UBS AG income statement presentation

Upon adoption of IFRS 9, the reclassification of auction rate securities, certain loans in the Investment Bank, certain repurchase agreements and brokerage balances from amortized cost to FVTPL has resulted in the interest income from these instruments moving from Interest income (expense) from financial instruments measured at amortized cost to interest income (expense) from financial instruments measured at fair value through profit or loss. These changes have been applied prospectively from 1 January 2018.

Effect on UBS AG Statement of cash flows

Following the adoption of IFRS 9, changes have been made to the Statement of cash flows to reflect the changes arising from financial instruments that have been reclassified on the balance sheet. In particular, cash flows from certain financial assets previously measured as available-for-sale assets at fair value through other comprehensive income have been reclassified from investing activities to operating activities as the assets are fair valued through profit or loss effective 1 January 2018.

Transition to expected credit loss requirements

As set out in UBS AG's amended accounting policies in Note 1.3, IFRS 9 introduces a forward-looking ECL approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39 and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*.

The majority of ECL calculated as of the transition date relates to the private and commercial mortgage portfolio and corporate lending in Switzerland within Personal & Corporate Banking.

Note 1 Basis of accounting (continued)

Models at transition

For the purpose of implementing ECL under IFRS 9, UBS AG has leveraged existing Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models.

Existing models have been adapted and 29 new models have been developed for the ECL calculation that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III TTC parameters. Management adjustments have also been made. UBS AG has leveraged its existing model risk framework, including the key model validation control executed by Model Risk Management & Control. New and revised models have been approved by UBS's GMGB.

The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III remain unchanged.

→ **Refer to "Credit risk models" in the "Risk, treasury and capital management" section of our Annual Report 2017 for more information**

→ **Refer to "Significant accounting and financial reporting changes in 2018" in the "Operating environment and strategy" section of our Annual Report 2017 for more information**

Scenarios and scenario weights at transition

As outlined in Note 1.3, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL calculated on transition have been determined for each of the scenarios and subsequently weighted based on the probabilities in the table "Economic scenarios and weights applied."

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (1.1.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

UBS AG has established IFRS 9 ECL Scenario and Operating Committees to propose and approve the selection of the scenarios and weights to be applied and to monitor whether appropriate governance exists.

Macroeconomic and other factors: For each of the economic scenarios, UBS AG forecasts a wide range of forward-looking macroeconomic, market and other factors. Historical information was used to support the identification of the key factors and to project their development under the different scenarios. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS AG projected those factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS AG's key ECL-relevant portfolios.

The following represent the most significant macroeconomic factors for UBS AG and could substantially change the estimated ECL:

- GDP growth rates, given their significant effect on borrowers' performance
- House price indices, given their significant effect on mortgage collateral valuations
- Unemployment rates, given their significant effect on private clients' ability to meet contractual obligations
- Interest rates, given the significant effect on the counterparties' abilities to service their debt
- Equity indices, given their relevance for equity collateral valuation
- Consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability.

Macroeconomic and other factors at transition

Assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of the economic scenarios to determine ECL at the date of transition can be summarized as follows:

In the upside scenario, which assumes GDP growth rising above trend in most countries with only a moderate rise in inflation and ongoing accommodative monetary policies, GDP growth in Switzerland peaks at around 5% annually. Strong growth leads to a decline in unemployment to very low levels (below 1%) by 2020. Asset prices grow at robust pace, with equity prices increasing by approximately 10% annually and house prices (single-family homes) rising by approximately 4% annually. Policy and short-term interest rates remain low over the entire scenario, while government bond yields experience a sustained increase.

Note 1 Basis of accounting (continued)

In the US and the rest of the world, the scenario shows broadly similar features, with growth accelerating in Year 1 before steadily returning toward trend by Year 3. Specifically in the US, GDP growth accelerates at a slightly faster pace than in Switzerland, although the US experiences a slightly less substantial improvement in the unemployment rate by Year 3. The degree of policy tightening is marginally greater over the scenario horizon and, as in Switzerland, long-term government bond yields rise more significantly than short-term rates, and to a greater degree.

For the baseline scenario, which is modelled along our business plan assumptions of a continuation of overall important global growth, Swiss GDP growth remains between 1% and 2% annually over the three years of the scenario. Moderate growth results in a very mild increase of unemployment, which stabilizes at around 3.5%. Asset price growth is also moderate, with the Swiss equity price index rising by approximately 8% annually, while house prices grow by less than 1% annually. Policy rates, short-term interest rates and government bond yields increase very gradually over the three years of the scenario by approximately 50 basis points.

GDP growth in the US remains relatively stable, and faster than in Switzerland. Monetary policy tightens at a similar pace to Switzerland and, combined with a modest decline in the unemployment rate, helps to keep inflation in check. US equity prices slightly underperform their Swiss counterparts, while house prices outperform relatively stagnant Swiss house price growth. In the rest of the world, growth remains buoyant, with moderating growth in both Europe and China contrasting with accelerating growth in other emerging markets.

The mild downside scenario is based on a monetary policy tightening assumption, implemented to deflate a potential asset price bubble, causing Swiss GDP to decline by almost 1% in the first year of the scenario. The unemployment rate rises to roughly 5%. Equity prices fall by more than 20% over three years, while house prices decline by 15% over the same period. The fall of the nominal asking rent index is cushioned by higher interest rates, which register a more moderate decline than house prices. Short-term interest rates rise significantly due to monetary tightening, as well as government bond yields.

In this scenario, inflation in the US accelerates rapidly, leading to a sharp rise in short-term interest rates, similar to Switzerland. GDP growth averages a similar pace to Switzerland over three years, while equity and house prices also fall by a broadly similar degree to their Swiss equivalents. In the rest of the world, growth is also weighed down, particularly in more vulnerable emerging markets such as Russia, Turkey and Brazil, as interest rates and credit spreads rise sharply.

The severe downside scenario is modeled to mimic a severe recession caused by an event affecting Switzerland's competitiveness in key export markets, with Swiss GDP shrinking almost 7% in the first year of the scenario. The severe recession results in a substantial increase in unemployment, which peaks at around 9%. Asset prices plummet, with the Swiss equity index falling more than 55% over three years, and house prices declining 27% over the same period. Policy and short-term interest rates remain low over the entire scenario horizon.

US GDP and unemployment deteriorate by a lesser degree than in Switzerland, and while house and equity prices decline sharply, the effects are also less severe than in Switzerland. With more scope to cut rates than the SNB, short-term rates fall in the US. In the rest of the world, growth also slows sharply, particularly in the eurozone and neighboring emerging markets such as Turkey and Russia.

ECL measurement period at transition

As set out in Note 1.3, for the majority of ECL-relevant instruments, the contractual maturity is used to calculate the measurement period, with this capped at 12 months when stage 1 ECL are required. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS AG must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit cards and 12 months for master credit facilities. UBS AG's ECL-relevant financial instruments have relatively short average maturities, which significantly contribute to the level of ECL on transition.

SICR determination at transition

The identification of instruments for which an SICR has been determined since initial recognition and the corresponding allocation to stage 2 at transition generally follow the principles described in the relevant accounting policy provided in Note 1.3. Furthermore, the following principles have been applied:

General: In estimating the retrospective lifetime PDs, we have considered the economic conditions over the relevant prior periods and the general significant uncertainty inherent in such approximation to determine the allocation of instruments to stage 2 at transition.

Note 1 Basis of accounting (continued)

Real estate financing: The Basel III rating methodology applied to the majority of income-producing real estate financings within Personal & Corporate Banking, which is leveraged for IFRS 9 ECL calculations, was significantly changed in 2017. As a consequence, there is no comparable rating on origination to determine whether an SICR has arisen over time. As permitted by the IFRS 9 transition requirements, a lifetime ECL allowance has therefore been recognized for certain real estate financing positions and will continue to be recognized until the positions are derecognized.

Other portfolios, including private mortgages and commercial SME clients: The Basel III rating models for other key portfolios in Personal & Corporate Banking, in particular for private client mortgages and commercial clients in the small and medium-sized enterprise (SME) segment, have recently been subject to a major redesign. While the methodology remained essentially the same and the calibration to the portfolios' average TTC PD value unchanged, the effect on the stage allocation is significant. This is due to the fact that the introduction of new models has led to a broader and different distribution of borrowers across the rating spectrum; while there was no material effect on those counterparties with an uplift in their rating, some of those that had a downward shift in their rating triggered the SICR threshold and a reclassification into stage 2 at transition.

The table on the following pages provides a detailed overview of the IFRS 9 transition effects as of 1 January 2018. This includes:
– reclassification of IAS 39 carrying amounts to the new categories applicable under IFRS 9;
– remeasurement of carrying amounts due to reclassification (any remeasurement to fair value and / or reversal of IAS 39 allowances or IAS 37 provisions for assets moving from amortized cost to fair value); and
– recognition of IFRS 9 ECL for in-scope assets, off-balance sheet positions and other credit lines.

The following table also includes the effects recognized for deferred tax assets and therefore the total impact provided in *Retained earnings* in the table is net of tax effects. Explanatory footnotes provided after the table provide additional details on these changes.

Note 1 Basis of accounting (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9

	31.12.17		1.1.18			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39/ IAS 37 allowances/ provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Assets						
Cash and balances at central banks	Loans and receivables	87,775			0	87,775
Loans and advances to banks	Loans and receivables	13,693	(17)		(3)[12]	13,673
to: Brokerage receivables	*Loans and receivables*		*(17)*[1]			
Receivables from securities financing transactions	Loans and receivables	89,633	(4,957)		(2)[12]	84,674
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(4,957)*[2]			
Cash collateral receivables on derivative instruments	Loans and receivables	23,434			0	23,434
Loans and advances to customers	Loans and receivables	320,659	(7,822)	0	(235)[12]	312,602
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(2,678)*[3]			
to: Brokerage receivables	*Loans and receivables*		*(4,691)*[1]			
to: Financial assets at fair value held for trading	*Loans and receivables*		*(468)*[4]			
from: Financial assets at fair value not held for trading	*FVTPL (designated)*		*8*[5]	*0*		
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*6*[5]			
Other financial assets measured at amortized cost	Loans and receivables, held to maturity	36,935	(18,525)	0	(35)[12]	18,375
to: Brokerage receivables	*Loans and receivables*		*(19,080)*[1]			
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*555*[6]	*0*		
Total financial assets measured at amortized cost		572,129	(31,321)	0	(275)	540,533
Financial assets at fair value held for trading	FVTPL (held for trading)	126,244	(10,854)	(15)		115,375
to: Loans and advances to customers	*FVTPL (held for trading)*		*(6)*[5]			
to: Financial assets at fair value not held for trading	*FVTPL (held for trading)*		*(11,316)*[7]			
from: Loans and advances to customers	*Loans and receivables*		*468*[4]	*(15)*[4]		
of which: assets pledged as collateral that may be sold or repledged by counterparties	*FVTPL (held for trading)*	*35,363*				*35,363*
Derivative financial instruments	FVTPL (derivatives)	118,229				118,229
Brokerage receivables	Loans and receivables		23,787			23,787
from: Loans and advances to banks	*Loans and receivables*		*17*[1]			
from: Loans and advances to customers	*Loans and receivables*		*4,691*[1]			
from: Other financial assets measured at amortized cost	*Loans and receivables*		*19,080*[1]			
Financial assets at fair value not held for trading	FVTPL (designated)	58,556[9]	20,297	(287)		78,566
to: Loans and advances to customers	*FVTPL (designated)*		*(8)*[5]			
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*11,316*[7]			
from: Receivables from securities financing transactions	*Loans and receivables*		*4,957*[2]	*(1)*		
from: Loans and advances to customers	*Loans and receivables*		*2,678*[3]	*(286)*[3]		
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*1,356*[8]			
Total financial assets measured at fair value through profit or loss		303,028	33,231	(303)		335,957
Financial assets measured at fair value through other comprehensive income	**Available-for-sale**	8,665	(1,911)			6,755[10]
to: Other financial assets measured at amortized cost	*Available-for-sale*		*(555)*[6]			
to: Financial assets at fair value not held for trading	*Available-for-sale*		*(1,356)*[8]			
Investments in associates		1,018				1,018
Property, equipment and software		7,985				7,985
Goodwill and intangible assets		6,398				6,398
Deferred tax assets		9,783		58[11]	64[11]	9,905
Other non-financial assets		7,358				7,358
Total assets		916,363		(245)	(211)	915,908

Note 1 Basis of accounting (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9 (continued)

	31.12.17		1.1.18			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39/ IAS 37 allowances/ provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Liabilities						
Amounts due to banks	Amortized cost	7,533				7,533
Payables from securities financing transactions	Amortized cost	17,044	(5,081)			11,963
to: Other financial liabilities designated at fair value	*Amortized cost*		*(5,081)*[13]			
Cash collateral payables on derivative instruments	Amortized cost	30,247				30,247
Customer deposits	Amortized cost	412,392	(5,268)			407,124
to: Brokerage payables designated at fair value	*Amortized cost*		*(5,268)*[14]			
Funding from UBS Group AG and its subsidiaries	Amortized cost	34,749				34,749
Debt issued measured at amortized cost	Amortized cost	104,749				104,749
Other financial liabilities measured at amortized cost	Amortized cost	37,133	(29,646)	(4)		7,482
to: Brokerage payables designated at fair value	*Amortized cost*		*(29,646)*[14]			
Derecognition: deferred fees on other loan commitments	*Amortized cost*			*(4)*[4]		
Total financial liabilities measured at amortized cost		643,847	(39,996)	(4)		603,848
Financial liabilities at fair value held for trading	FVTPL (held for trading)	30,463				30,463
Derivative financial instruments	FVTPL (derivatives)	116,134		57		116,192
Recognition: Loan commitments	*Amortized cost – off-balance sheet*			*60*[4]		
Derecognition: Loan commitments	*FVTPL (derivatives)*			*(2)*[5]		
Brokerage payables designated at fair value	Amortized cost		34,915			34,915
from: Customer deposits	*Amortized cost*		*5,268*[14]			
from: Other financial liabilities measured at amortized cost	*Amortized cost*		*29,646*[14]			
Debt issued designated at fair value	FVTPL (designated)	49,502				49,502
Other financial liabilities designated at fair value	FVTPL (designated)	16,223	5,081	(5)		21,300
from: Payables from securities financing transactions	*Amortized cost*		*5,081*[13]	*(5)*[13]		
Total financial liabilities measured at fair value through profit or loss		212,323	39,996	53		252,371
Provisions		3,084			74[12]	3,158
Other non-financial liabilities		6,335				6,335
Total liabilities		865,588		49	74	865,711
Equity						
Share capital		386				386
Share premium		26,966				26,966
Retained earnings		29,102	72[8,15]	(293)	(284)	28,597
Other comprehensive income recognized directly in equity, net of tax		(5,736)	(72)[8,15]			(5,808)
Equity attributable to shareholders		50,718	0	(293)[15]	(284)[15]	50,141
Equity attributable to non-controlling interests		57				57
Total equity		50,775	0	(293)	(284)	50,198
Total liabilities and equity		916,363	0	(245)	(211)	915,908

Note 1 Basis of accounting (continued)

Explanatory footnotes to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9"

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018
1	Certain customer and prime brokerage receivable balances, in the Investment Bank and Global Wealth Management, fail the solely payments of principal and interest (SPPI) criteria for measurement at amortized cost. This includes CHF 4,691 million previously included within *Loans and advances to customers*, CHF 17 million from *Loans and advances to banks* and CHF 19,080 million previously included within *Other financial assets measured at amortized cost*. The receivables are managed under a business model whose objective is to hold the assets to collect contractual cash flows. However, the reported receivables represent an aggregation of cash receivable and payable balances that form a single unit of account at the client level and generate a return that does not constitute consideration for the time value of money, credit risk and other basic lending risks. The SPPI criterion is therefore not met and under IFRS 9 the receivables are mandatorily measured at FVTPL and separately presented as *Brokerage receivables*. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
2	Based on the business model assessment under IFRS 9, certain reverse repurchase agreements with a carrying amount of CHF 4,957 million as of 31 December 2017 were determined to be managed on a fair value basis and were therefore reclassified from amortized cost to FVTPL measurement under IFRS 9. The carrying value has been reclassified from *Receivables from securities financing transactions* to *Financial assets at fair value not held for trading* as of 1 January 2018. A remeasurement loss of CHF 1 million has been recorded in *Retained earnings*. CHF 11,490 million of forward starting reverse repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
3	Certain positions previously included within *Loans and advances to customers* with a carrying amount of CHF 2,678 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* upon adoption of IFRS 9. This includes: – auction rate securities (CHF 2,114 million) that are held in Corporate Center and that contain an embedded leverage feature triggering the failure of the SPPI criteria. – certain loans in the Investment Bank (CHF 552 million) and in Corporate Center (CHF 12 million), which either fail the SPPI criteria or are held within a business model with an intent to sell or substantially hedge the primary risks. These assets are mandatorily measured at FVTPL under IFRS 9. A corresponding net remeasurement loss of CHF 286 million was recognized in *Retained earnings* related to these reclassifications. This remeasurement loss also included reversal of specific credit loss allowances (CHF 11 million).
4	Due to a change in the underlying business model, loans and advances to customers with a carrying amount of CHF 468 million as of 31 December 2017 have been reclassified to *Financial assets at fair value held for trading* as of 1 January 2018. A corresponding net remeasurement loss of CHF 15 million, which includes the reversal of specific IAS 39 credit loss allowances, was recognized in *Retained earnings* related to this reclassification. Irrevocable loan commitments that are contractually linked with these financial assets are now recognized as *Derivative financial instruments* (derivative liabilities) and are measured at FVTPL as of 1 January 2018. This reclassification resulted in a CHF 60 million loss with a corresponding entry to *Retained earnings*. Liabilities related to deferred fees of CHF 4 million related to these loan commitments recorded as *Other financial liabilities measured at amortized cost* at 31 December 2017 were derecognized with a corresponding entry to *Retained earnings*.
5	Financial assets with a carrying amount of CHF 14 million as of 31 December 2017 were reclassified to *Loans and advances to customers* from *Financial assets at fair value not held for trading* (CHF 8 million) and from *Financial assets at fair value held for trading* (CHF 6 million) given management's intent to hold these financial assets to collect contractual cash flows. Loan commitments related to these financial assets, which were recognized as derivative liabilities with a carrying value of CHF 2 million as of 31 December 2017, were accordingly derecognized on 1 January 2018 with a corresponding entry to *Retained earnings*.
6	Certain debt instruments with a carrying amount of CHF 555 million as of 31 December 2017 were formerly classified as available for sale and measured at FVOCI under IAS 39 but are measured at amortized cost under IFRS 9. Those positions, which are held to collect cash flows solely representing payment of principal and interest, are presented within *Other financial assets measured at amortized cost* as of 1 January 2018. The fair value of these assets was consistent with the amortized cost value as of 1 January 2018 and no remeasurement gain or loss has been recognized.
7	Upon adopting IFRS 9, UBS AG has elected to refine the assets classified within *Financial assets at fair value held for trading* to carve out those that are segregated from UBS AG's trading activities, where UBS AG's role is primarily to manage the assets on a fair value basis on behalf of others. Instead, such assets will be presented alongside others managed on a fair value basis within *Financial assets at fair value not held for trading*. As a consequence of this refinement, UBS AG has reclassified assets held to hedge unit linked investment contracts of CHF 11,316 million from *Financial assets at fair value held for trading* to *Financial assets at fair value not held for trading* as of 1 January 2018. No remeasurement gain or loss has been recognized.

Note 1 Basis of accounting (continued)

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018 (continued)
8	UBS AG holds certain global and local liquidity buffers that were determined to be managed on a fair value basis as management utilizes fair value information for reporting and decision making purposes. Therefore, assets previously classified as available for sale under IAS 39 with a carrying amount of CHF 620 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading*. An unrealized gain of CHF 5 million related to these positions was reclassified from *Other comprehensive income* to *Retained earnings*. Additionally, equity instruments and investment fund units previously classified as available for sale under IAS 39 with a carrying amount of CHF 736 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules. A related unrealized gain in OCI of CHF 199 million has been reclassified to *Retained earnings*. Additionally, a net tax expense of CHF 131 million was transferred from OCI to *Retained earnings* related to the positions above which were reclassified out of the IAS 39 available-for-sale category.
9	Assets previously designated at FVTPL with a carrying amount of CHF 58,556 million as of 31 December 2017 are no longer designated as such under IFRS 9, as it was determined that these assets were either held in a business model that is managed on a fair value basis, did not meet the SPPI criteria, or did meet the SPPI criteria and are held in a hold to collect business model. Of the total, assets with a carrying amount of CHF 58,548 million are now mandatorily measured at FVTPL and included within *Financial assets at fair value not held for trading*. The remaining assets with a carrying amount of CHF 8 million have been de-designated and were reclassified to *Loans and advances to customers* given a change in business model to hold to collect (refer to footnote 5).
10	Certain debt instruments with a carrying amount of CHF 6,755 million as of 31 December 2017, were formerly classified as available for sale under IAS 39 and are measured at FVOCI under IFRS 9. These instruments include U.S. government bonds and U.S. government sponsored mortgage-backed securities and other debt that are held in a business model whose objective is achieved by both collecting contractual cash flows and selling, and that meet the SPPI criteria. These positions are now presented within *Financial assets measured at fair value through other comprehensive income*.
11	Deferred tax assets of CHF 122 million have been recognized in connection with the adoption of IFRS 9. Of the total effect, CHF 64 million relates to the recognition of ECL and CHF 58 million relates to classification and measurement changes upon adoption of IFRS 9.
12	Upon adoption of the ECL requirements of IFRS 9, a transition impact of CHF 348 million was recognized, consisting of CHF 144 million of stage 1 allowances, CHF 188 million of stage 2 allowances and an incremental increase in stage 3 allowances of CHF 16 million. The effect was mainly recognized within *Loans and advances to customers* (CHF 235 million), with effects also recognized in *Other financial assets measured at amortized cost* (CHF 35 million), *Loans and advances to banks* (CHF 3 million), *Receivables from securities financing transactions* (CHF 2 million) and *Provisions* (CHF 74 million).
13	Certain repurchase agreements with a carrying amount of CHF 5,081 million as of 31 December 2017 have been designated at FVTPL as they are managed in conjunction with reverse repurchase agreements that are mandatorily measured at FVTPL under IFRS 9. These amounts are included within *Other financial liabilities designated at fair value* as of 1 January 2018. A remeasurement gain of CHF 5 million has been recognized in *Retained earnings* as of 1 January 2018 related to this reclassification. CHF 7,730 million of forward starting repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
14	To achieve measurement consistency with reclassified customer and prime brokerage receivables that are measured at FVTPL following adoption of IFRS 9, certain customer deposits with a carrying amount of CHF 5,268 million and prime brokerage payables with a carrying amount of CHF 29,646 million as of 31 December 2017 have been designated at FVTPL and are presented within *Brokerage payables designated at fair value* as of 1 January 2018. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
15	The adoption of IFRS 9 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of ECL credit loss methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. In addition, CHF 72 million has been reclassified from *Other comprehensive income* recognized directly in equity, net of tax, to *Retained earnings* (refer to footnote 8 above), with no overall impact on equity attributable to shareholders.

Note 1 Basis of accounting (continued)

Reconciliation of allowances and provisions on adoption of IFRS 9 as of 1 January 2018

The table below provides a reconciliation from the IAS 39 allowances / IAS 37 provisions to the IFRS 9 ECL allowances / provisions recognized as of 1 January 2018 upon adoption of IFRS 9.

Reconciliation of allowances and provisions on adoption of IFRS 9

	31.12.17	1.1.18		
CHF million	Loss allowances and provisions (IAS 39 / IAS 37)	Reversal of allowances (IAS 39)	Recognition of ECL (IFRS 9)[1]	Allowances for ECL / Provisions for ECL (IFRS 9)
On-balance sheet				
Cash and balances at central banks			0	0
Loans and advances to banks	(3)		(3)	(5)
Receivables from securities financing transactions			(2)	(2)
Cash collateral receivables on derivative instruments			0	0
Loans and advances to customers	(658)	26[2]	(235)[3]	(867)
Other financial assets measured at amortized cost	(101)[4]		(35)	(136)
Total on-balance sheet	(761)	26	(275)	(1,011)
Off-balance sheet financial instruments and other credit lines				
Guarantees	(29)		(8)	(37)
Loan commitments	(4)		(32)	(36)
Other credit lines			(34)	(34)
Total off-balance sheet financial instruments and other credit lines	(33)		(74)	(107)
Total	(794)	26	(348)	(1,117)
of which: Stage 1			*(144)*	*(144)*
of which: Stage 2			*(188)*	*(188)*
of which: Stage 3			*(16)*[5]	*(785)*

1 Includes stage 1 and stage 2 expected credit losses and additional stage 3 expected credit losses. 2 The reversal of CHF 26 million of IAS 39 loss allowances relates to instruments reclassified from amortized cost to fair value through profit or loss on transition to IFRS 9. Refer also to footnotes 3 and 4 to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9." 3 Includes the reversal of collective allowances of CHF 13 million. 4 Includes CHF 82 million related to loans to financial advisors for which an allowance was reported as a direct reduction of the carrying amount as of 31 December 2017. 5 The incremental increase in stage 3 allowances of CHF 16 million arises from additional consideration of forward looking scenarios under IFRS 9.

Note 1 Basis of accounting (continued)

IFRS 9 transition impact on other comprehensive income and retained earnings as of 1 January 2018

The table below presents the transition effects recognized in OCI and retained earnings upon adoption of IFRS 9.

IFRS 9 impact on other comprehensive income and retained earnings

CHF million	
Other comprehensive income recognized directly in equity, net of tax	
Reclassification of financial assets (available for sale to fair value through profit or loss) – equity instruments	(199)
Reclassification of financial assets (available for sale to fair value through profit or loss) – debt instruments	(5)
Tax (expense) / benefit	131
Total change in other comprehensive income	(72)
Retained earnings	
Remeasurement of financial assets (reclassified from amortized cost to fair value through profit or loss)	(303)
Reclassification of financial assets (reclassified from available for sale to fair value through profit or loss)	204
Recognition of ECL for on-balance sheet financial assets	(275)
Remeasurement of financial liabilities (reclassified from amortized cost to designated at fair value through profit or loss)	5
Recognition of derivative loan commitments measured at fair value through profit or loss	(60)
Derecognition of liabilities for deferred fees on other loan commitments	4
Derecognition of derivative loan commitments measured at fair value through profit or loss	2
Recognition of ECL for off-balance sheet positions	(74)
Tax (expense) / benefit	(9)
Total change in retained earnings	(505)
Total change in equity due to the adoption of IFRS 9	(577)

Note 1 Basis of accounting (continued)

1.4.6 Information on IFRS 9 exposures and allowances / provisions as of 1 January 2018

Key balance sheet and off-balance sheet positions as of 1 January 2018

The opening balances for certain key balance sheet and off-balance sheet positions subject to ECL, broken down by segments and stages, are presented in Note 8b. UBS AG has established ECL disclosure segments or "ECL segments" to disaggregate portfolios based on shared risk characteristics and on the same or similar rating methods applied. These segments are presented in the table below.

Segment	**Private clients with mortgages**	**Real estate financing**	**Large corporate clients**	**SME clients**	**Financial interme-diaries and hedge funds[1]**	**Sovereigns and public non-profit organiz-ations[1]**	**Lombard**	**Other[1]**
Segment description	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Rental or income-producing real estate financing to corporate clients secured by real estate	Lending to large corporate and multinational clients	Lending to small- and medium-sized corporate clients	Financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Public and (sub-) sovereign partners, including cantons, cities and non-profit organizations	Loans secured by pledges of marketable securities, guarantees and other forms of collateral	Remaining smaller segments including commodity trade finance, credit cards and aircraft lending
Description of credit risk sensitivity	Sensitive to the interest rate environment, employment status and influence from regional effects (e.g., property values)	Sensitive to GDP development, the interest rate environment and regional effects (e.g., property values)	Sensitive to GDP development, seasonality and business cycles, collateral values (diverse collateral including real estate and other collateral types)	Sensitive to GDP development, the interest rate environment and to some extent, seasonality and business cycles, collateral values (diverse collateral including real estate and other collateral types)	Sensitive to GDP development, the interest rate environment, regulatory changes and political risk	Sensitive to (geo-) political events and GDP development (through tax revenues)	Sensitive to the market (e.g., changes in collateral, as well as in invested assets)	Sensitivity based on specific lending conditions
Personal & Corporate Banking	●	●	●	●	●	●	●	●
Global Wealth Management	●	●					●	●
Investment Bank			●		●	●		●
Corporate Center					●			●

1 Not subject to separate disclosure in Note 8.

Note 1 Basis of accounting (continued)

1.5 Other new accounting standards and changes in accounting policies effective first quarter 2018

IFRS 7, *Financial Instruments: Disclosures*

IFRS 7, *Financial Instruments: Disclosures* was updated in line with IFRS 9, *Financial Instruments*. UBS AG adopted the revised standard on 1 January 2018. Given the first quarter of 2018 includes the date of initial application of IFRS 9, and to meet the general disclosure requirements for interim periods to describe the nature and effects of changes to policies and methods made since the last annual reporting, UBS AG provides the IFRS 9 transition disclosures as set out by IFRS 7 in the first quarter of 2018. Those transition disclosures are presented in Note 1.4. A full set of disclosures as required by revised IFRS 7 will be provided in UBS AG's annual Financial Statements as of and for the year ended 31 December 2018.

In line with amendments to IFRS 7, from 1 January 2018, UBS AG separately presents hedging gains and losses recognized during the period in the statement of comprehensive income and the amounts reclassified to the income statement. More specifically, the effective portion of changes in fair value of hedging instruments designated in net investment hedges (before tax) recognized in other comprehensive income and the amounts reclassified to income statement, previously included within *Foreign currency translation movements, before tax* and *Foreign exchange amounts reclassified to the income statement from equity*, are now presented in *Effective portion of changes in fair value of hedging instruments designated in net investment hedges, before tax*, and *Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to income statement*, respectively. Furthermore, the line *Foreign exchange amounts reclassified to the income statement from equity* was renamed to *Foreign currency translation differences on foreign operations reclassified to income statement*, and the line *Income tax relating to foreign currency translation movements* was renamed to *Income tax relating to foreign currency translations, including the impact of net investment hedges.*

IFRS 15 *Revenue from Contracts with Customers*

Effective from 1 January 2018, UBS AG adopted IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue* and establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied.

IFRS 15 now specifies that variable consideration is only recognized when the related performance obligation has been satisfied and to the extent that it is highly probable that a significant reversal will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

IFRS 15 also provides guidance on when revenues and expenses should be presented on a gross or net basis and establishes a cohesive set of disclosure requirements for information on the nature, amount, timing and uncertainty of revenue and cash flows from contracts with customers.

As permitted by the transitional provisions of IFRS 15, UBS AG elected not to restate comparative figures. Instead, the cumulative effect of initially applying the standard was recognized as an adjustment to the opening balance of retained earnings. A transition adjustment of CHF 27 million on a pre-tax basis and CHF 24 million net of tax was posted to retained earnings to reverse income recognized prior to 1 January 2018 under IAS 18 that must be deferred under IFRS 15 either due to the variable consideration constraint (asset management performance fees of CHF 16 million) or because UBS AG does not have an enforceable right to a specified amount of consideration (commission-sharing agreements for research services of CHF 11 million).

The adoption of IFRS 15 resulted in changes to UBS AG's accounting policies applicable from 1 January 2018. Accounting policies set out in Note 1.3.2 replace item 4 of Note 1a) in the UBS AG consolidated annual Financial Statements for the year ended 31 December 2017.

Following the adoption of IFRS 15, fee and commission income is presented in the income statement separately from fee and commission expense.

Where UBS AG is acting as principal as defined by IFRS 15, costs of fulfilling contracts are required by IFRS 15 to be presented separately in the income statement within fee and commission expense. Where UBS AG is acting as agent as defined by IFRS 15, costs of fulfilling contracts are required to be presented as a reduction in *Fee and commission income*. This resulted in a reclassification of certain brokerage fees paid in an agency capacity from *Fee and commission expense* to *Fee and commission income* from 1 January 2018**,** primarily relating to third-party execution costs for exchange traded derivative transactions and fees payable to third-party research providers on behalf of clients

Other presentational changes

In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, presented within *Fee and commission income* have been reclassified between reporting lines in Note 3 to better reflect the nature of the revenues, with comparative period information restated accordingly. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from *General and administrative expenses* to *Fee and commission expense* to improve the alignment of transaction-based costs with the associated revenue stream, primarily affecting clearing costs, client loyalty costs, fund and custody expenses. As the effect of this reclassification was not material, prior-period information was not restated.

Note 1 Basis of accounting (continued)

Further information on the nature, amount, timing and uncertainty of revenues and cash flows from contracts with customers is provided in the accounting policy in item 1.3.

→ **Refer to Note 3 for more information**

IAS 28, *Investments in Associates and Joint Ventures*

In October 2017, the IASB issued an amendment to IAS 28, *Investments in Associates and Joint Ventures* that clarified that IFRS 9 must be applied when accounting for long-term interests in an associate or joint venture that are not accounted for under the equity method. The amendment is mandatorily effective for accounting periods beginning on or after 1 January 2019. UBS AG early adopted this amendment from 1 January 2018 to align with the mandatory application date of IFRS 9. The adoption of this amendment did not have a material effect on UBS AG's financial statements.

Amendments to IFRS 2, *Share-based Payment*

In June 2016, the IASB issued amendments to IFRS 2, *Share-based Payment*, which are mandatorily effective as of 1 January 2018. The amendments clarify that the approach used to account for vesting and non-vesting conditions when measuring cash-settled share-based payments is consistent with that used for equity-settled share-based payments. The amendments also clarify the classification of share-based payments settled net of withholding tax as well as the accounting consequences resulting from a modification of share-based payments from cash-settled to equity-settled. The adoption of these amendments did not have a material effect on UBS AG's financial statements.

IFRIC 22, *Foreign Currency Transactions and Advance Consideration*

In December 2016, the IFRS Interpretations Committee of the IASB issued IFRIC Interpretation 22, *Foreign Currency Transactions and Advance Consideration* (IFRIC 22), which clarifies that in circumstances when an advance consideration is received or paid before the recognition of an associated asset, expense or income, the exchange rate to be used on initial recognition of the related asset, expense or income is the rate determined as of the date of transaction – i.e., the date of initial recognition of the non-monetary asset or non-monetary liability arising from the receipt or payment of advance consideration. UBS AG, as required, applied IFRIC 22 from 1 January 2018. The adoption of this IFRS Interpretation did not have a material effect on UBS AG's financial statements.

Amendments to IAS 1, *Presentation of Financial Statements*

In line with amendments to IAS 1, *Presentation of Financial Statements*, from 1 January 2018, UBS AG presents interest income and interest expense, calculated using the effective interest method, on financial instruments measured at amortized cost and financial assets measured at FVOCI separately from interest income and expense on financial instruments measured at FVTPL in the income statement.

Conceptual Framework

In March 2018, the IASB issued a revised version of its Conceptual Framework for Financial Reporting (the "Framework"). The Framework sets out the fundamental concepts of financial reporting that guide the IASB in developing IFRS Standards. The amended Framework seeks to improve the concepts for reporting assets, liabilities, income and expenses, explains how to decide when asset and liabilities should be measured using historical cost and when they should be measured at current value, and provides up-to-date tools that will help the IASB in setting IFRS Standards. It underpins existing IFRS Standards but does not override them. Preparers use the Framework as a point of reference to develop accounting policies in rare instances where a particular business transaction is not covered by existing IFRS Standards.

The IASB and the IFRS Interpretations Committee will begin to use the new Framework immediately in developing new, or amending existing, financial reporting standards and interpretations. For UBS AG, the Framework becomes effective in annual periods beginning on 1 January 2020. UBS AG is currently assessing the effect of the amended Framework on its financial accounting policies.

Change in presentation of forward points of certain long duration foreign exchange contracts transacted as economic hedges

In addition to changes resulting from new or amended accounting standards, effective from 1 January 2018, UBS AG refined the presentation of forward points on certain long-duration foreign exchange contracts transacted as economic hedges, transferring the forward points from *Other net income from fair value changes on financial instruments* (prior to 1 January 2018: *Net trading income*) to *Interest income from financial instruments measured at fair value through profit or loss* to align with the presentation of forward points on certain short-dated foreign exchange contracts. The amount of forward points on certain long-duration foreign exchange contracts recognized in *Interest income from financial instruments measured at fair value through profit or loss* in the first quarter of 2018 did not have a material effect on UBS AG's financial statements and prior periods have not been restated.

Note 2 Segment reporting

UBS AG's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which are supported by Corporate Center. The four business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center and its units, reflect the management structure of UBS AG. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Refer to "Note 1a Significant accounting policies" item 2 and "Note 2 Segment reporting" in the "Consolidated financial statements" section of the Annual Report 2017 for more information on UBS AG's reporting segments.

	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
CHF million					Services	Group ALM	Non-core and Legacy Portfolio	
For the quarter ended 31 March 2018[1]								
Net interest income	954	488	(7)	511	(85)	(142)	6	1,727
Non-interest income	3,183	454	444	1,916	141	(73)	56	6,121
Allocations from CC – Group ALM	55	18	4	(104)	23	19	(15)	0
Income	4,192	960	441	2,323	79	(196)	49	7,848
Credit loss (expense) / recovery	3	(13)	0	(15)	0	0	0	(25)
Total operating income	4,195	947	441	2,307	79	(196)	49	7,823
Personnel expenses	1,860	176	167	895	436	9	14	3,556
General and administrative expenses	301	60	50	157	1,658	10	0	2,236
Services (to) / from CC and other BDs	905	288	118	673	(2,030)	(1)	48	0
of which: services from CC – Services	*878*	*310*	*128*	*650*	*(2,050)*	*42*	*41*	*0*
Depreciation and impairment of property, equipment and software	1	3	0	2	226	0	0	232
Amortization and impairment of intangible assets	12	0	0	2	0	0	0	16
Total operating expenses	3,079	527	335	1,730	289	18	62	6,040
Operating profit / (loss) before tax	**1,117**	**420**	**106**	**577**	**(210)**	**(214)**	**(13)**	**1,783**
Tax expense / (benefit)								411
Net profit / (loss)								**1,371**
As of 31 March 2018								
Total assets	**193,522**	**135,907**	**27,079**	**252,667**	**19,422**	**251,149**	**40,533**	**920,280**
For the quarter ended 31 March 2017[1]								
Net interest income	864	457	(7)	383	(74)	58	6	1,688
Non-interest income	3,013	435	452	1,806	42	107	16	5,872
Allocations from CC – Group ALM	104	59	5	(86)	30	(88)	(23)	0
Income	3,981	951	450	2,105	(2)	77	0	7,560
Credit loss (expense) / recovery	(1)	7	0	(6)	0	0	0	0
Total operating income	3,979	958	450	2,099	(2)	77	0	7,560
Personnel expenses	1,886	212	162	827	933	8	15	4,044
General and administrative expenses	292	60	57	158	1,014	4	16	1,601
Services (to) / from CC and other BDs	873	264	127	664	(1,980)	(10)	61	0
of which: services from CC – Services	*844*	*292*	*135*	*640*	*(1,992)*	*29*	*51*	*0*
Depreciation and impairment of property, equipment and software	1	3	0	2	247	0	0	253
Amortization and impairment of intangible assets	12	0	1	3	5	0	0	21
Total operating expenses	3,064	539	347	1,655	219	1	92	5,919
Operating profit / (loss) before tax	**915**	**418**	**103**	**443**	**(222)**	**76**	**(93)**	**1,641**
Tax expense / (benefit)								364
Net profit / (loss)								**1,277**
As of 31 December 2017								
Total assets	**190,074**	**135,587**	**14,270**	**263,046**	**19,447**	**247,739**	**46,200**	**916,363**

1 Prior period information may not be comparable as a result of the adoption of IFRS 9, Financial Instruments and IFRS 15, Revenue from Contracts with Customers, both effective 1 January 2018. Refer to Note 1 for more information on these changes.

Note 3 Net fee and commission income[1]

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Underwriting fees	241	197	295
of which: equity underwriting fees	*118*	*104*	*161*
of which: debt underwriting fees	*123*	*93*	*134*
M&A and corporate finance fees	194	162	177
Brokerage fees	968	911	1,023
Investment fund fees	1,207	1,080	1,062
Portfolio management and related services	1,837	1,982	1,793
Other	452	441	457
Total fee and commission income[2]	4,900	4,772	4,807
of which: recurring	*3,071*		
of which: transaction-based	*1,811*		
of which: performance-based	*17*		
Brokerage fees paid	85	155	166
Other	324	323	271
Total fee and commission expense	409	478	436
Net fee and commission income	4,491	4,294	4,371
of which: net brokerage fees	*884*	*756*	*858*

1 Upon adoption of IFRS 15, certain brokerage fees paid in an agency capacity have been reclassified from Fee and commission expense to Fee and commission income on a prospective basis from 1 January 2018, primarily relating to third-party execution costs for exchange traded derivative transactions and fees payable to third-party research providers on behalf of clients. In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, have been reclassified between reporting lines to better reflect the nature of the revenues with prior period information restated accordingly. This resulted in the following impacts: for the quarter ended 31 December 2017, CHF 77 million was reclassified from Underwriting fees to Brokerage fees and CHF 258 million was reclassified from Portfolio management and related services to Investment fund fees. For the quarter ended 31 March 2017, CHF 81 million was reclassified from total Underwriting fees to Brokerage fees and CHF 247 million was reclassified from Portfolio management and related services to Investment fund fees. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from General and administrative expenses to Fee and commission expense to improve the alignment of transaction-based costs with the associated revenue stream, primarily impacting clearing costs, client loyalty costs, fund and custody expenses. As the impact of this reclassification was not material, prior period information was not restated. 2 Reflects fee and commission income from third parties and affiliated entities for the first quarter of 2018 of CHF 2,891 million for Global Wealth Management, CHF 300 million for Personal & Corporate Banking, CHF 777 million for Asset Management, CHF 917 million for the Investment Bank and CHF 14 million for Corporate Center.

Note 4 Other income

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Associates, joint ventures and subsidiaries			
Net gains / (losses) from disposals of subsidiaries[1]	0	55	(4)
Share of net profits of associates and joint ventures	15	19	19
Total	15	74	15
Financial assets measured at fair value through other comprehensive income			
Net gains / (losses) from disposals	0	46	6
Impairments	0	(2)	(14)
Total	0	45	(8)
Net gains / (losses) from disposals of financial assets measured at amortized cost	0	(3)	17
Net income from properties (excluding net gains / (losses) from disposals)[2]	6	6	6
Income from shared services provided to UBS Group AG or its subsidiaries[3]	120[4]	126[4]	14
Other	23	146	16
Total other income	164	395	60

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to disposed foreign subsidiaries and branches. 2 Includes net rent received from third parties and net operating expenses. 3 Relates to subsidiaries not in the UBS AG scope of consolidation. 4 The increase compared with the first quarter of 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG in the second quarter of 2017. Refer to the Annual Report 2017 for more information.

Note 5 Personnel expenses

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Salaries and variable compensation	2,211	1,884	2,434
Financial advisor variable compensation[1]	974	1,031	987
Contractors	41	65	93
Social security	189	170	198
Pension and other post-employment benefit plans	21	126	199
Other personnel expenses	120	144	133
Total personnel expenses	3,556[2]	3,420[2]	4,044

1 Financial advisor variable compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated on the basis of financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 2 The decrease compared with the first quarter of 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG in the second quarter of 2017. Refer to the Annual Report 2017 for more information.

Changes to the Pension Fund of UBS in Switzerland

As a result of the effects of continuing low and in some cases negative interest rates, diminished investment return expectations and increasing life expectancy, the Pension Fund of UBS in Switzerland and UBS have agreed measures that will take effect from the start of 2019 to support the long-term financial stability of the Swiss pension fund. As a result, the conversion rate will be lowered, the regular retirement age and employee contributions will be increased, and savings contributions will start earlier. These measures will have no effect on current pensioners of UBS.

To mitigate the effects of the reduction of the conversion rate on future pensions, UBS AG will make a payment to employees' retirement assets in the Swiss pension fund of up to CHF 450 million in three installments in 2020, 2021 and 2022. In accordance with International Financial Reporting Standards (IFRS), these measures, including the portion of the payment to be made by UBS that is attributable to past service, have resulted in a reduction in the pension obligation recognized by UBS AG, resulting in a pre-tax gain of CHF 123 million recognized in the income statement in the first quarter of 2018, with no overall effect on total equity. The change has also resulted in a reduced pension service cost starting from January 2018. The gain was recognized as a reduction in personnel expense, with a corresponding effect in *Other comprehensive income* to reflect the effect of the IFRS asset ceiling. If the Swiss pension plan remains in an asset ceiling position, the annual payments adjusted for expected forfeitures are expected to reduce total equity by approximately CHF 130 million per year over the installment period, with no effect on the income statement.

Note 6 General and administrative expenses

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Occupancy	205	221	216
Rent and maintenance of IT and other equipment	76	84	144
Communication and market data services	124	125	154
Administration	1,293	1,450	222
of which: shared services costs charged by UBS Group AG or its subsidiaries[1]	*1,154[2]*	*1,209[2]*	*125*
of which: UK bank levy[3]	*0*	*88*	*(25)*
Marketing and public relations	70	107	92
Travel and entertainment	79	104	86
Professional fees	195	283	253
Outsourcing of IT and other services	176	240	370
Litigation, regulatory and similar matters[4]	(11)	181	33
Other	30	23	30
Total general and administrative expenses	2,236	2,817	1,601

1 Relates to subsidiaries not in the UBS AG scope of consolidation. 2 The increase compared with the first quarter of 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG in the second quarter of 2017. Refer to the Annual Report 2017 for more information. 3 The credit presented for the first quarter of 2017 related to 2016. The net expense presented for the fourth quarter of 2017 included a CHF 11 million credit related to 2016. 4 Reflects the net increase / (decrease) in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 14 for more information. Also includes recoveries from third parties (first quarter of 2018: CHF 17 million; fourth quarter of 2017: CHF 2 million; first quarter of 2017: CHF 1 million).

Note 7 Income taxes

UBS AG recognized an income tax expense of CHF 411 million for the first quarter of 2018 compared with an income tax expense of CHF 364 million for the first quarter of 2017.

Deferred tax expenses were CHF 228 million in the first quarter of 2018 compared with CHF 128 million in the first quarter of 2017 and mainly related to the amortization of deferred tax assets previously recognized in relation to tax losses carried forward and deductible temporary differences to reflect their offset against profits for the quarter.

The current tax expense was CHF 183 million compared with CHF 236 million in the same quarter a year earlier and related to taxable profits of UBS Switzerland AG and other subsidiaries and branches of UBS AG.

Note 8 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses amounted to CHF 25 million in the first quarter of 2018, reflecting net losses of CHF 15 million related to credit impaired (stage 3) positions and expected credit losses of CHF 10 million related to stages 1 and 2 positions.
Stage 3 net losses of CHF 15 million were recognized across a number of defaulted positions and included a recovery of CHF 7 million on a position that was previously fully written-off.

Stage 1 and 2 expected credit losses (ECL) have been recognized in the period across P&C, GWM and IB primarily related to new loans and facilities.

There have not been any material changes to models used to calculate ECL and to determine stage allocation.

As outlined in Note 1.3, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL as of 31 March 2018 have been determined based on the same scenario selection and scenario weights as of 1 January 2018, the date of transition to IFRS 9.

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (31.3.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

Further, assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of those economic scenarios to determine ECL at the reporting date have not changed from the date of transition to IFRS 9. The point-in-time probability of default values applied to the ECL calculation at the reporting date reflect, however, market data updates, such as house price and equity indices and foreign exchange rates. Details on assumptions applied around the most important forward-looking economic factors are discussed in Note 1.4.

b) ECL-relevant balance sheet and off-balance sheet positions including ECL allowances and provisions

The table on the next page provides information on financial instruments and certain non-financial instruments that are subject to ECL. For amortized cost instruments, the net carrying value represents the maximum exposure to credit risk, taking into account the allowance for credit losses. Financial assets measured at fair value through other comprehensive income (FVOCI) are also subject to ECL; however, unlike amortized cost instruments, the allowance does not reduce the carrying value of these financial assets. The carrying value of financial assets measured at FVOCI represents the maximum exposure to credit risk.

In addition to on-balance sheet financial assets, certain off-balance sheet and other credit lines are also subject to ECL. The maximum exposure to credit risk for off-balance sheet financial instruments is calculated based on notional amounts.

Note 8 Expected credit loss measurement (continued)

CHF million	31.3.18							
	Carrying amount				ECL allowance			
Financial assets measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	92,800	92,800	0	0	0	0	0	0
Loans and advances to banks	13,284	13,246	38	0	(5)	(3)	0	(2)
Receivables from securities financing transactions	77,016	77,016	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,271	24,271	0	0	0	0	0	0
Loans and advances to customers	318,394	289,306	27,543	1,545	(838)	(54)	(162)	(622)
of which: Private clients with mortgage	*120,535*	*104,614*	*15,149*	*772*	*(127)*	*(11)*	*(71)*	*(44)*
of which: Real estate financing	*36,003*	*26,415*	*9,553*	*36*	*(62)*	*(3)*	*(51)*	*(8)*
of which: Large corporate clients	*11,610*	*10,828*	*684*	*97*	*(62)*	*(7)*	*(2)*	*(54)*
of which: SME clients	*10,072*	*7,893*	*1,629*	*550*	*(281)*	*(9)*	*(24)*	*(248)*
of which: Lombard	*114,436*	*114,423*	*0*	*13*	*(86)*	*(4)*	*0*	*(82)*
Other financial assets measured at amortized cost	19,235	18,477	271	488	(146)	(35)	(5)	(106)
of which: loans to financial advisors	*3,326*	*3,104*	*74*	*149*	*(115)*	*(28)*	*(2)*	*(85)*
Total financial assets measured at amortized cost[1]	545,000	515,116	27,851	2,033	(992)	(94)	(168)	(730)
Financial assets measured at fair value through other comprehensive income	6,758	6,758	0	0	0	0	0	0
Total on-balance sheet financial assets in scope of ECL requirements	551,757	521,873	27,851	2,033	(992)	(94)	(168)	(730)

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,404	16,624	577	203	(40)	(7)	(2)	(31)
Irrevocable loan commitments	29,746	29,181	547	18	(32)	(24)	(7)	(1)
of which: Large corporate clients	*22,234*	*21,693*	*535*	*7*	*(26)*	*(20)*	*(5)*	*(1)*
Forward starting reverse repurchase and securities borrowing agreements	1,231	1,231	0	0	0	0	0	0
Committed unconditionally revocable credit lines	35,892	33,937	1,879	75	(34)	(17)	(17)	0
of which: Real estate financing	*2,942*	*2,134*	*808*	*0*	*(12)*	*(2)*	*(9)*	*0*
of which: SME clients	*4,617*	*4,065*	*496*	*56*	*(7)*	*(4)*	*(3)*	*0*
Irrevocable committed prolongation of existing loans	1,912	1,912	0	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	86,184	82,885	3,003	296	(106)	(49)	(26)	(32)
Total allowances and provisions					(1,098)	(143)	(194)	(762)

1 The carrying value of financial assets at amortized cost are net of the respective ECL allowances.

Note 8 Expected credit loss measurement (continued)

CHF million	1.1.18							
	Carrying amount				ECL allowance			
Financial assets measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	87,775	87,775	0	0	0	0	0	0
Loans and advances to banks	13,673	13,654	18	0	(5)	(2)	0	(3)
Receivables from securities financing transactions	84,674	84,674	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	23,434	23,434	0	0	0	0	0	0
Loans and advances to customers	312,602	283,256	27,855	1,491	(867)	(61)	(163)	(644)
of which: Private clients with mortgage	*119,560*	*103,867*	*15,006*	*686*	*(124)*	*(12)*	*(69)*	*(44)*
of which: Real estate financing	*35,896*	*26,210*	*9,657*	*29*	*(62)*	*(3)*	*(53)*	*(6)*
of which: Large corporate clients	*11,004*	*10,358*	*557*	*88*	*(69)*	*(6)*	*0*	*(63)*
of which: SME clients	*10,322*	*8,218*	*1,518*	*585*	*(287)*	*(8)*	*(23)*	*(256)*
of which: Lombard	*110,601*	*110,584*	*0*	*17*	*(84)*	*(5)*	*0*	*(79)*
Other financial assets measured at amortized cost	18,375	17,877	32	465	(136)	(29)	(1)	(106)
of which: loans to financial advisors	*3,086*	*2,874*	*32*	*179*	*(115)*	*(28)*	*(1)*	*(87)*
Total financial assets measured at amortized cost[1]	540,533	510,671	27,906	1,956	(1,011)	(95)	(164)	(752)
Financial assets measured at fair value through other comprehensive income	6,755	6,755	0	0	0	0	0	0
Total on-balance sheet financial assets in scope of ECL requirements	547,288	517,426	27,906	1,956	(1,011)	(95)	(164)	(752)

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,152	16,331	633	189	(37)	(6)	(2)	(29)
Irrevocable loan commitments	30,852	30,153	662	37	(36)	(24)	(8)	(4)
of which: Large corporate clients	*21,999*	*21,344*	*629*	*26*	*(27)*	*(19)*	*(4)*	*(4)*
Forward starting reverse repurchase and securities borrowing agreements	1,216	1,216	0	0	0	0	0	0
Committed unconditionally revocable credit lines	36,690	34,471	2,157	62	(34)	(19)	(15)	0
of which: Real estate financing	*3,103*	*2,097*	*1,007*	*0*	*(9)*	*(2)*	*(7)*	*0*
of which: SME clients	*4,770*	*4,311*	*406*	*53*	*(7)*	*(5)*	*(2)*	*0*
Irrevocable committed prolongation of existing loans	1,635	1,634	0	1	0	0	0	0
Total off-balance sheet financial instruments and other credit lines	87,545	83,805	3,452	288	(107)	(49)	(24)	(33)
Total allowances and provisions					(1,117)	(144)	(188)	(785)

1 The carrying value of financial assets at amortized cost are net of the respective ECL allowances.

Note 9 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and should be read in conjunction with "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017, which provides more information on valuation principles, valuation governance, fair value hierarchy classification, valuation adjustments, valuation techniques and inputs, sensitivity of fair value measurements and methods applied to calculate fair values for financial instruments not measured at fair value.

Adoption of IFRS 9

Upon adoption of IFRS 9 on 1 January 2018, certain classification and measurement changes were made, primarily resulting in a reclassification of certain financial assets and liabilities from amortized cost to fair value through profit or loss. This included:

- Brokerage receivables and payables held in the Investment Bank and Global Wealth Management;
- Auction rate securities held in Corporate Center; and
- Certain loans held in the Investment Bank.

Certain financial assets and liabilities which have been newly classified at fair value through profit or loss are designated as Level 3 in the fair value hierarchy. Refer to the tables and text within this Note for more information.

An immaterial amount of financial assets were reclassified from *Financial assets at fair value held for trading* and *Financial assets at fair value not held for trading* to *Loans and advances to customers* upon adoption of IFRS 9. An immaterial amount of associated loan commitments, which were recognized as derivative liabilities as of 31 December 2017 were also derecognized. No material fair value gains and losses would have been recognized in the income statement in the first quarter of 2018 had those instruments not been reclassified. Similarly, no material fair value gains or losses would have been recognized in *Other comprehensive income* related to debt instruments that were reclassified from *Financial assets available for sale* to *Other financial assets measured at amortized cost* upon adoption of IFRS 9.

→ **Refer to Note 1.4 for more information on the adoption of IFRS 9**

Note 9 Fair value measurement (continued)

a) Fair value hierarchy

The fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value is summarized in the table below.

Determination of fair values from quoted market prices or valuation techniques[1]

	31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis								
Financial assets at fair value held for trading	89,282	14,566	1,937	105,785	108,963	15,309	1,972	126,244
of which:								
Government bills / bonds	*13,769*	*1,115*	*0*	*14,885*	*11,935*	*918*	*0*	*12,854*
Corporate and municipal bonds	*342*	*8,379*	*233*	*8,953*	*37*	*8,072*	*552*	*8,662*
Loans	*0*	*3,005*	*606*	*3,611*	*0*	*3,346*	*501*	*3,847*
Investment fund units	*6,951*	*1,560*	*704*	*9,215*	*7,223*	*1,839*	*571*	*9,632*
Asset-backed securities	*0*	*169*	*157*	*326*	*0*	*194*	*174*	*368*
Equity instruments	*68,220*	*338*	*237*	*68,796*	*79,276*	*186*	*105*	*79,566*
Financial assets for unit-linked investment contracts[2]					*10,492*	*755*	*69*	*11,316*
Derivative financial instruments	853	111,136	1,344	113,334	458	116,222	1,549	118,229
of which:								
Interest rate contracts	*8*	*41,153*	*35*	*41,196*	*1*	*43,913*	*135*	*44,049*
Credit derivative contracts	*0*	*1,894*	*458*	*2,352*	*0*	*2,266*	*550*	*2,816*
Foreign exchange contracts	*385*	*42,026*	*239*	*42,650*	*207*	*46,749*	*189*	*47,145*
Equity / index contracts	*21*	*24,374*	*608*	*25,002*	*16*	*21,541*	*675*	*22,232*
Commodity contracts	*0*	*1,379*	*0*	*1,379*	*0*	*1,727*	*0*	*1,727*
Financial assets mandatorily measured at fair value on a recurring basis								
Brokerage receivables[3]	0	20,250	0	20,250				
Financial assets at fair value not held for trading	44,989	47,557	4,667	97,213	23,032	34,104	1,419	58,556
of which:								
Government bills / bonds	*24,255*	*3,646*	*0*	*27,901*	*22,062*	*3,900*	*0*	*25,961*
Corporate and municipal bonds	*760*	*23,265*	*0*	*24,025*	*765*	*20,702*	*0*	*21,467*
Financial assets for unit-linked investment contracts[2]	*19,655*	*4,528*	*0*	*24,183*				
Loans (including structured loans)	*0*	*8,353*	*1,924*	*10,277*	*0*	*9,385*	*758*	*10,143*
Structured securities financing transactions[4]	*0*	*7,621*	*140*	*7,760*	*0*	*118*	*173*	*291*
Auction-rate securities[3]	*0*	*0*	*1,713*	*1,713*				
Investment fund units	*167*	*96*	*107*	*370*	*205*	*0*	*0*	*205*
Equity instruments[5]	*151*	*47*	*369*	*567*				
Other	*0*	*1*	*413*	*415*	*0*	*0*	*489*	*489*
Financial assets measured at fair value through other comprehensive income on a recurring basis								
Financial assets measured at fair value through other comprehensive income	2,560	4,197	0	6,758	3,000	5,157	507	8,665
of which:								
Government bills / bonds	*2,515*	*118*	*0*	*2,634*	*2,733*	*133*	*0*	*2,866*
Corporate and municipal bonds	*45*	*428*	*0*	*473*	*121*	*1,060*	*9*	*1,189*
Asset-backed securities	*0*	*3,651*	*0*	*3,651*	*0*	*3,880*	*0*	*3,880*
Other[5]	*0*	*0*	*0*	*0*	*146*	*85*	*499*	*730*
Non-financial assets measured at fair value on a recurring basis								
Other non-financial assets								
Precious metals and other physical commodities	4,032	0	0	4,032	4,563	0	0	4,563
Non-financial assets measured at fair value on a non-recurring basis								
Other non-financial assets[6]	0	58	9	67	0	54	42	95
Total assets measured at fair value	141,716	197,764	7,957	347,438	140,017	170,848	5,489	316,353

Note 9 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis								
Financial liabilities at fair value held for trading	29,657	4,999	91	34,747	26,037	4,309	117	30,463
of which:								
Government bills / bonds	*7,574*	*398*	*0*	*7,972*	*5,153*	*256*	*0*	*5,409*
Corporate and municipal bonds	*11*	*4,133*	*31*	*4,176*	*50*	*3,453*	*35*	*3,538*
Investment fund units	*291*	*67*	*4*	*362*	*541*	*263*	*16*	*820*
Equity instruments	*21,781*	*392*	*56*	*22,229*	*20,293*	*336*	*66*	*20,695*
Derivative financial instruments	837	108,437	2,671	111,945	398	112,929	2,807	116,134
of which:								
Interest rate contracts	*12*	*36,125*	*212*	*36,349*	*5*	*38,196*	*186*	*38,387*
Credit derivative contracts	*0*	*2,777*	*629*	*3,407*	*0*	*3,196*	*601*	*3,797*
Foreign exchange contracts	*343*	*41,891*	*118*	*42,353*	*213*	*45,151*	*122*	*45,486*
Equity / index contracts	*6*	*26,131*	*1,708*	*27,845*	*42*	*24,803*	*1,896*	*26,741*
Commodity contracts	*0*	*1,227*	*1*	*1,227*	*0*	*1,561*	*1*	*1,562*
Financial liabilities designated at fair value on a recurring basis								
Brokerage payables designated at fair value[3]	0	34,793	0	34,793				
Debt issued designated at fair value	0	40,213	11,846	52,059	0	38,617	10,885	49,502
Other financial liabilities designated at fair value	2	33,061	1,375	34,438	0	14,282	1,941	16,223
of which:								
Amounts due under unit-linked investment contracts	*0*	*24,348*	*0*	*24,348*	*0*	*11,523*	*0*	*11,523*
Structured securities financing transactions[4]	*0*	*5,812*	*1*	*5,812*	*0*	*372*	*4*	*376*
Over-the-counter debt instruments	*2*	*2,898*	*1,371*	*4,270*	*0*	*2,385*	*1,930*	*4,315*
Non-financial liabilities measured at fair value on a non-recurring basis								
Other non-financial liabilities	0	0	0	0	0	1	0	1
Total liabilities measured at fair value	30,495	221,504	15,984	267,983	26,435	170,139	15,750	212,324

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The fair value of these derivatives was not material for the periods presented. 2 Financial assets for unit-linked investment contracts were reclassified from Financial assets at fair value held for trading to Financial assets at fair value not held for trading as of 1 January 2018. Refer to Note 1.4 for more information. 3 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information. 4 The increases in Structured securities financing transactions primarily relate to the reclassification of certain balances from amortized cost to fair value through profit or loss upon adoption of IFRS 9. Refer to Note 1.4 for more information. 5 Upon adoption of IFRS 9, equity instruments that were formerly classified as available for sale under IAS 39 have been reclassified to Financial assets at fair value not held for trading. Refer to Note 1.4 for more information. 6 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
- Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Note 9 Fair value measurement (continued)

Product description, valuation and classification in the fair value hierarchy for products newly classified at fair value upon adoption of IFRS 9

Product description, valuation and fair value hierarchy information is provided below for significant products classified at fair value which are not described in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Auction rate securities

There are two types of auction rate securities (ARS): auction preferred securities (APS) and auction rates certificates (ARC). ARC are issued by municipalities and are used by investors as tax-exempt alternatives to money market instruments. Interest rates for these instruments are reset through a periodic Dutch auction. APS are similar to ARC with the primary difference being that they are issued from closed-end funds. ARS are valued directly using market prices that reflect recent transactions after applying an adjustment for trade size or quoted dealer prices where available. Suitably deep and liquid pricing information is generally not available for ARS securities. As a result, these securities are classified as Level 3.

Brokerage receivables and payables

Callable, on-demand balances, including long cash credits, short cash debits, margin debit balances and short sale proceeds. The business model for these accounts is similar to any current or on demand account, with account holders using the account to house subscriptions, redemptions and billed amounts. Fair value is determined based on value of the underlying balances. Due to the on-demand nature of its underlying, these receivables and payables are designated as Level 2.

b) Valuation adjustments

Day-1 reserves

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss is generally released into *Other net income from fair value changes on financial instruments* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

Deferred day-1 profit or loss

	For the quarter ended		
CHF million	31.3.18	31.12.17	31.3.17
Balance at the beginning of the period	329	351	371
Profit / (loss) deferred on new transactions	187	50	51
(Profit) / loss recognized in the income statement	(53)	(76)	(53)
Foreign currency translation	(6)	4	(3)
Balance at the end of the period	457	329	365

c) Transfers between Level 1 and Level 2

The amounts disclosed reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets and liabilities transferred from Level 2 to Level 1 during the first three months of 2018 were not material. Assets totaling approximately CHF 0.5 billion, which were mainly comprised of financial assets at fair value held for trading, primarily equity instruments, were transferred from Level 1 to Level 2 during the first three months of 2018, generally due to diminished levels of trading activity observed within the market. Transfers of financial liabilities from Level 1 to Level 2 recorded during the first three months of 2018 were not material.

Note 9 Fair value measurement (continued)

d) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Further, the ranges and weighted averages of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

The significant unobservable inputs disclosed in the table below are generally consistent with those included in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017. A description of the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown, is also provided in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				31.3.18			31.12.17			
CHF billion	31.3.18	31.12.17	31.3.18	31.12.17	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading, Financial assets at fair value not held for trading[3]													
Corporate and municipal bonds	0.2	0.6	0.0	0.0	Relative value to market comparable	Bond price equivalent	0	132	91	0	133	92	points
Traded loans, loans mandatorily at fair value, loan commitments and guarantees	2.9	1.7	0.0	0.0	Relative value to market comparable	Loan price equivalent	20	101	98	50	102	98	points
					Discounted expected cash flows	Credit spread	118	153		23	124		basis points
					Market comparable and securitization model	Discount margin	0	14	2	0	14	2	%
Auction-rate securities[4]	1.7		0.0		Relative value to market comparable	Price	77	97					points
Investment fund units[5]	0.8	0.7	0.0	0.0	Relative value to market comparable	Net asset value							
Equity instruments[5]	0.6	0.5	0.1	0.1	Relative value to market comparable	Price							
Debt issued designated at fair value[6]			11.8	10.9									
Other financial liabilities designated at fair value[6]			1.4	1.9									
Derivative financial instruments													
Interest rate contracts	0.0	0.1	0.2	0.2	Option model	Volatility of interest rates[7]	53	76		28	70		basis points
Credit derivative contracts	0.5	0.5	0.6	0.6	Discounted expected cash flows	Credit spreads	5	303		6	550		basis points
						Bond price equivalent	1	103		2	102		points
Equity / index contracts	0.6	0.7	1.7	1.9	Option model	Equity dividend yields	0	13		0	13		%
						Volatility of equity stocks, equity and other indices	0	85		0	172		%
						Equity-to-FX correlation	(45)	71		(39)	70		%
						Equity-to-equity correlation	(50)	97		(50)	97		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 Comparative period information includes equity instruments that were formerly classified as available for sale under IAS 39 and have been reclassified to Financial assets at fair value not held for trading upon adoption of IFRS 9. Refer to Note 1.4 for more information. 4 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information. 5 The range of inputs is not disclosed due to the dispersion of values given the diverse nature of the investments. 6 Valuation techniques, significant unobservable inputs and the respective input ranges for Debt issued designated at fair value and Other financial liabilities designated at fair value, which is primarily comprised of over-the-counter debt instruments, are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table. 7 Effective 31 March 2018, the range of inputs reported for this significant unobservable input is based on normal volatility and the unit has been updated to basis points. Log-normal volatility with the unit as points was reported previously. Prior-period information has been restated to reflect this change in presentation.

Note 9 Fair value measurement (continued)

e) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity of fair value measurements for debt issued designated at fair value and over-the-counter debt instruments designated at fair value is reported with the equivalent derivative or structured financing instrument within the table below.

The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and does not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Further, direct interrelationships between the Level 3 parameters are not a significant element of the valuation uncertainty.

Sensitivity of fair value measurements to changes in unobservable input assumptions

	31.3.18		31.12.17	
CHF million	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	83	(18)	79	(11)
Structured securities financing transactions	65	(65)	34	(34)
Auction-rate securities[1]	87	(87)		
Asset-backed securities	31	(26)	19	(15)
Equity instruments	134	(106)	79	(53)
Interest rate derivative contracts, net	12	(28)	13	(26)
Credit derivative contracts, net	33	(36)	64	(99)
Foreign exchange derivative contracts, net	8	(5)	12	(6)
Equity / index derivative contracts, net	189	(205)	190	(193)
Other	14	(14)	13	(13)
Total	656	(591)	502	(450)

1 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information.

f) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Upon adoption of IFRS 9 on 1 January 2018, certain financial assets and liabilities were designated as Level 3 in the fair value hierarchy and are presented in the table on the following pages, including the associated effect upon adoption of IFRS 9 on 1 January 2018. This includes auction rate securities held in Corporate Center and certain loans held in the Investment Bank.

In addition to various financial assets and liabilities being newly classified at fair value through profit or loss, certain equity investments and investment fund units measured at fair value through other comprehensive income were reclassified to Financial assets at fair value not held for trading under the revised IFRS 9 measurement rules, which resulted in an opening balance reclassification between reporting lines in the table on the following pages.

Note 9 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2016	Total gains / losses included in comprehensive income: Net gains / losses included in income[1]	Total gains / losses included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 31 March 2017
Financial assets at fair value held for trading	1.7	0.1	*0.0*	0.3	(1.1)	0.6	0.0	0.1	(0.2)	0.0	1.5
of which:											
Corporate and municipal bonds	*0.6*	*0.1*	*0.1*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.7*
Loans	*0.7*	*0.0*	*0.0*	*0.1*	*(0.9)*	*0.6*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.4*
Investment fund units	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other	*0.4*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.3*
Financial assets at fair value not held for trading	2.1	0.1	*0.0*	0.0	0.0	0.5	(1.0)	0.0	(0.1)	0.0	1.6
of which:											
Loans (including structured loans)	*1.2*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*(0.7)*	*0.0*	*(0.1)*	*0.0*	*0.6*
Auction-rate securities[3]											
Equity instruments											
Other	*0.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*	*(0.3)*	*0.0*	*0.0*	*0.0*	*1.0*
Financial assets measured at fair value through other comprehensive income	0.5	0.0	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Derivative financial instruments – assets	2.5	(0.3)	*(0.1)*	0.0	0.0	1.1	(0.9)	0.2	(0.3)	0.0	2.3
of which:											
Credit derivative contracts	*1.3*	*(0.1)*	*0.1*	*0.0*	*0.0*	*0.9*	*(0.7)*	*0.1*	*(0.2)*	*0.0*	*1.2*
Equity / index contracts	*0.7*	*0.0*	*0.0*	*0.0*	*0.0*	*0.2*	*(0.1)*	*0.0*	*(0.1)*	*0.0*	*0.7*
Other	*0.5*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.4*
Derivative financial instruments – liabilities	4.0	0.0	*0.1*	0.0	0.0	0.5	(0.3)	0.0	(0.7)	0.0	3.6
of which:											
Credit derivative contracts	*1.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*	*0.0*	*0.0*	*(0.3)*	*0.0*	*1.5*
Equity / index contracts	*1.9*	*0.1*	*0.1*	*0.0*	*0.0*	*0.2*	*(0.3)*	*0.0*	*(0.4)*	*0.0*	*1.6*
Other	*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
Debt issued designated at fair value	9.7	0.7	*0.6*	0.0	0.0	1.4	(1.1)	0.6	(1.1)	(0.1)	10.2
Other financial liabilities designated at fair value	1.3	0.3	0.2	0.0	0.0	1.1	(0.7)	0.2	0.0	0.0	2.1

1 Net gains / losses included in comprehensive income comprise of Net interest income, Other net income from fair value changes on financial instruments and Other income. 2 Total Level 3 assets as of 31 March 2018 were CHF 8.0 billion (31 December 2017: CHF 5.5 billion). Total Level 3 liabilities as of 31 March 2018 were CHF 16.0 billion (31 December 2017: CHF 15.7 billion). 3 Comparative period information is not disclosed for items that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 1.4 for more information.

Note 9 Fair value measurement (continued)

Balance as of 31 December 2017	Adoption of IFRS 9	Balance as of 1 January 2018	Total gains / losses included in comprehensive income: Net gains / losses included in income[1]	Total gains / losses included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 31 March 2018[2]
2.0	0.4	2.4	(0.2)	*(0.1)*	0.4	(1.4)	0.4	0.0	0.3	0.0	0.1	1.9
0.6		*0.6*	*0.0*	*0.0*	*0.1*	*(0.5)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.2*
0.5	*0.4*	*0.9*	*(0.1)*	*0.0*	*0.1*	*(0.8)*	*0.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
0.6		*0.6*	*(0.2)*	*(0.2)*	*0.1*	*0.0*	*0.0*	*0.0*	*0.2*	*0.0*	*0.0*	*0.7*
0.3		*0.3*	*0.1*	*0.1*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
1.4	2.9	4.3	(0.3)	*(0.3)*	0.8	(0.4)	0.0	0.0	0.1	0.0	0.2	4.7
0.8	*0.6*	*1.3*	*(0.3)*	*(0.2)*	*0.8*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.1*	*1.9*
	1.8	*1.8*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*1.7*
	0.4	*0.4*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
0.7	*0.1*	*0.8*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.7*
0.5	(0.5)											
1.5		1.5	(0.1)	*(0.1)*	0.0	0.0	0.2	(0.4)	0.0	0.0	0.1	1.3
0.5		*0.5*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.5*
0.7		*0.7*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.2*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.6*
0.3		*0.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.3*
2.8	0.0	2.8	(0.2)	*(0.2)*	0.0	0.0	0.4	(0.6)	0.2	(0.1)	0.1	2.7
0.6		*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
1.9		*1.9*	*(0.3)*	*(0.3)*	*0.0*	*0.0*	*0.4*	*(0.4)*	*0.1*	*(0.1)*	*0.1*	*1.7*
0.3	*0.0*	*0.3*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.1*	*0.0*	*0.0*	*0.3*
10.9		10.9	(0.3)	*(0.3)*		0.0	2.5	(1.5)	0.4	(0.6)	0.4	11.8
1.9		1.9	(0.3)	(0.3)	0.0	0.0	0.2	(0.6)	0.0	0.0	0.1	1.4

Note 9 Fair value measurement (continued)

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into Level 3 totaled CHF 0.4 billion and were primarily comprised of investment fund units and corporate and municipal bonds, mainly due to decreased observability of the respective net asset value and bond price equivalent inputs. Assets transferred out of Level 3 during the first three months of 2018 were not significant.

Liabilities transferred into and out of Level 3 totaled CHF 0.6 billion and CHF 0.7 billion, respectively. Transfers into Level 3 were primarily comprised of equity-linked issued debt instruments and interest rate derivatives contracts, due to decreased observability of the respective equity volatility and rates volatility inputs. Transfers out of Level 3 were primarily comprised of equity-linked and credit-linked issued debt instruments resulting from changes in the availability of the observable equity volatility and credit spread inputs used to determine the fair value of the options embedded in these structures.

g) Financial instruments not measured at fair value

The table below reflects the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	31.3.18		31.12.17	
CHF billion	Carrying value	Fair value	Carrying value	Fair value
Assets				
Cash and balances at central banks	92.8	92.8	87.8	87.8
Loans and advances to banks	13.3	13.3	13.7	13.7
Receivables from securities financing transactions	77.0	77.0	89.6	89.6
Cash collateral receivables on derivative instruments	24.3	24.3	23.4	23.4
Loans and advances to customers	318.4	319.2	320.7	322.1
Other financial assets measured at amortized cost	19.2	19.0	36.9	36.8
Liabilities				
Amounts due to banks	9.0	9.0	7.5	7.5
Payables from securities financing transactions	9.2	9.2	17.0	17.0
Cash collateral payables on derivative instruments	29.4	29.4	30.2	30.2
Customer deposits	401.5	401.5	412.4	412.4
Funding from UBS Group AG and its subsidiaries	35.9	36.9	34.7	36.4
Debt issued measured at amortized cost	102.2	104.2	104.8	107.0
Other financial liabilities measured at amortized cost	6.4	6.4	37.1	37.1

The fair values included in the table above were calculated for disclosure purposes only. The fair value valuation techniques and assumptions relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another.

Note 10 Derivative instruments

a) Derivative instruments

As of 31.3.18, CHF billion	Derivative financial assets	Notional values related to derivative financial assets[3]	Derivative financial liabilities	Notional values related to derivative financial liabilities[3]	Other notional values[4]
Derivative financial instruments[1,2]					
Interest rate contracts	41.2	1,231	36.3	1,103	11,173
Credit derivative contracts	2.4	88	3.4	93	0
Foreign exchange contracts	42.7	2,548	42.4	2,445	0
Equity / index contracts	25.0	412	27.8	474	91
Commodity contracts	1.4	39	1.2	39	9
Unsettled purchases of non-derivative financial instruments[5]	0.4	36	0.3	15	
Unsettled sales of non-derivative financial instruments[5]	0.3	28	0.5	28	
Total derivative financial instruments, based on IFRS netting[6]	113.3	4,382	111.9	4,197	11,273
Further netting potential not recognized on the balance sheet[7]	(99.3)		(96.8)		
of which: netting of recognized financial liabilities / assets	*(80.7)*		*(80.7)*		
of which: netting with collateral received / pledged	*(18.6)*		*(16.1)*		
Total derivative financial instruments, after consideration of further netting potential	14.1		15.2		
As of 31.12.17, CHF billion					
Derivative financial instruments[1]					
Interest rate contracts	44.0	1,142	38.4	1,044	10,462
Credit derivative contracts	2.8	92	3.8	98	1
Foreign exchange contracts	47.1	2,389	45.5	2,193	0
Equity / index contracts	22.2	380	26.7	487	83
Commodity contracts	1.7	33	1.6	37	8
Unsettled purchases of non-derivative financial instruments[5]	0.1	12	0.1	11	
Unsettled sales of non-derivative financial instruments[5]	0.1	15	0.1	9	
Total derivative financial instruments, based on IFRS netting[6]	118.2	4,063	116.1	3,878	10,555
Further netting potential not recognized on the balance sheet[7]	(104.2)		(98.5)		
of which: netting of recognized financial liabilities / assets	*(83.5)*		*(83.5)*		
of which: netting with collateral received / pledged	*(20.7)*		*(15.0)*		
Total derivative financial instruments, after consideration of further netting potential	14.0		17.7		

1 Derivative financial liabilities as of 31 March 2018 include CHF 0.1 billion related to derivative loan commitments (31 December 2017: CHF 0.0 billion). No notional amounts related to these commitments are included in this table but are disclosed within Note 15 under Loan commitments with a committed amount of CHF 3.9 billion as of 31 March 2018 (31 December 2017: CHF 5.3 billion). 2 Upon adoption of IFRS 9 on 1 January 2018, certain forward starting transactions have been classified as measured at fair value through profit or loss and are recognized within derivative instruments. Derivative financial assets and Derivative financial liabilities each include CHF 0.0 billion as of 31 March 2018 related to forward starting transactions. No notional amounts related to these assets and liabilities are included in this table but are disclosed within Note 15 under Forward starting transactions. 3 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional values of the netted derivative financial instruments are still presented on a gross basis. 4 Other notional values relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for all periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously. 7 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

b) Cash collateral on derivative instruments

CHF billion	Receivables 31.3.18	Payables 31.3.18	Receivables 31.12.17	Payables 31.12.17
Cash collateral on derivative instruments, based on IFRS netting[1]	24.3	29.4	23.4	30.2
Further netting potential not recognized on the balance sheet[2]	(13.5)	(14.4)	(12.5)	(17.4)
of which: netting of recognized financial liabilities / assets	*(12.9)*	*(13.3)*	*(11.7)*	*(16.3)*
of which: netting with collateral received / pledged	*(0.6)*	*(1.2)*	*(0.7)*	*(1.2)*
Cash collateral on derivative instruments, after consideration of further netting potential	10.7	15.0	11.0	12.8

1 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS or its counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 2 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of our Annual Report 2017 for more information.

Note 11 Other assets and liabilities

a) Other financial assets measured at amortized cost

CHF million	31.3.18	31.12.17
Prime brokerage receivables[1]		19,080
Debt securities	10,610	9,166
of which: government bills / bonds	*7,775*	*6,465*
Loans to financial advisors[2]	3,326	3,118
Fee and commission related receivables	1,694	1,748
Finance lease receivables	1,070	1,059
Settlement and clearing accounts	557	716
Accrued interest income	610	578
Other	1,368	1,470
Total other financial assets measured at amortized cost	19,235	36,935

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 1.4 for more information. 2 Related to financial advisors in the US and Canada.

b) Other non-financial assets

CHF million	31.3.18	31.12.17
Precious metals and other physical commodities	4,032	4,563
Bail deposit[1]	1,336	1,337
Prepaid expenses	834	819
VAT and other tax receivables	299	292
Properties and other non-current assets held for sale	67	95
Other	416	251
Total other non-financial assets	6,984	7,358

1 Refer to item 1 in Note 14b for more information.

Note 11 Other assets and liabilities (continued)

c) Other financial liabilities measured at amortized cost

CHF million	31.3.18	31.12.17
Prime brokerage payables[1]		29,646
Other accrued expenses	1,960	2,105
Accrued interest expenses	1,311	1,533
Settlement and clearing accounts	1,058	1,380
Other	2,043	2,468
Total other financial liabilities measured at amortized cost	6,372	37,133

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 1.4 for more information.

d) Other financial liabilities designated at fair value

CHF million	31.3.18	31.12.17
Amounts due under unit-linked investment contracts	24,348	11,523
Structured securities financing transactions	5,812	375
Over-the-counter debt instruments	4,270	4,317
of which: life-to-date own credit (gain) / loss	5	36
Loan commitments and guarantees	7	9
Total other financial liabilities designated at fair value	34,438	16,223

e) Other non-financial liabilities

CHF million	31.3.18	31.12.17
Compensation-related liabilities	3,130	4,909
of which: accrued expenses	*1,007*	*2,372*
of which: other deferred compensation plans	*1,296*	*1,613*
of which: net defined benefit pension and post-employment liabilities	*827*	*925*
Current and deferred tax liabilities	867	844
VAT and other tax payables	501	378
Deferred income	243	150
Other	67	53
Total other non-financial liabilities	4,808	6,335

Note 12 Debt issued designated at fair value

CHF million	31.3.18	31.12.17
Issued debt instruments		
Equity-linked[1]	36,107	34,162
Rates-linked	5,972	5,811
Credit-linked	2,933	2,937
Fixed-rate	4,187	3,921
Other	2,860	2,671
Total debt issued designated at fair value	52,059	49,502
of which: life-to-date own credit (gain) / loss	*14*	*159*

1 Includes investment fund unit-linked instruments issued.

Note 13 Debt issued measured at amortized cost

CHF million	31.3.18	31.12.17
Certificates of deposit	18,779	23,831
Commercial paper	23,304	23,532
Other short-term debt	4,078	3,590
Short-term debt[1]	46,162	50,953
Senior unsecured debt	34,729	32,268
Covered bonds	4,105	4,112
Subordinated debt	8,791	8,985
of which: low-trigger loss-absorbing tier 2 capital instruments	*8,097*	*8,286*
of which: non-Basel III-compliant tier 2 capital instruments	*694*	*700*
Debt issued through the Swiss central mortgage institutions	8,349	8,345
Other long-term debt	77	87
Long-term debt[2]	56,051	53,796
Total debt issued measured at amortized cost[3]	102,213	104,749

1 Debt with an original maturity of less than one year. 2 Debt with original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

Note 14 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions recognized under both IAS 37 and IFRS 9.

CHF million	31.3.18	31.3.17
Provisions recognized under IAS 37	2,893	3,051
Provisions for off-balance sheet financial instruments[1]	72	33
Provisions for other credit lines[1]	35	0
Total provisions	2,999	3,084

1 Provisions recognized as of 31 March 2018 relate to exposures in the scope of the expected credit loss requirements of IFRS 9. Refer to Notes 1.4 and 8 for more information. Comparative period provisions for off-balance sheet financial instruments relate to loss provisions recognized under IAS 37.

The following table presents additional information for provisions recognized under IAS 37.

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restructuring	Real estate	Employee benefits[5]	Other	Total
Balance as of 31 December 2017	43	2,444	294	125	55	89	3,051
Increase in provisions recognized in the income statement	5	37	31	0	1	6	80
Release of provisions recognized in the income statement	(2)	(31)	(6)	0	(2)	(4)	(44)
Provisions used in conformity with designated purpose	(5)	(81)	(58)	0	0	(7)	(151)
Foreign currency translation / unwind of discount	0	(39)	(4)	1	(1)	0	(43)
Balance as of 31 March 2018	41	2,331	257[3]	126[4]	54	83	2,893

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Primarily consists of personnel-related restructuring provisions of CHF 41 million as of 31 March 2018 (31 December 2017: CHF 54 million) and provisions for onerous lease contracts of CHF 212 million as of 31 March 2018 (31 December 2017: CHF 235 million). 4 Consists of reinstatement costs for leasehold improvements of CHF 86 million as of 31 March 2018 (31 December 2017: CHF 86 million) and provisions for onerous lease contracts of CHF 40 million as of 31 March 2018 (31 December 2017: CHF 39 million). 5 Includes provisions for sabbatical and anniversary awards as well as provisions for severance that are not part of restructuring provisions.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 14b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

UBS operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where UBS may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which UBS believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. UBS makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that UBS has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS, but are nevertheless expected to be, based on UBS's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

Note 14 Provisions and contingent liabilities (continued)

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 14a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of this report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	UBS
Balance as of 31 December 2017	555	79	1	345	240	0	1,224	2,444
Increase in provisions recognized in the income statement	35	0	0	2	0	0	0	37
Release of provisions recognized in the income statement	(4)	0	0	(3)	(24)	0	0	(31)
Provisions used in conformity with designated purpose	(33)	0	0	(15)	0	0	(33)	(81)
Foreign currency translation / unwind of discount	(8)	0	0	(6)	0	0	(26)	(39)
Balance as of 31 March 2018	546	79	1	323	216	0	1,166	2,331

1 Provisions, if any, for the matters described in this Note are recorded in Global Wealth Management (item 3 and item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this Note in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio.

Note 14 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders.

Since 2013, UBS (France) S.A. and UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory and regarding the laundering of proceeds of tax fraud and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). In March 2017, the investigating judges issued the trial order ("*ordonnance de renvoi*") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and which transfers the case to court. The trial schedule has not yet been announced. In October 2017, the Investigation Chamber of the Court of Appeals decided that UBS (France) S.A. shall not be constituted as a civil party in the guilty plea proceedings against the former UBS (France) S.A. Head of Front Office. UBS (France) S.A. has appealed this decision to the French Supreme Court ("*Cour de cassation*"). The appeal is pending, although the criminal court subsequently found the individual's guilty plea to be invalid.

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud and of banking, financial solicitation by unauthorized persons and serious tax fraud.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 31 March 2018 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Note 14 Provisions and contingent liabilities (continued)

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action (Trustee Suit) in the US District Court for the Southern District of New York (SDNY) seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations with an original principal balance of approximately USD 2 billion. Approximately 9,000 loans were at issue in a bench trial in the SDNY in 2016, following which the court issued an order ruling on numerous legal and factual issues and applying those rulings to 20 exemplar loans. The court further ordered that a lead master be appointed to apply the court's rulings to the loans that remain at issue following the trial. In October 2017, UBS and certain holders of the RMBS in the Trustee Suit entered into an agreement under which UBS has agreed to pay an aggregate of USD 543 million into the relevant RMBS trusts, plus certain attorneys' fees. A portion of UBS's settlement costs will be borne by other parties that indemnified UBS. The agreement was subject to the trustee for the RMBS trusts becoming a party thereto by 9 March 2018. The trustee for the RMBS trusts has informed UBS that it would not accept the proposed settlement under the agreement between UBS and the RMBS holders. UBS has been in discussions with the trustee about the terms on which it would become a party to a settlement, although there can be no assurance that the trustee will agree to a settlement on terms that are acceptable to UBS. Other than the Trustee Suit, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS also received and responded to subpoenas from the New York State Attorney General (NYAG) and other state attorneys general relating to UBS's RMBS business. In March 2018, UBS and the NYAG reached an agreement to resolve the NYAG's investigation, whereby UBS will pay USD 41 million and provide consumer relief in a stated amount of USD 189 million calculated as set forth in the settlement agreement. UBS has also responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the US Securities and Exchange Commission (SEC) relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

Our balance sheet at 31 March 2018 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

Note 14 Provisions and contingent liabilities (continued)

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed. In 2014, several claims, including a purported class action, were filed in the US by BMIS customers against UBS entities, asserting claims similar to those made by the BMIS Trustee, and seeking unspecified damages. These claims have either been voluntarily withdrawn or dismissed on the basis that the courts did not have jurisdiction to hear the claims against the UBS entities. In 2016, the plaintiff in one of those claims appealed the dismissal. In February 2018, the United States Court of Appeals for the Second Circuit affirmed the dismissal of the plaintiff's claim.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.5 billion, of which claims with aggregate claimed damages of USD 1.5 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims are filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans. A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied. Defendants' requests for permission to appeal that ruling were denied by the Puerto Rico Court of Appeals and the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In 2016, defendants' motion to dismiss was granted in part and denied in part. In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA in December 2013 based on plaintiffs' allegation that the loans are not valid. The trial court denied defendant's motion for summary judgment based on a forum selection clause in the loan agreements. The Puerto Rico Supreme Court reversed that decision and remanded the case back to the trial court for reconsideration. On reconsideration the trial court granted defendant's motion and dismissed the action.

In 2014, UBS reached a settlement with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI) in connection with OCFI's examination of UBS's operations from January 2006 through September 2013, pursuant to which UBS is paying up to an aggregate of USD 7.7 million in investor education contributions and restitution.

In 2015, the SEC and the Financial Industry Regulatory Authority (FINRA) announced settlements with UBS PR of their separate investigations stemming from the 2013 market events. Without admitting or denying the findings in either matter, UBS PR agreed in the SEC settlement to pay USD 15 million and USD 18.5 million in the FINRA matter. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Note 14 Provisions and contingent liabilities (continued)

Beginning in 2015, and continuing through 2017, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. The funds hold significant amounts of those bonds and the defaults on interest payments have had, and are expected to continue to have, an adverse effect on dividends from the funds. Executive orders of the Governor that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of creditors' rights. In May and June 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 31 March 2018 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Following an initial media report in 2013 of widespread irregularities in the foreign exchange markets, UBS immediately commenced an internal review of its foreign exchange business, which includes our precious metals and related structured products businesses. Numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority (FCA) and the US Commodity Futures Trading Commission (CFTC) in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System (Federal Reserve Board) and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In addition, the DOJ's Criminal Division (Criminal Division) terminated the 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. In January 2018, UBS reached a settlement with the CFTC in connection with the CFTC's precious metals investigations. As part of that settlement, UBS paid a USD 15 million civil monetary penalty. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. They allege collusion by the defendants and assert claims under the antitrust laws and for unjust enrichment. In 2015, additional putative class actions were filed in federal court in New York against UBS and other banks on behalf of a putative class of persons who entered into or held any foreign exchange futures contracts and options on foreign exchange futures contracts since 2003. The complaints assert claims under the Commodity Exchange Act (CEA) and the US antitrust laws. In 2015, a consolidated complaint was filed on behalf of both putative classes of persons covered by the US federal court class actions described above. UBS has entered into a settlement agreement that would resolve all of these US federal court class actions. The settlement agreement, which has been preliminarily approved by the court and is subject to final court approval, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

Note 14 Provisions and contingent liabilities (continued)

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign currency exchange transactional services, exercised discretionary authority or discretionary control over management of such ERISA plan, or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. The parties filed a stipulation to dismiss the case with prejudice. The plaintiffs have appealed the dismissal. The appeals court heard oral argument in June 2017.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and their co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint. In 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017. In March 2018, the court dismissed the consolidated complaint. Plaintiffs have filed a motion seeking leave to file an amended complaint. Putative class actions are also pending against UBS and other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits assert claims under the antitrust laws and the CEA, and other claims. In 2016, the court in New York granted UBS's motions to dismiss the putative class actions relating to gold and silver. Plaintiffs in those cases sought to amend their complaints to add new allegations about UBS, which the court granted. The plaintiffs filed amended complaints in 2017. In March 2017, the court in New York granted UBS's motion to dismiss the platinum and palladium action. In May 2017, plaintiffs in the platinum and palladium action filed an amended complaint that did not allege claims against UBS.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office (SFO), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the FSA, the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission (WEKO) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of individual actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

Note 14 Provisions and contingent liabilities (continued)

USD LIBOR class and individual actions in the US. In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims. Although, the Second Circuit vacated the district court's judgment dismissing antitrust claims, the district court again dismissed antitrust claims against UBS in 2016. Certain plaintiffs have appealed that decision to the Second Circuit. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims. UBS entered into an agreement in 2016 with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs have sought permission to appeal that ruling to the Second Circuit.

Other benchmark class actions and ISDAFIX class action in the US. In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including federal antitrust claims for lack of standing. In 2015, this court dismissed plaintiff's federal racketeering claims on the same basis and affirmed its previous dismissal of plaintiff's antitrust claims against UBS. In 2017, this court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR / SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR / SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2017, the district court preliminarily approved a settlement agreement under which UBS would pay USD 14 million to resolve putative class actions filed in federal court in New York and New Jersey against UBS and other financial institutions, among others, on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX.

Government bonds: Putative class actions have been filed in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. The complaints generally allege that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction. They assert claims under the antitrust laws and the CEA and for unjust enrichment. The cases have been consolidated in the SDNY, and a consolidated complaint was filed in 2017. Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 31 March 2018 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 31 March 2018 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong-listed initial public offerings for 18 months. UBS has appealed the decision.

Note 15 Guarantees, commitments and forward starting transactions

The table below presents the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

	31.3.18			31.12.17		
CHF million	Gross	Sub-participations	Net	Gross	Sub-participations	Net
Total guarantees	19,009	(2,923)	16,086	18,854	(2,867)	15,987
Loan commitments	34,534	(866)	33,667	39,069	(1,074)	37,995
Forward starting transactions[1]						
Reverse repurchase agreements	16,905			12,683		
Securities borrowing agreements	35			23		
Repurchase agreements	13,763			8,187		

1 Cash to be paid in the future by either UBS or the counterparty.

Note 16 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS's foreign operations into Swiss francs.

	Spot rate			Average rate[1]		
	As of			For the quarter ended		
	31.3.18	31.12.17	31.3.17	31.3.18	31.12.17	31.3.17
1 USD	0.95	0.97	1.00	0.94	0.98	1.00
1 EUR	1.17	1.17	1.07	1.16	1.17	1.07
1 GBP	1.34	1.32	1.25	1.32	1.32	1.25
100 JPY	0.90	0.86	0.90	0.88	0.87	0.89

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a quarter represent an average of three month-end rates, weighted according to the income and expense volumes of all foreign operations of UBS AG with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for UBS AG.

Appendix 7 – Excerpts from the UBS Group Second Quarter 2018 Report

It should be noted that the term "pro-forma" as used in this Appendix 7 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

UBS Group AG interim consolidated financial statements (unaudited)

Income statement

		For the quarter ended			Year-to-date	
CHF million, except per share data	Note	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income		2,469	2,250	2,532	4,719	4,928
Interest expense from financial instruments measured at amortized cost		(1,559)	(1,310)	(1,321)	(2,869)	(2,467)
Interest income from financial instruments measured at fair value through profit or loss		1,712	1,593	1,095	3,305	2,050
Interest expense from financial instruments measured at fair value through profit or loss		(1,637)	(790)	(890)	(2,426)	(1,399)
Net interest income		985	1,743	1,417	2,729	3,113
Other net income from fair value changes on financial instruments		2,187	1,466	1,456	3,653	2,896
Credit loss (expense) / recovery	9	(28)	(25)	(46)	(53)	(46)
Fee and commission income		4,793	4,882	4,744	9,675	9,533
Fee and commission expense		(417)	(409)	(449)	(826)	(885)
Net fee and commission income	3	4,377	4,473	4,295	8,850	8,648
Other income	4	34	40	147	74	190
Total operating income		7,554	7,698	7,269	15,252	14,801
Personnel expenses	5	4,059	4,014	4,014	8,073	8,074
General and administrative expenses	6	1,516	1,424	1,488	2,940	2,994
Depreciation and impairment of property, equipment and software		284	272	249	556	505
Amortization and impairment of intangible assets		16	16	16	32	37
Total operating expenses		5,875	5,725	5,767	11,600	11,609
Operating profit / (loss) before tax		1,679	1,973	1,502	3,652	3,192
Tax expense / (benefit)	7	394	457	327	851	701
Net profit / (loss)		1,285	1,516	1,175	2,801	2,490
Net profit / (loss) attributable to non-controlling interests		1	1	1	3	47
Net profit / (loss) attributable to shareholders		1,284	1,514	1,174	2,798	2,443

Earnings per share (CHF)						
Basic	8	0.34	0.41	0.32	0.75	0.66
Diluted	8	0.33	0.39	0.31	0.73	0.64

Statement of comprehensive income

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Comprehensive income attributable to shareholders					
Net profit / (loss)	1,284	1,514	1,174	2,798	2,443
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation					
Foreign currency translation movements, before tax (revaluation of net investment)	785	(482)	(1,252)	303	(1,566)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax	(53)	97	258	44	201
Foreign currency translation differences on foreign operations reclassified to the income statement	15	0	21	15	25
Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to the income statement	0	0	0	0	0
Income tax relating to foreign currency translations, including the impact of net investment hedges	(1)	1	1	0	3
Subtotal foreign currency translation, net of tax	747	(384)	(971)	363	(1,337)
Financial assets measured at fair value through other comprehensive income					
Net unrealized gains / (losses), before tax	(24)	(71)	10	(95)	53
Impairment charges reclassified to the income statement from equity	0	0	(1)	0	13
Realized gains reclassified to the income statement from equity	0	0	(135)	0	(143)
Realized losses reclassified to the income statement from equity	0	0	5	0	7
Income tax relating to net unrealized gains / (losses)	6	19	6	26	(2)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax	(18)	(51)	(115)	(69)	(72)
Cash flow hedges of interest rate risk					
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	(127)	(441)	165	(569)	136
Net (gains) / losses reclassified to the income statement from equity	(70)	(127)	(211)	(197)	(431)
Income tax relating to cash flow hedges	37	114	11	151	63
Subtotal cash flow hedges, net of tax	(161)	(454)	(35)	(615)	(233)
Total other comprehensive income that may be reclassified to the income statement, net of tax	568	(889)	(1,121)	(322)	(1,641)
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans					
Gains / (losses) on defined benefit plans, before tax	240	(144)	107	96	156
Income tax relating to defined benefit plans	4	44	1	48	4
Subtotal defined benefit plans, net of tax	244	(100)	108	144	160
Own credit on financial liabilities designated at fair value					
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	248	171	(72)	419	(252)
Income tax relating to own credit on financial liabilities designated at fair value	0	(2)	(1)	(2)	(1)
Subtotal own credit on financial liabilities designated at fair value, net of tax	248	170	(73)	417	(254)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	492	70	35	562	(94)
Total other comprehensive income	1,060	(820)	(1,086)	240	(1,735)
Total comprehensive income attributable to shareholders	2,343	695	89	3,038	708

Statement of comprehensive income (continued)

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Comprehensive income attributable to non-controlling interests					
Net profit / (loss)	1	1	1	3	47
Other comprehensive income that will not be reclassified to the income statement					
Foreign currency translation movements, before tax	(2)	0	14	(2)	14
Income tax relating to foreign currency translation movements	0	0	0	0	0
Subtotal foreign currency translation, net of tax	(2)	0	14	(2)	14
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(2)	0	14	(2)	14
Total comprehensive income attributable to non-controlling interests	(1)	1	14	1	61
Total comprehensive income					
Net profit / (loss)	1,285	1,515	1,175	2,801	2,490
Other comprehensive income	1,057	(819)	(1,072)	238	(1,721)
of which: other comprehensive income that may be reclassified to the income statement	*568*	*(889)*	*(1,121)*	*(322)*	*(1,641)*
of which: other comprehensive income that will not be reclassified to the income statement	*490*	*70*	*49*	*560*	*(80)*
Total comprehensive income	2,342	696	103	3,039	769

Balance sheet

CHF million	Note	30.6.18	31.3.18	31.12.17
Assets				
Cash and balances at central banks		102,262	92,800	87,775
Loans and advances to banks		15,577	13,338	13,739
Receivables from securities financing transactions		76,450	77,016	89,633
Cash collateral receivables on derivative instruments	11	24,937	24,271	23,434
Loans and advances to customers	9	318,278	316,195	318,509
Other financial assets measured at amortized cost	12	20,996	19,129	36,861
Total financial assets measured at amortized cost		558,500	542,749	569,950
Financial assets at fair value held for trading	10	112,121	105,554	126,144
of which: assets pledged as collateral that may be sold or repledged by counterparties		*36,580*	*34,536*	*35,363*
Derivative financial instruments	10,11	121,604	113,333	118,227
Brokerage receivables	10	18,415	20,250	
Financial assets at fair value not held for trading	10	93,217	97,532	58,933
Total financial assets measured at fair value through profit or loss		345,357	336,669	303,304
Financial assets measured at fair value through other comprehensive income	10	6,941	6,758	8,665
Investments in associates		1,026	1,037	1,018
Property, equipment and software		9,083	8,860	8,829
Goodwill and intangible assets		6,391	6,235	6,398
Deferred tax assets		9,859	9,729	9,844
Other non-financial assets	12	7,324	7,324	7,633
Total assets		944,482	919,361	915,642

Balance sheet (continued)

CHF million	Note	30.6.18	31.3.18	31.12.17
Liabilities				
Amounts due to banks		10,242	9,024	7,533
Payables from securities financing transactions		10,130	9,167	17,044
Cash collateral payables on derivative instruments	11	31,843	29,426	30,247
Customer deposits		403,430	398,604	408,999
Debt issued measured at amortized cost	14	137,530	137,883	139,551
Other financial liabilities measured at amortized cost	12	6,909	5,911	36,337
Total financial liabilities measured at amortized cost		600,084	590,014	639,711
Financial liabilities at fair value held for trading	10	31,416	34,747	30,463
Derivative financial instruments	10,11	119,223	111,945	116,133
Brokerage payables designated at fair value	10	37,904	34,793	
Debt issued designated at fair value	10,13	56,849	52,059	49,502
Other financial liabilities designated at fair value	10,12	37,342	34,438	16,223
Total financial liabilities measured at fair value through profit or loss		282,734	267,983	212,322
Provisions	15	3,123	3,044	3,133
Other non-financial liabilities	12	7,708	7,016	9,205
Total liabilities		893,649	868,056	864,371
Equity				
Share capital		385	385	385
Share premium		22,961	25,262	25,942
Treasury shares		(2,032)	(1,520)	(2,133)
Retained earnings		35,584	33,807	32,752
Other comprehensive income recognized directly in equity, net of tax		(6,124)	(6,692)	(5,732)
Equity attributable to shareholders		50,774	51,243	51,214
Equity attributable to non-controlling interests		60	62	57
Total equity		50,834	51,305	51,271
Total liabilities and equity		944,482	919,361	915,642

Statement of changes in equity

CHF million	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 1 January 2017	**385**	**28,254**	**(2,249)**	**31,725**
Issuance of share capital	0			
Acquisition of treasury shares			(851)	
Delivery of treasury shares under share-based compensation plans		(808)	883	
Other disposal of treasury shares			38	
Premium on shares issued and warrants exercised		8		
Share-based compensation expensed in the income statement		361		
Tax (expense) / benefit		14		
Dividends		(2,229)[2]		
New consolidations / (deconsolidations) and other increases / (decreases)		(1)		
Total comprehensive income for the period				2,349
of which: net profit / (loss)				*2,443*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*160*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*(254)*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 June 2017	**385**	**25,600**	**(2,180)**	**34,074**
Balance as of 1 January 2018 before the adoption of IFRS 9 and IFRS 15	**385**	**25,942**	**(2,133)**	**32,752**
Effect of adoption of IFRS 9				(505)
Effect of adoption of IFRS 15				(24)
Balance as of 1 January 2018 after the adoption of IFRS 9 and IFRS 15	**385**	**25,942**	**(2,133)**	**32,223**
Issuance of share capital	0			
Acquisition of treasury shares			(925)	
Delivery of treasury shares under share-based compensation plans		(918)	1,000	
Other disposal of treasury shares			26	
Premium on shares issued and warrants exercised		12		
Share-based compensation expensed in the income statement		364		
Tax (expense) / benefit		14		
Dividends		(2,444)[2]		
New consolidations / (deconsolidations) and other increases / (decreases)		(9)		
Total comprehensive income for the period				3,360
of which: net profit / (loss)				*2,798*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*144*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*417*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 June 2018	**385**	**22,961**	**(2,032)**	**35,584**

1 Excludes defined benefit plans and own credit that are recorded directly in Retained earnings. 2 Reflects the payment of an ordinary cash dividend of CHF 0.65 (2017: CHF 0.60) per dividend-bearing share out of the capital contribution reserve.

Other comprehensive income recognized directly in equity, net of tax [1]	*of which: foreign currency translation*	*of which: financial assets measured at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Non-controlling interests	Total equity
(4,494)	*(5,564)*	*98*	*972*	**53,621**	**682**	**54,302**
				0		0
				(851)		(851)
				76		76
				38		38
				8		8
				361		361
				14		14
				(2,229)	(50)	(2,280)
				(1)	1	0
(1,641)	*(1,337)*	*(72)*	*(233)*	708	61	769
				2,443	*47*	*2,490*
(1,641)	*(1,337)*	*(72)*	*(233)*	*(1,641)*		*(1,641)*
				160		*160*
				(254)		*(254)*
				0	*14*	*14*
(6,135)	*(6,901)*	*26*	*739*	**51,744**	**693**	**52,437**
(5,732)	*(6,095)*	*12*	*351*	51,214	57	51,271
(72)		*(72)*		(577)		(577)
				(24)		(24)
(5,804)	*(6,095)*	*(60)*	*351*	50,612	57	50,670
				0		0
				(925)		(925)
				82		82
				26		26
				12		12
				364		364
				14		14
				(2,444)	(6)	(2,449)
				(9)	8	(1)
(322)	*363*	*(69)*	*(615)*	3,038	1	3,039
				2,798	*3*	*2,801*
(322)	*363*	*(69)*	*(615)*	*(322)*		*(322)*
				144		*144*
				417		*417*
				0	*(2)*	*(2)*
(6,124)	*(5,732)*	*(128)*	*(264)*	50,774	60	50,834

Statement of cash flows[1]

	Year-to-date	
CHF million	30.6.18	30.6.17
Cash flow from / (used in) operating activities		
Net profit / (loss)	2,801	2,490
Non-cash items included in net profit and other adjustments:		
Depreciation and impairment of property, equipment and software	556	505
Amortization and impairment of intangible assets	32	37
Credit loss expense / (recovery)	53	46
Share of net profits of associates / joint ventures and impairment of associates	(30)	(36)
Deferred tax expense / (benefit)	455	264
Net loss / (gain) from investing activities	(35)	246
Net loss / (gain) from financing activities	1,340	(307)
Other net adjustments	(1,568)	689
Net change in operating assets and liabilities:		
Loans and advances to banks / amounts due to banks	2,634	484
Securities financing transactions	6,727	(6,568)
Cash collateral on derivative instruments	225	15
Loans and advances to customers	(6,859)	(6,438)
Customer deposits	(1,290)	(13,414)
Financial assets and liabilities at FV held for trading and derivative financial instruments	1,726	(7,353)
Brokerage receivables and payables	8,439	
Financial assets at fair value not held for trading, other financial assets and liabilities	2,291	7,878
Provisions, other non-financial assets and liabilities	(823)	(557)
Income taxes paid, net of refunds	(348)	(689)
Net cash flow from / (used in) operating activities	16,327	(22,708)
Cash flow from / (used in) investing activities		
Purchase of subsidiaries, associates and intangible assets	(3)	(5)
Disposal of subsidiaries, associates and intangible assets[2]	58	95
Purchase of property, equipment and software	(819)	(720)
Disposal of property, equipment and software	30	23
Purchase of financial assets measured at fair value through other comprehensive income	(831)	(4,729)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	668	6,150
Net (purchase) / redemption of debt securities measured at amortized cost	(2,391)	
Net (purchase) / redemption of financial assets held to maturity		168
Net cash flow from / (used in) investing activities	(3,288)	982

Table continues on the next page.

Statement of cash flows (continued)[1]

Table continued from previous page.

	Year-to-date	
CHF million	30.6.18	30.6.17
Cash flow from / (used in) financing activities		
Net short-term debt issued / (repaid)	(5,801)	18,738
Net movements in treasury shares and own equity derivative activity	(833)	(751)
Distributions paid on UBS shares	(2,444)	(2,229)
Issuance of long-term debt, including debt issued designated at fair value	38,980	24,829
Repayment of long-term debt, including debt issued designated at fair value	(26,066)	(23,407)
Net changes in non-controlling interests and preferred notes	16	(50)
Net cash flow from / (used in) financing activities	3,853	17,130
Total cash flow		
Cash and cash equivalents at the beginning of the period	102,200	121,138
Net cash flow from / (used in) operating, investing and financing activities	16,892	(4,596)
Effects of exchange rate differences on cash and cash equivalents	135	(1,502)
Cash and cash equivalents at the end of the period[3]	119,227	115,040
of which: cash and balances with central banks	*102,145*	*100,006*
of which: due from banks	*14,288*	*12,676*
of which: money market paper[4]	*2,794*	*2,358*
Additional information		
Net cash flow from / (used in) operating activities includes:		
Interest received in cash	6,703	6,009
Interest paid in cash	4,348	3,522
Dividends on equity investments, investment funds and associates received in cash[5]	1,190	985

1 Upon adoption of IFRS 9 on 1 January 2018, cash flows from certain financial instruments have been reclassified from investing to operating activities. Refer to Note 19 for more information. 2 Includes dividends received from associates. 3 CHF 4,042 million and CHF 2,576 million of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 30 June 2018 and 30 June 2017, respectively. Refer to "Note 23 Restricted and transferred financial assets" in the "Consolidated financial statements" section in the Annual Report 2017 for more information. 4 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading, and Other financial assets measured at amortized cost. 5 Includes dividends received from associates reported within Cash flow from / (used in) investing activities.

Notes to the UBS Group AG interim consolidated financial statements (unaudited)

Note 1 Basis of accounting

1.1 Basis of preparation

The consolidated financial statements (the Financial Statements) of UBS Group AG and its subsidiaries (together "UBS" or "the Group") are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), which is also the functional currency of UBS Group AG and UBS AG's Head Office and its Swiss-based operations.[1] These interim Financial Statements are prepared in accordance with IAS 34, *Interim Financial Reporting*.

In preparing these interim Financial Statements, the same accounting policies and methods of computation have been applied as in the UBS Group AG consolidated annual Financial Statements for the period ended 31 December 2017, except for the changes described in this note, in Note 19 of this report and in "Note 1 Basis of accounting" in the "Consolidated financial statements" section of the first quarter 2018 report. These interim Financial Statements are unaudited and should be read in conjunction with UBS Group AG's audited consolidated Financial Statements included in the Annual Report 2017. In the opinion of management, all necessary adjustments were made for a fair presentation of the Group's financial position, results of operations and cash flows.

Preparation of these interim Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities. These estimates and assumptions are based on the best available information. Actual results in the future could differ from such estimates and such differences may be material to the Financial Statements. Revisions to estimates, based on regular reviews, are recognized in the period in which they occur. For more information on areas of estimation uncertainty considered to require critical judgment, refer to "Note 1a) Significant accounting policies" in the "Consolidated financial statements" section of the Annual Report 2017 and in Note 19.1 of this report.

1.2 Adoption of IFRS 9 and IFRS 15 in the first quarter of 2018

IFRS 9, *Financial instruments*

As disclosed in the UBS Group first quarter 2018 report, effective 1 January 2018, UBS adopted IFRS 9, *Financial Instruments*, which replaces IAS 39, *Financial Instruments: Recognition and Measurement* and substantially changes accounting and financial reporting in three key areas: classification and measurement of financial assets, impairment and hedge accounting. In addition, UBS early adopted the Amendment to IFRS 9, *Prepayment Features with Negative Compensation*, issued in October 2017, which allows the Group to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs. The Group has retained hedge accounting under IAS 39 as permitted and early adopted the own credit requirements of IFRS 9 during the first quarter of 2016.

As permitted by the transitional provisions of IFRS 9, UBS elected not to restate comparative period information. Any effect on the carrying amounts of financial assets and liabilities at the date of transition to IFRS 9 was recognized as an adjustment to opening retained earnings. The adoption of IFRS 9 effective 1 January 2018 resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of impairment requirements based on an ECL methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax.

UBS continues to test and refine the new accounting processes, internal controls and governance framework necessitated by the adoption of IFRS 9. Therefore, the estimation of ECL and related effects remain subject to change until finalization of the financial statements for the year ending 31 December 2018.

1 As explained in UBS's Annual Report 2017, in light of cumulative changes in UBS's legal structure, business activities and evolving changes to its structural currency management strategy, it is anticipated that during the second half of 2018 the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland may change from Swiss francs to US dollars, and the functional currency of UBS AG's London Branch operations may change from British pounds to US dollars, where such changes would be made on a prospective basis. If such changes occur, we expect that management would change the presentation currency of UBS Group AG's consolidated and UBS AG's consolidated financial statements from Swiss francs to US dollars to align to the change in functional currency, with prior periods restated.

Note 1 Basis of accounting (continued)

The updated accounting policies for classification and measurement of financial instruments and impairment of financial assets as applied from 1 January 2018 are presented in Note 19.1 of this report and the detailed effects of the adoption of IFRS 9 on 1 January 2018 are presented in Note 19.2.

→ **Refer to the 31 March 2018 Pillar 3 report – UBS Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the effect of the IFRS 9 transition on UBS's capital adequacy**

IFRS 15, *Revenue from Contracts with Customers*

As disclosed in the UBS Group first quarter 2018 report, effective from 1 January 2018, UBS adopted IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue* and establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied.

The adoption of IFRS 15 resulted in changes to UBS's accounting policies applicable from 1 January 2018. Accounting policies set out in Note 1.3.2 in the "Consolidated financial statements" section of the first quarter 2018 report replace item 4 of Note 1a) in the UBS Group AG consolidated annual Financial Statements for the year ended 31 December 2017. The primary changes stem from IFRS 15 requirements that fee and commission income is measured based on consideration specified in a legally enforceable contract and variable consideration that is contingent on an uncertain event can only be recognized to the extent that it is highly probable that a significant reversal will not occur. UBS does not consider the highly probable criteria to be met where the contingency is beyond the control of UBS.

As permitted by the transitional provisions of IFRS 15, UBS elected not to restate comparative figures. Instead, the cumulative effect of initially applying the standard was recognized as an adjustment to the opening balance of retained earnings. A transition adjustment of CHF 27 million on a pre-tax basis and CHF 24 million net of tax was posted to retained earnings to reverse income recognized prior to 1 January 2018 under IAS 18 that must be deferred under IFRS 15 either due to the variable consideration constraint (asset management performance fees of CHF 16 million) or because UBS does not have an enforceable right to a specified amount of consideration (commission-sharing agreements for research services of CHF 11 million).

IFRS 15 also resulted in changes to presentation. Fee and commission income and expenses are presented gross rather than net on the face of the income statement when UBS is considered principal to the contract with a customer. In turn, fees and expenses can only be presented net when UBS is considered to be an agent.

→ **Refer to Note 3 for more information**

1.3 New accounting standards and changes in accounting policies effective second quarter 2018

IFRS Interpretations Committee, *Payments relating to taxes other than income tax*

During the second quarter of 2018, UBS refined its treatment of prepayments or overpayments in relation to uncertain tax positions outside of the scope of IAS 12, *Income Taxes*, following the IFRS Interpretation Committee's discussion on *Payments relating to taxes other than income tax*. More specifically, prepayments for uncertain tax positions that have not yet given rise to a liability are recognized as assets because UBS will either receive a cash rebate or a benefit through the extinguishment of a future liability. Adoption of the change did not have a material effect on UBS's financial statements.

Note 2 Segment reporting

UBS's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which are supported by Corporate Center. The four business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center and its units, reflect the management structure of the Group. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Refer to "Note 1a Significant accounting policies" item 2 and "Note 2 Segment reporting" in the "Consolidated financial statements" section of the Annual Report 2017 for more information on the Group's reporting segments.

Effective 1 February 2018, UBS integrated its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division. Refer to "Note 1.2 Changes to segment reporting effective first quarter 2018" in the "Consolidated financial statements" section of the first quarter 2018 report for more information.

	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS
CHF million					Services	Group ALM	Non-core and Legacy Portfolio	
For the six months ended 30 June 2018[1]								
Net interest income	1,998	989	(16)	290	(179)	(368)	13	2,729
Non-interest income	6,264	897	907	4,413	37	(121)	180	12,577
Allocations from CC – Group ALM	88	29	7	(204)	25	100	(44)	0
Income	8,350	1,915	899	4,499	(116)	(389)	148	15,305
Credit loss (expense) / recovery	2	(35)	0	(21)	0	0	(1)	(53)
Total operating income	8,352	1,880	899	4,478	(116)	(389)	147	15,252
Personnel expenses	3,766	398	356	1,667	1,847	18	19	8,073
General and administrative expenses	589	115	97	287	1,766	20	66	2,940
Services (to) / from CC and other BDs	1,805	573	237	1,357	(4,065)	1	91	0
of which: services from CC – Services	*1,755*	*615*	*258*	*1,313*	*(4,101)*	*81*	*79*	*0*
Depreciation and impairment of property, equipment and software	2	6	1	4	542	0	0	556
Amortization and impairment of intangible assets	25	0	1	5	1	0	0	32
Total operating expenses	6,187	1,093	692	3,320	92	39	177	11,600
Operating profit / (loss) before tax	**2,165**	**787**	**207**	**1,158**	**(207)**	**(428)**	**(30)**	**3,652**
Tax expense / (benefit)								851
Net profit / (loss)								**2,801**
As of 30 June 2018								
Total assets	**197,729**	**135,929**	**27,570**	**262,221**	**20,944**	**261,308**	**38,781**	**944,482**
For the six months ended 30 June 2017[1]								
Net interest income	1,764	940	(15)	452	(153)	115	10	3,113
Non-interest income	5,986	870	935	3,859	55	(5)	34	11,734
Allocations from CC – Group ALM	190	103	9	(174)	60	(139)	(50)	0
Income	7,940	1,914	929	4,137	(37)	(30)	(6)	14,847
Credit loss (expense) / recovery	(2)	(21)	0	(12)	0	0	(11)	(46)
Total operating income	7,938	1,893	929	4,124	(37)	(30)	(16)	14,801
Personnel expenses	3,758	437	357	1,591	1,888	17	25	8,074
General and administrative expenses	578	134	109	256	1,920	7	(12)	2,994
Services (to) / from CC and other BDs	1,757	542	247	1,335	(3,984)	(13)	116	0
of which: services from CC – Services	*1,703*	*587*	*266*	*1,287*	*(4,006)*	*65*	*97*	*0*
Depreciation and impairment of property, equipment and software	2	6	1	5	491	0	0	505
Amortization and impairment of intangible assets	23	0	2	6	6	0	0	37
Total operating expenses	6,119	1,119	716	3,194	321	12	129	11,609
Operating profit / (loss) before tax	**1,819**	**774**	**213**	**931**	**(358)**	**(41)**	**(146)**	**3,192**
Tax expense / (benefit)								701
Net profit / (loss)								**2,490**
As of 31 December 2017								
Total assets	**190,074**	**135,556**	**14,269**	**262,931**	**20,875**	**245,737**	**46,200**	**915,642**

1 Prior period information may not be comparable as a result of the adoption of IFRS 9 and IFRS 15, both effective 1 January 2018. Refer to Note 1 for more information on these changes.

Note 3 Net fee and commission income[1]

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Underwriting fees	183	224	274	407	552
of which: equity underwriting fees	*88*	*118*	*148*	*206*	*310*
of which: debt underwriting fees	*95*	*106*	*125*	*201*	*242*
M&A and corporate finance fees	178	194	170	372	347
Brokerage fees	877	968	945	1,845	1,967
Investment fund fees	1,213	1,207	1,046	2,420	2,107
Portfolio management and related services	1,902	1,837	1,852	3,739	3,646
Other	440	452	457	893	915
Total fee and commission income[2]	4,793	4,882	4,744	9,675	9,533
of which: recurring	*3,161*	*3,071*		*6,232*	
of which: transaction-based	*1,611*	*1,793*		*3,404*	
of which: performance-based	*22*	*17*		*39*	
Brokerage fees paid	75	85	179	160	344
Other	342	324	270	666	541
Total fee and commission expense	417	409	449	826	885
Net fee and commission income	4,377	4,473	4,295	8,850	8,648
of which: net brokerage fees	*802*	*884*	*766*	*1,685*	*1,623*

1 Upon adoption of IFRS 15, certain brokerage fees paid in an agency capacity have been reclassified from Fee and commission expense to Fee and commission income on a prospective basis from 1 January 2018, primarily relating to third-party execution costs for exchange-traded derivative transactions and fees payable to third-party research providers on behalf of clients. In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, have been reclassified between reporting lines to better reflect the nature of the revenues, with prior period information restated accordingly. This resulted in the following impacts: for the quarter ended 30 June 2017, CHF 83 million was reclassified from Underwriting fees to Brokerage fees and CHF 255 million was reclassified from Portfolio management and related services to Investment fund fees. For the first six months of 2017, CHF 164 million was reclassified from total Underwriting fees to Brokerage fees and CHF 499 million was reclassified from Portfolio management and related services to Investment fund fees. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from General and administrative expenses to Fee and commission expense to improve the alignment of transaction-based costs with the associated revenue stream, primarily impacting clearing costs, client loyalty costs, fund and custody expenses. As the impact of this reclassification was not material, prior period information was not restated. 2 Reflects third-party fee and commission income for the second quarter of 2018 of CHF 2,832 million for Global Wealth Management (first quarter of 2018: CHF 2,891 million), CHF 301 million for Personal & Corporate Banking (first quarter of 2018: CHF 300 million), CHF 801 million for Asset Management (first quarter of 2018: CHF 777 million), CHF 857 million for the Investment Bank (first quarter of 2018: CHF 900 million) and CHF 3 million for Corporate Center (first quarter of 2018: CHF 14 million).

Note 4 Other income

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Associates, joint ventures and subsidiaries					
Net gains / (losses) from disposals of subsidiaries[1]	(10)	0	(18)	(10)	(22)
Share of net profits of associates and joint ventures	15	15	17	30	36
Total	5	15	(2)	20	14
Financial assets measured at fair value through other comprehensive income					
Net gains / (losses) from disposals	0	0	129	0	136
Impairments	0	0	1	0	(13)
Total	0	0	131	0	123
Net gains / (losses) from disposals of financial assets measured at amortized cost	(1)	0	(2)	0	16
Net income from properties (excluding net gains / (losses) from disposals)[2]	6	6	6	12	12
Net gains / (losses) from disposals of properties held for sale	0	0	0	0	(1)
Other	23	19	14	42	26
Total other income	34	40	147	74	190

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to disposed foreign subsidiaries and branches. 2 Includes net rent received from third parties and net operating expenses.

Note 5 Personnel expenses

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Salaries and variable compensation	2,430	2,585	2,428	5,014	4,871
Financial advisor variable compensation[1]	996	974	992	1,970	1,979
Contractors	127	116	107	243	200
Social security	195	229	187	423	389
Pension and other post-employment benefit plans	169	(30)[2]	169	138[2]	369
Other personnel expenses	142	141	130	284	266
Total personnel expenses	4,059	4,014	4,014	8,073	8,074

1 Financial advisor variable compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated on the basis of financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 2 Changes to the Pension Fund of UBS in Switzerland in the first quarter of 2018 resulted in a reduction in the pension obligation recognized by UBS. As a consequence, a pre-tax gain of CHF 225 million was recognized in the income statement in the first quarter of 2018, with no overall effect on total equity. Refer to "Note 5 Personnel expenses" in the "Consolidated financial statements" section of the first quarter 2018 report for more information.

Note 6 General and administrative expenses

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Occupancy	221	219	217	441	438
Rent and maintenance of IT and other equipment	148	150	135	299	279
Communication and market data services	154	152	148	306	304
Administration	71	135	102	207	201
of which: UK bank levy[1]	*(45)*	*0*	*(46)*	*(45)*	*(71)*
Marketing and public relations	84	80	93	164	186
Travel and entertainment	112	93	110	204	197
Professional fees	237	231	276	468	532
Outsourcing of IT and other services	347	340	362	687	745
Litigation, regulatory and similar matters[2]	131	(11)	9	120	42
Other	10	34	35	44	69
Total general and administrative expenses	1,516	1,424	1,488	2,940	2,994

1 The credits presented for the periods shown are related to prior years. 2 Reflects the net increase / (decrease) in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 15 for more information. Also includes recoveries from third parties (second quarter of 2018: CHF 10 million; first quarter of 2018: CHF 17 million; second quarter of 2017: CHF 1 million).

Note 7 Income taxes

The Group recognized an income tax expense of CHF 394 million for the second quarter of 2018 compared with an income tax expense of CHF 327 million for the second quarter of 2017.

Deferred tax expenses were CHF 198 million in the second quarter of 2018 compared with CHF 133 million in the second quarter of 2017 and mainly related to the amortization of deferred tax assets previously recognized in relation to tax losses carried forward and deductible temporary differences to reflect their offset against profits for the quarter.

The current tax expense was CHF 196 million compared with CHF 194 million in the second quarter of 2017 and related to taxable profits of UBS Switzerland AG and other legal entities in the UBS Group.

Note 8 Earnings per share (EPS) and shares outstanding

	As of or for the quarter ended			As of or year-to-date	
	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Basic earnings (CHF million)					
Net profit / (loss) attributable to shareholders	1,284	1,514	1,174	2,798	2,443
Diluted earnings (CHF million)					
Net profit / (loss) attributable to shareholders	1,284	1,514	1,174	2,798	2,443
Less: (profit) / loss on own equity derivative contracts	(1)	(1)	0	(2)	0
Net profit / (loss) attributable to shareholders for diluted EPS	1,283	1,513	1,174	2,796	2,443
Weighted average shares outstanding					
Weighted average shares outstanding for basic EPS[1]	3,750,246,679	3,728,701,542	3,715,138,875	3,739,474,111	3,714,042,783
Effect of dilutive potential shares resulting from notional shares, in-the-money options and warrants outstanding	99,757,026	128,521,488	110,988,858	114,179,416	117,296,611
Weighted average shares outstanding for diluted EPS	3,850,003,705	3,857,223,030	3,826,127,733	3,853,653,527	3,831,339,394
Earnings per share (CHF)					
Basic	0.34	0.41	0.32	0.75	0.66
Diluted	0.33	0.39	0.31	0.73	0.64
Shares outstanding					
Shares issued	3,854,589,552	3,854,297,125	3,851,805,058		
Treasury shares	125,469,362	93,077,090	135,182,950		
Shares outstanding	3,729,120,190	3,761,220,035	3,716,622,108		

1 The weighted average shares outstanding for basic EPS are calculated by taking the number of shares at the beginning of the period, adjusted by the number of shares acquired or issued during the period, multiplied by a time-weighted factor for the period outstanding. As a result, balances are affected by the timing of acquisitions and issuances during the period.

The table below outlines the potential shares that could dilute basic earnings per share in the future, but were not dilutive for the periods presented.

Number of shares	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Potentially dilutive instruments					
Employee share-based compensation awards	6,592,571	7,283,110	30,018,635	6,592,571	30,018,635
Other equity derivative contracts	11,499,172	7,757,622	12,185,977	10,774,521	11,904,237
Total	18,091,743	15,040,732	42,204,612	17,367,092	41,922,872

Note 9 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses amounted to CHF 28 million in the second quarter of 2018, reflecting expected credit losses (ECL) of CHF 21 million related to stage 1 and 2 positions and net losses of CHF 7 million related to credit impaired (stage 3) positions.

Stage 1 and 2 ECL have been recognized in the period, primarily arising from credit quality changes in Personal & Corporate Banking and, to a lesser extent, from new loans, facilities and other exposure movements across the Investment Bank, Personal & Corporate Banking and Global Wealth Management.

Stage 3 net losses of CHF 7 million were recognized across a number of defaulted positions, predominantly in Personal & Corporate Banking.

There have not been any material changes to the models used to calculate ECL and to determine stage allocation.

As outlined in Note 19, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. The scenarios and scenario weights applied to calculate ECL as of 30 June 2018 were reviewed and remain unchanged from those applied as of 31 March 2018 and as of 1 January 2018, the date of transition to IFRS 9.

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (30.6.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

Further, assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of those economic scenarios to determine ECL at the reporting date have not changed from the date of transition to IFRS 9. The point-in-time probability of default values applied to the ECL calculation at the reporting date reflect, however, market data updates, such as house price and equity indices and foreign exchange rates. Details on assumptions applied around the most important forward-looking economic factors are discussed in Note 19.

b) ECL-relevant balance sheet and off-balance sheet positions including ECL allowances and provisions

The tables on the following pages provide information on financial instruments and certain non-financial instruments that are subject to ECL. For amortized cost instruments, the net carrying value represents the maximum exposure to credit risk, taking into account the allowance for credit losses. Financial assets measured at fair value through other comprehensive income (FVOCI) are also subject to ECL; however, unlike amortized cost instruments, the allowance does not reduce the carrying value of these financial assets. The carrying value of financial assets measured at FVOCI represents the maximum exposure to credit risk. Tables provided for 30 June 2018 and 31 March 2018 include additional detail on certain segments that have not been provided for balances as of 1 January 2018.

In addition to on-balance sheet financial assets, certain off-balance sheet and other credit lines are also subject to ECL. The maximum exposure to credit risk for off-balance sheet financial instruments is calculated based on notional amounts.

Note 9 Expected credit loss measurement (continued)

UBS has established ECL disclosure segments or "ECL segments" to disaggregate portfolios based on shared risk characteristics and on the same or similar rating methods applied. The key segments are presented in the table below.

Segment	Segment description	Description of credit risk sensitivity	Business division / Corporate Center
Private clients with mortgages	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Sensitive to the interest rate environment, employment status and influence from regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Real estate financing	Rental or income-producing real estate financing to corporate clients secured by real estate	Sensitive to GDP development, the interest rate environment and regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Large corporate clients	Lending to large corporate and multinational clients	Sensitive to GDP development, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking – Investment Bank
SME clients	Lending to small- and medium-sized corporate clients	Sensitive to GDP development, the interest rate environment and, to some extent, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking
Financial intermediaries and hedge funds	Financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Sensitive to GDP development, the interest rate environment, regulatory changes and political risk	– Personal & Corporate Banking – Investment Bank – Corporate Center
Lombard	Loans secured by pledges of marketable securities, guarantees and other forms of collateral	Sensitive to the market (e.g., changes in collateral, as well as in invested assets)	– Personal & Corporate Banking – Global Wealth Management
Credit cards	Credit card solutions in Switzerland and the US	Sensitive to the interest rate environment and employment status	– Personal & Corporate Banking – Global Wealth Management
Commodity trade finance	Working capital financing of commodity traders, generally extended on a self-liquidating transactional basis	Sensitive primarily to the strength of individual transaction structures and collateral values (price volatility of commodities) as the primary source for debt service is directly linked to the shipments financed	– Personal & Corporate Banking
Leasing (finance lease receivables)	Financing of private aircraft Financing of investment goods	Sensitive to changes in collateral values Sensitive to GDP development, the interest rate environment, seasonality and business cycles and collateral values	– Personal & Corporate Banking

Note 9 Expected credit loss measurement (continued)

CHF million	30.6.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	102,262	102,262	0	0	0	0	0	0
Loans and advances to banks	15,577	15,569	8	0	(4)	(2)	0	(2)
Receivables from securities financing transactions	76,450	76,450	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,937	24,937	0	0	0	0	0	0
Loans and advances to customers	318,278	293,041	23,612	1,625	(847)	(53)	(174)	(620)
of which: Private clients with mortgage	*121,858*	*108,533*	*12,498*	*826*	*(122)*	*(9)*	*(79)*	*(34)*
of which: Real estate financing	*35,659*	*26,826*	*8,795*	*39*	*(60)*	*(3)*	*(49)*	*(8)*
of which: Large corporate clients	*10,486*	*9,841*	*555*	*91*	*(82)*	*(5)*	*(9)*	*(68)*
of which: SME clients	*9,920*	*8,055*	*1,284*	*581*	*(292)*	*(8)*	*(25)*	*(258)*
of which: Lombard	*116,795*	*116,779*	*0*	*16*	*(90)*	*(4)*	*0*	*(86)*
of which: Credit cards	*1,406*	*1,123*	*268*	*14*	*(37)*	*(6)*	*(11)*	*(20)*
of which: Commodity trade finance	*3,075*	*3,049*	*13*	*13*	*(88)*	*(4)*	*0*	*(84)*
Other financial assets measured at amortized cost	20,996	20,188	292	516	(168)	(39)	(6)	(123)
of which: Loans to financial advisors	*3,394*	*3,139*	*85*	*171*	*(124)*	*(32)*	*(2)*	*(90)*
Total financial assets measured at amortized cost[1]	558,500	532,447	23,912	2,141	(1,022)	(97)	(179)	(746)
Financial assets measured at fair value through other comprehensive income	6,941	6,941	0	0	0	0	0	0
Total on-balance sheet financial assets in scope of ECL requirements	565,441	539,388	23,912	2,141	(1,022)	(97)	(179)	(746)

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	18,529	17,826	506	197	(34)	(7)	(1)	(26)
of which: Large corporate clients	*3,818*	*3,462*	*218*	*138*	*(7)*	*(1)*	*0*	*(5)*
of which: SME clients	*1,262*	*996*	*221*	*45*	*(16)*	*0*	*(1)*	*(15)*
of which: Financial intermediaries and hedge funds	*7,473*	*7,464*	*9*	*0*	*(4)*	*(4)*	*0*	*0*
of which: Lombard	*2,493*	*2,493*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*2,398*	*2,342*	*43*	*13*	*(4)*	*(1)*	*0*	*(3)*
Irrevocable loan commitments	31,009	30,407	563	38	(42)	(34)	(8)	0
of which: Large corporate clients	*21,914*	*21,342*	*550*	*22*	*(34)*	*(27)*	*(7)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	1,545	1,545	0	0	0	0	0	0
Committed unconditionally revocable credit lines	34,129	33,011	1,053	65	(33)	(21)	(13)	0
of which: Real estate financing	*2,676*	*2,404*	*272*	*0*	*(16)*	*(8)*	*(8)*	*0*
of which: Large corporate clients	*4,065*	*4,000*	*65*	*0*	*(1)*	*(1)*	*0*	*0*
of which: SME clients	*4,407*	*3,961*	*390*	*57*	*(8)*	*(5)*	*(2)*	*0*
of which: Lombard	*6,231*	*6,231*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*6,980*	*6,712*	*267*	*0*	*(5)*	*(3)*	*(1)*	*0*
of which: Commodity trade finance	*2,707*	*2,703*	*0*	*5*	*(1)*	*(1)*	*0*	*0*
Irrevocable committed prolongation of existing loans	2,760	2,741	19	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	87,972	85,531	2,142	300	(111)	(62)	(23)	(26)
Total allowances and provisions					(1,133)	(159)	(202)	(772)

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 9 Expected credit loss measurement (continued)

CHF million	31.3.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	92,800	92,800	0	0	0	0	0	0
Loans and advances to banks	13,338	13,300	38	0	(5)	(3)	0	(2)
Receivables from securities financing transactions	77,016	77,016	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,271	24,271	0	0	0	0	0	0
Loans and advances to customers	316,195	287,107	27,543	1,545	(838)	(54)	(162)	(622)
of which: Private clients with mortgage	*120,535*	*104,614*	*15,149*	*772*	*(127)*	*(11)*	*(71)*	*(44)*
of which: Real estate financing	*36,003*	*26,415*	*9,553*	*36*	*(62)*	*(3)*	*(51)*	*(8)*
of which: Large corporate clients	*11,610*	*10,828*	*684*	*97*	*(62)*	*(7)*	*(2)*	*(54)*
of which: SME clients	*10,072*	*7,893*	*1,629*	*550*	*(281)*	*(9)*	*(24)*	*(248)*
of which: Lombard	*114,436*	*114,423*	*0*	*13*	*(86)*	*(4)*	*0*	*(82)*
of which: Credit cards	*1,334*	*1,069*	*252*	*14*	*(34)*	*(5)*	*(9)*	*(19)*
of which: Commodity trade finance	*3,008*	*2,942*	*61*	*5*	*(92)*	*(4)*	*(4)*	*(85)*
Other financial assets measured at amortized cost	19,129	18,371	271	488	(146)	(35)	(5)	(106)
of which: Loans to financial advisors	*3,326*	*3,104*	*74*	*149*	*(115)*	*(28)*	*(2)*	*(85)*
Total financial assets measured at amortized cost[1]	**542,749**	**512,865**	**27,851**	**2,033**	**(992)**	**(94)**	**(168)**	**(730)**
Financial assets measured at fair value through other comprehensive income	**6,758**	**6,758**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**549,507**	**519,623**	**27,851**	**2,033**	**(992)**	**(94)**	**(168)**	**(730)**

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,404	16,624	577	203	(40)	(7)	(2)	(31)
of which: Large corporate clients	*3,775*	*3,380*	*249*	*146*	*(10)*	*(1)*	*0*	*(9)*
of which: SME clients	*1,313*	*1,029*	*235*	*50*	*(16)*	*0*	*(1)*	*(15)*
of which: Financial intermediaries and hedge funds	*5,740*	*5,694*	*47*	*0*	*(3)*	*(3)*	*0*	*0*
of which: Lombard	*2,537*	*2,537*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*1,783*	*1,752*	*24*	*7*	*(4)*	*(1)*	*0*	*(3)*
Irrevocable loan commitments	29,746	29,181	547	18	(32)	(24)	(7)	(1)
of which: Large corporate clients	*22,234*	*21,693*	*535*	*7*	*(26)*	*(20)*	*(5)*	*(1)*
Forward starting reverse repurchase and securities borrowing agreements	1,231	1,231	0	0	0	0	0	0
Committed unconditionally revocable credit lines	35,892	33,937	1,879	75	(34)	(17)	(17)	0
of which: Real estate financing	*2,942*	*2,134*	*808*	*0*	*(12)*	*(2)*	*(9)*	*0*
of which: Large corporate clients	*4,804*	*4,700*	*99*	*5*	*0*	*0*	*0*	*0*
of which: SME clients	*4,617*	*4,065*	*496*	*56*	*(7)*	*(4)*	*(3)*	*0*
of which: Lombard	*5,960*	*5,960*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*6,879*	*6,609*	*269*	*0*	*(5)*	*(4)*	*(1)*	*0*
of which: Commodity trade finance	*3,413*	*3,307*	*92*	*14*	*(2)*	*(1)*	*(1)*	*0*
Irrevocable committed prolongation of existing loans	1,912	1,912	0	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	**86,184**	**82,885**	**3,003**	**296**	**(106)**	**(49)**	**(26)**	**(32)**
Total allowances and provisions					**(1,098)**	**(143)**	**(194)**	**(762)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 9 Expected credit loss measurement (continued)

CHF million	1.1.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	87,775	87,775	0	0	0	0	0	0
Loans and advances to banks	13,719	13,701	18	0	(5)	(2)	0	(3)
Receivables from securities financing transactions	84,674	84,674	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	23,434	23,434	0	0	0	0	0	0
Loans and advances to customers	310,451	281,149	27,812	1,491	(867)	(61)	(163)	(644)
of which: Private clients with mortgage	*119,560*	*103,867*	*15,006*	*686*	*(124)*	*(12)*	*(69)*	*(44)*
of which: Real estate financing	*35,896*	*26,210*	*9,657*	*29*	*(62)*	*(3)*	*(53)*	*(6)*
of which: Large corporate clients	*11,004*	*10,358*	*557*	*88*	*(69)*	*(6)*	*0*	*(63)*
of which: SME clients	*10,322*	*8,218*	*1,518*	*585*	*(287)*	*(8)*	*(23)*	*(256)*
of which: Lombard	*111,748*	*111,731*	*0*	*17*	*(84)*	*(5)*	*0*	*(79)*
Other financial assets measured at amortized cost	18,302	17,805	32	465	(136)	(29)	(1)	(106)
of which: Loans to financial advisors	*3,086*	*2,874*	*32*	*179*	*(115)*	*(28)*	*(1)*	*(87)*
Total financial assets measured at amortized cost[1]	**538,354**	**508,538**	**27,862**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
Financial assets measured at fair value through other comprehensive income	**6,755**	**6,755**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**545,110**	**515,293**	**27,862**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,152	16,331	633	189	(37)	(6)	(2)	(29)
Irrevocable loan commitments	30,852	30,153	662	37	(36)	(24)	(8)	(4)
of which: Large corporate clients	*21,999*	*21,344*	*629*	*26*	*(27)*	*(19)*	*(4)*	*(4)*
Forward starting reverse repurchase and securities borrowing agreements	1,216	1,216	0	0	0	0	0	0
Committed unconditionally revocable credit lines	36,690	34,471	2,157	62	(34)	(19)	(15)	0
of which: Real estate financing	*3,103*	*2,097*	*1,007*	*0*	*(9)*	*(2)*	*(7)*	*0*
of which: SME clients	*4,770*	*4,311*	*406*	*53*	*(7)*	*(5)*	*(2)*	*0*
Irrevocable committed prolongation of existing loans	1,635	1,634	0	1	0	0	0	0
Total off-balance sheet financial instruments and other credit lines	**87,545**	**83,805**	**3,452**	**288**	**(107)**	**(49)**	**(24)**	**(33)**
Total allowances and provisions					**(1,117)**	**(144)**	**(188)**	**(785)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances. 2 Upon adoption of IFRS 9 as of 1 January 2018, an instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is purchased or originated credit-impaired and includes credit impaired exposures for which no loss has occurred, or for which no allowance has been recognized (e.g., because they are expected to be fully recoverable through the collateral held). Refer to Note 19 for more information on the adoption of IFRS 9.

Note 10 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and should be read in conjunction with "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017, which provides more information on valuation principles, valuation governance, fair value hierarchy classification, valuation adjustments, valuation techniques and inputs, sensitivity of fair value measurements and methods applied to calculate fair values for financial instruments not measured at fair value.

Adoption of IFRS 9

Upon adoption of IFRS 9 on 1 January 2018, certain classification and measurement changes were made, primarily resulting in a reclassification of certain financial assets and liabilities from amortized cost to fair value through profit or loss. This included:

- brokerage receivables and payables held in the Investment Bank and Global Wealth Management;
- auction rate securities held in Corporate Center; and
- certain loans held in the Investment Bank.

Certain financial assets and liabilities that have been newly classified at fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018 are designated as Level 3 in the fair value hierarchy. Refer to the tables and text within this Note for more information.

An immaterial amount of financial assets were reclassified from *Financial assets at fair value held for trading* and *Financial assets at fair value not held for trading* to *Loans* and *advances to customers* upon adoption of IFRS 9. An immaterial amount of associated loan commitments, which were recognized as derivative liabilities as of 31 December 2017, were also derecognized from the balance sheet. No material fair value gains and losses would have been recognized in the income statement in the second quarter of 2018 had these instruments not been reclassified. Similarly, no material fair value gains or losses would have been recognized in Other comprehensive income related to debt instruments that were reclassified from *Financial assets available for sale* to *Other financial assets measured at amortized cost* upon adoption of IFRS 9.

→ **Refer to Note 19 for more information on the adoption of IFRS 9**

Note 10 Fair value measurement (continued)

a) Fair value hierarchy

The fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value is summarized in the table below.

Determination of fair values from quoted market prices or valuation techniques[1]

	30.6.18				31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis												
Financial assets at fair value held for trading	96,129	12,729	3,263	112,121	89,273	14,344	1,937	105,554	108,962	15,211	1,972	126,144
of which:												
Government bills / bonds	10,650	877	0	11,527	13,769	1,115	0	14,885	11,935	918	0	12,854
Corporate and municipal bonds	550	7,463	627	8,640	342	8,157	233	8,731	37	7,974	552	8,563
Loans	0	2,096	1,733	3,829	0	3,005	606	3,611	0	3,346	501	3,847
Investment fund units	8,716	1,974	540	11,230	6,951	1,560	704	9,215	7,223	1,839	571	9,632
Asset-backed securities	0	110	157	266	0	169	157	326	0	194	174	368
Equity instruments	76,214	210	188	76,612	68,211	338	237	68,787	79,274	186	105	79,565
Financial assets for unit-linked investment contracts[2]									10,492	755	69	11,316
Derivative financial instruments	878	119,245	1,481	121,604	853	111,135	1,344	113,333	458	116,221	1,549	118,227
of which:												
Interest rate contracts	0	38,555	226	38,782	8	41,153	35	41,196	1	43,913	135	44,049
Credit derivative contracts	0	1,674	452	2,127	0	1,894	458	2,352	0	2,266	550	2,816
Foreign exchange contracts	563	52,941	186	53,690	385	42,025	239	42,649	207	46,748	189	47,143
Equity / index contracts	7	24,320	612	24,939	21	24,374	608	25,002	16	21,541	675	22,232
Commodity contracts	0	1,564	0	1,564	0	1,379	0	1,379	0	1,727	0	1,727
Brokerage receivables[3]	0	18,415	0	18,415	0	20,250	0	20,250				
Financial assets at fair value not held for trading	42,929	45,518	4,769	93,217	44,989	47,876	4,667	97,532	23,032	34,481	1,419	58,933
of which:												
Government bills / bonds	21,853	3,452	0	25,305	24,255	3,646	0	27,901	22,062	3,900	0	25,961
Corporate and municipal bonds	958	21,849	0	22,807	760	23,265	0	24,025	765	20,702	0	21,467
Financial assets for unit-linked investment contracts[2]	19,824	4,735	8	24,568	19,655	4,528	0	24,183				
Loans (including structured loans)	0	7,394	1,904	9,298	0	8,353	1,924	10,277	0	9,385	758	10,143
Structured securities financing transactions[4]	0	7,556	65	7,622	0	7,621	140	7,760	0	118	173	291
Auction-rate securities[3]	0	0	1,832	1,832	0	0	1,713	1,713				
Investment fund units	194	458	118	770	167	415	107	689	205	377	0	582
Equity instruments[5]	101	16	484	602	151	47	369	567				
Other	0	57	357	414	0	1	413	415	0	0	489	489
Financial assets measured at fair value through other comprehensive income on a recurring basis												
Financial assets measured at fair value through other comprehensive income	2,608	4,333	0	6,941	2,560	4,197	0	6,758	3,000	5,157	507	8,665
of which:												
Government bills / bonds	2,563	111	0	2,675	2,515	118	0	2,634	2,733	133	0	2,866
Corporate and municipal bonds	44	390	0	434	45	428	0	473	121	1,060	9	1,189
Asset-backed securities	0	3,832	0	3,832	0	3,651	0	3,651	0	3,880	0	3,880
Other[5]	0	0	0	0	0	0	0	0	146	85	499	730
Non-financial assets measured at fair value on a recurring basis												
Other non-financial assets												
Precious metals and other physical commodities	3,975	0	0	3,975	4,032	0	0	4,032	4,563	0	0	4,563
Non-financial assets measured at fair value on a non-recurring basis												
Other non-financial assets[6]	0	57	9	65	0	58	9	67	0	54	42	95
Total assets measured at fair value	146,519	200,297	9,522	356,338	141,707	197,861	7,957	347,525	140,015	171,125	5,489	316,629

Note 10 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	30.6.18				31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis												
Financial liabilities at fair value held for trading	26,211	5,117	88	31,416	29,657	4,999	91	34,747	26,037	4,309	117	30,463
of which:												
Government bills / bonds	*4,386*	*299*	*0*	*4,685*	*7,574*	*398*	*0*	*7,972*	*5,153*	*256*	*0*	*5,409*
Corporate and municipal bonds	*138*	*4,113*	*34*	*4,285*	*11*	*4,133*	*31*	*4,176*	*50*	*3,453*	*35*	*3,538*
Investment fund units	*785*	*214*	*2*	*1,002*	*291*	*67*	*4*	*362*	*541*	*263*	*16*	*820*
Equity instruments	*20,901*	*488*	*52*	*21,440*	*21,781*	*392*	*56*	*22,229*	*20,293*	*336*	*66*	*20,695*
Derivative financial instruments	875	115,954	2,394	119,223	837	108,437	2,671	111,945	398	112,928	2,807	116,133
of which:												
Interest rate contracts	*6*	*33,738*	*285*	*34,030*	*12*	*36,125*	*212*	*36,349*	*5*	*38,196*	*186*	*38,387*
Credit derivative contracts	*0*	*2,620*	*613*	*3,233*	*0*	*2,777*	*629*	*3,407*	*0*	*3,196*	*601*	*3,797*
Foreign exchange contracts	*585*	*52,921*	*115*	*53,620*	*343*	*41,891*	*118*	*42,353*	*213*	*45,150*	*122*	*45,485*
Equity / index contracts	*2*	*25,122*	*1,369*	*26,493*	*6*	*26,131*	*1,708*	*27,845*	*42*	*24,803*	*1,896*	*26,741*
Commodity contracts	*0*	*1,365*	*1*	*1,366*	*0*	*1,227*	*1*	*1,227*	*0*	*1,561*	*1*	*1,562*
Financial liabilities designated at fair value on a recurring basis												
Brokerage payables designated at fair value[3]	0	37,904	0	37,904	0	34,793	0	34,793				
Debt issued designated at fair value	0	46,683	10,166	56,849	0	40,213	11,846	52,059	0	38,617	10,885	49,502
Other financial liabilities designated at fair value	2	36,252	1,089	37,342	2	33,061	1,375	34,438	0	14,282	1,941	16,223
of which:												
Amounts due under unit-linked investment contracts	*0*	*24,913*	*0*	*24,913*	*0*	*24,348*	*0*	*24,348*	*0*	*11,523*	*0*	*11,523*
Structured securities financing transactions[4]	*0*	*6,533*	*0*	*6,533*	*0*	*5,812*	*1*	*5,812*	*0*	*372*	*4*	*376*
Over-the-counter debt instruments	*2*	*4,801*	*1,085*	*5,888*	*2*	*2,898*	*1,371*	*4,270*	*0*	*2,385*	*1,930*	*4,315*
Non-financial liabilities measured at fair value on a non-recurring basis												
Other non-financial liabilities	0	0	0	0	0	0	0	0	0	1	0	1
Total liabilities measured at fair value	27,087	241,910	13,737	282,734	30,495	221,504	15,984	267,983	26,435	170,138	15,750	212,323

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The fair value of these derivatives was not material for the periods presented. 2 Financial assets for unit-linked investment contracts were reclassified from Financial assets at fair value held for trading to Financial assets at fair value not held for trading as of 1 January 2018. Refer to Note 19 for more information. 3 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 4 The increases in Structured securities financing transactions from 31 December 2017 to 31 March 2018 primarily relate to the reclassification of certain balances from amortized cost to fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 5 Upon adoption of IFRS 9 on 1 January 2018, equity instruments that were formerly classified as available for sale under IAS 39 were reclassified to Financial assets at fair value not held for trading. Refer to Note 19 for more information. 6 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
- Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Product description, valuation and classification in the fair value hierarchy for products newly classified at fair value upon adoption of IFRS 9 on 1 January 2018

Product description, valuation and fair value hierarchy information is provided on the next page for significant products classified at fair value that are not described in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Note 10 Fair value measurement (continued)

Auction rate securities

There are two types of auction rate securities (ARS): auction preferred securities (APS) and auction rate certificates (ARC). ARC are issued by municipalities and are used by investors as tax-exempt alternatives to money market instruments. Interest rates for these instruments are reset through a periodic Dutch auction. APS are similar to ARC with the primary difference being that they are issued from closed-end funds. ARS are valued directly using market prices that reflect recent transactions after applying an adjustment for trade size or quoted dealer prices where available. Suitably deep and liquid pricing information is generally not available for ARS securities. As a result, these securities are classified as Level 3.

Brokerage receivables and payables

Brokerage receivables and payables include callable, on-demand balances, including long cash credits, short cash debits, margin debit balances and short sale proceeds. The business model for these accounts is similar to any current or on-demand account, with account holders using the account to house subscriptions, redemptions and billed amounts. Fair value is determined based on value of the underlying balances. Due to the on-demand nature of its underlying, these receivables and payables are designated as Level 2.

b) Valuation adjustments

Own credit

Own credit is estimated using an own credit adjustment (OCA) curve, which incorporates observable market data, including market-observed secondary prices for UBS senior debt, UBS credit default swap spreads and senior debt curves of peers.

In June 2018, UBS AG issued a 30-year senior unsecured bond as part of its ongoing funding requirements. The market-observable secondary prices for this bond have been incorporated into the OCA curve construction, resulting in a widening of the curve at the long-end. An own credit gain of CHF 248 million has been recognized in Other comprehensive income in the second quarter of 2018, mainly reflecting aforementioned changes to the OCA curve.

Day-1 reserves

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss is generally released into *Other net income from fair value changes on financial instruments* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

In the second quarter of 2018, a day-1 reserve release of CHF 192 million was recognized in the income statement related to long-dated UBS-issued structured notes, which are reported within *Debt issued designated at fair value* on the balance sheet. The day-1 reserve release was driven by increased observability of the OCA curve used to value these positions following the 30-year bond issuance described in the previous section.

Other valuation adjustments

In the second quarter of 2018, a CHF 64 million expense was recognized in the income statement reflecting the model valuation adjustment recorded to capture the spread between OCA and LIBOR volatility impacting the valuation of certain structured note issuances.

Deferred day-1 profit or loss

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Balance at the beginning of the period	457	329	365	329	371
Profit / (loss) deferred on new transactions	53	187	65	240	116
(Profit) / loss recognized in the income statement	(248)	(53)	(66)	(301)	(119)
Foreign currency translation	13	(6)	(15)	7	(18)
Balance at the end of the period	274	457	349	274	349

c) Transfers between Level 1 and Level 2

The amounts disclosed below reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets totaling approximately CHF 0.6 billion, which were mainly comprised of financial assets at fair value held for trading, primarily equity instruments and investment fund units, were transferred from Level 2 to Level 1 during the first six months of 2018, generally due to increased levels of trading activity observed within the market. Liabilities transferred from Level 2 to Level 1 during the first six months of 2018 were not material. Assets and liabilities transferred from Level 1 to Level 2 during the first six months of 2018 were also not material.

Note 10 Fair value measurement (continued)

d) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Further, the ranges and weighted averages of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

The significant unobservable inputs disclosed in the table below are generally consistent with those included in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017. A description of the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown, is also provided in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				30.6.18			31.12.17			
CHF billion	30.6.18	31.12.17	30.6.18	31.12.17	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading, Financial assets at fair value not held for trading[3]													
Corporate and municipal bonds	0.6	0.6	0.0	0.0	Relative value to market comparable	Bond price equivalent	0	134	95	0	133	92	points
Traded loans, loans mandatorily at fair value, loan commitments and guarantees	3.9	1.7	0.0	0.0	Relative value to market comparable	Loan price equivalent	0	101	97	50	102	98	points
					Discounted expected cash flows	Credit spread	111	153		23	124		basis points
					Market comparable and securitization model	Discount margin	0	14	2	0	14	2	%
Auction-rate securities[4]	1.8		0.0		Relative value to market comparable	Price	77	99					points
Investment fund units[5]	0.7	0.7	0.0	0.0	Relative value to market comparable	Net asset value							
Equity instruments[5]	0.7	0.5	0.1	0.1	Relative value to market comparable	Price							
Debt issued designated at fair value[6]			10.2	10.9									
Other financial liabilities designated at fair value[6]			1.1	1.9									
Derivative financial instruments													
Interest rate contracts	0.2	0.1	0.3	0.2	Option model	Volatility of interest rates[7]	42	76		28	70		basis points
Credit derivative contracts	0.5	0.5	0.6	0.6	Discounted expected cash flows	Credit spreads	4	394		6	550		basis points
						Bond price equivalent	1	99		2	102		points
Equity / index contracts	0.6	0.7	1.4	1.9	Option model	Equity dividend yields	0	11		0	13		%
						Volatility of equity stocks, equity and other indices	0	75		0	172		%
						Equity-to-FX correlation	(45)	71		(39)	70		%
						Equity-to-equity correlation	(50)	97		(50)	97		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 Comparative period information includes equity instruments that were formerly classified as available for sale under IAS 39 and have been reclassified to Financial assets at fair value not held for trading upon adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 4 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 19 for more information. 5 The range of inputs is not disclosed due to the dispersion of values given the diverse nature of the investments. 6 Valuation techniques, significant unobservable inputs and the respective input ranges for Debt issued designated at fair value and Other financial liabilities designated at fair value, which are primarily comprised of over-the-counter debt instruments, are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table. 7 Effective 31 March 2018, the range of inputs reported for this significant unobservable input is based on normal volatility and the unit has been updated to basis points. Log-normal volatility with the unit as points was reported previously. Prior-period information has been restated to reflect this change in presentation.

Note 10 Fair value measurement (continued)

e) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity of fair value measurements for debt issued designated at fair value and over-the-counter debt instruments designated at fair value is reported with the equivalent derivative or structured financing instrument within the table below.

The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and do not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Further, direct interrelationships between the Level 3 parameters are not a significant element of the valuation uncertainty.

Sensitivity of fair value measurements to changes in unobservable input assumptions

	30.6.18		31.3.18		31.12.17	
CHF million	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	89	(15)	83	(18)	79	(11)
Structured securities financing transactions	20	(15)	65	(65)	34	(34)
Auction-rate securities[1]	92	(92)	87	(87)		
Asset-backed securities	31	(26)	31	(26)	19	(15)
Equity instruments	182	(115)	134	(106)	79	(53)
Interest rate derivative contracts, net	12	(37)	12	(28)	13	(26)
Credit derivative contracts, net	40	(35)	33	(36)	64	(99)
Foreign exchange derivative contracts, net	6	(3)	8	(5)	12	(6)
Equity / index derivative contracts, net	212	(228)	189	(205)	190	(193)
Other	21	(21)	14	(14)	13	(13)
Total	704	(586)	656	(591)	502	(450)

1 Comparative period information as of 31 December 2017 is not disclosed for financial assets that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information.

f) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Upon adoption of IFRS 9 on 1 January 2018, certain financial assets and liabilities were newly classified at fair value through profit or loss and were designated as Level 3 in the fair value hierarchy. These financial instruments are presented in the table on the following pages, including the associated effect upon adoption. This includes auction rate securities held in Corporate Center and certain loans held in the Investment Bank.

In addition to various financial assets and liabilities being newly classified at fair value through profit or loss, certain equity investments and investment fund units measured at fair value through other comprehensive income were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules, which resulted in an opening balance reclassification between reporting lines in the table on the following pages.

In the second quarter of 2018, CHF 2.8 billion of UBS-issued structured notes, which are reported within *Debt issued designated at fair value* on the balance sheet, were transferred from Level 3 to Level 2 in the fair value hierarchy, reflecting increased observability of the OCA curve used to value these notes.

Note 10 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2016	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	Total gains / (losses) included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 June 2017
Financial assets at fair value held for trading	**1.7**	**0.0**	***0.0***	**0.7**	**(2.3)**	**1.6**	**0.0**	**0.2**	**(0.2)**	**0.0**	**1.6**
of which:											
Corporate and municipal bonds	*0.6*	*0.0*	*0.0*	*0.3*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.8*
Loans	*0.7*	*0.1*	*0.0*	*0.3*	*(2.1)*	*1.6*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
Investment fund units	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other	*0.4*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*
Financial assets at fair value not held for trading	**2.1**	**0.0**	***0.0***	**0.0**	**0.0**	**0.3**	**(0.7)**	**0.0**	**(0.1)**	**0.0**	**1.6**
of which:											
Loans (including structured loans)	*1.2*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*(0.7)*	*0.0*	*(0.1)*	*0.0*	*0.5*
Auction-rate securities[3]											
Equity instruments											
Other	*0.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*	*(0.1)*	*0.0*	*0.0*	*0.0*	*1.1*
Financial assets measured at fair value through other comprehensive income	**0.5**	**0.0**	***0.0***	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.5**
Derivative financial instruments – assets	**2.5**	**(0.2)**	***(0.3)***	**0.0**	**0.0**	**0.4**	**(0.5)**	**0.1**	**(0.5)**	**0.0**	**1.9**
of which:											
Credit derivative contracts	*1.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*(0.3)*	*0.0*	*0.8*
Equity / index contracts	*0.7*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*	*(0.2)*	*0.1*	*(0.1)*	*0.0*	*0.8*
Other	*0.5*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*0.0*	*0.3*
Derivative financial instruments – liabilities	**4.0**	**(0.1)**	***(0.2)***	**0.0**	**0.0**	**0.5**	**(1.0)**	**0.1**	**(0.7)**	**0.0**	**2.8**
of which:											
Credit derivative contracts	*1.5*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.3)*	*0.0*	*1.0*
Equity / index contracts	*1.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.5*	*(0.5)*	*0.1*	*(0.4)*	*0.0*	*1.4*
Other	*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*0.0*	*0.5*
Debt issued designated at fair value	**9.7**	**1.0**	***0.8***	**0.0**	**0.0**	**2.5**	**(2.0)**	**0.2**	**(0.9)**	**(0.3)**	**10.2**
Other financial liabilities designated at fair value	**1.3**	**0.0**	***0.0***	**0.0**	**0.0**	**1.3**	**(0.5)**	**0.0**	**(0.2)**	**0.0**	**1.9**

1 Net gains / (losses) included in comprehensive income are comprised of Net interest income, Other net income from fair value changes on financial instruments and Other income. 2 Total Level 3 assets as of 30 June 2018 were CHF 9.5 billion (31 March 2018: CHF 8.0 billion, 31 December 2017: CHF 5.5 billion). Total Level 3 liabilities as of 30 June 2018 were CHF 13.7 billion (31 March 2018: CHF 16.0 billion, 31 December 2017: CHF 15.7 billion). 3 Comparative period information is not disclosed for items that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information.

Note 10 Fair value measurement (continued)

Balance as of 31 December 2017	Reclassifications and remeasurements upon adoption of IFRS 9	Balance as of 1 January 2018	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	*of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 June 2018[2]
2.0	0.4	2.4	(0.3)	*(0.2)*	1.0	(4.8)	4.2	0.0	0.8	(0.1)	0.0	3.3
0.6		*0.6*	*(0.1)*	*(0.1)*	*0.4*	*(0.8)*	*0.0*	*0.0*	*0.6*	*0.0*	*0.0*	*0.6*
0.5	*0.4*	*0.9*	*0.0*	*0.0*	*0.3*	*(3.6)*	*4.2*	*0.0*	*0.0*	*0.0*	*0.0*	*1.7*
0.6		*0.6*	*(0.1)*	*(0.1)*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.5*
0.3		*0.3*	*(0.1)*	*(0.1)*	*0.3*	*(0.3)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.3*
1.4	2.9	4.3	0.1	*0.0*	1.0	(0.9)	0.0	0.0	0.1	(0.1)	0.1	4.8
0.8	*0.6*	*1.3*	*(0.1)*	*(0.1)*	*1.0*	*(0.3)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*1.9*
	1.8	*1.8*	*0.1*	*0.1*	*0.0*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*1.8*
	0.4	*0.4*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.5*
0.7	*0.1*	*0.8*	*0.1*	*0.0*	*0.0*	*(0.3)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
0.5	(0.5)											
1.5		1.5	0.0	*0.1*	0.0	0.0	0.4	(0.6)	0.1	0.0	0.0	1.5
0.5		*0.5*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.5*
0.7		*0.7*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*	*(0.5)*	*0.1*	*(0.1)*	*0.0*	*0.6*
0.3		*0.3*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
2.8	0.0	2.8	(0.3)	*(0.3)*	0.0	0.0	0.7	(0.8)	0.4	(0.5)	0.0	2.4
0.6		*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.6*
1.9		*1.9*	*(0.3)*	*(0.2)*	*0.0*	*0.0*	*0.6*	*(0.7)*	*0.2*	*(0.4)*	*0.0*	*1.4*
0.3	*0.0*	*0.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.4*
10.9		10.9	0.6	*0.5*	0.0	0.0	3.2	(2.4)	1.3	(3.6)	0.1	10.2
1.9		1.9	(0.6)	*(0.6)*	0.0	0.0	0.4	(0.7)	0.0	0.0	0.0	1.1

Note 10 Fair value measurement (continued)

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into and out of Level 3 totaled CHF 1.0 billion and CHF 0.2 billion, respectively. Transfers into Level 3 were primarily comprised of corporate and municipal bonds reflecting decreased observability of the respective bond price equivalent inputs. Transfers out of Level 3 were primarily comprised of equity / index contracts due to increased observability of the respective equity volatility inputs.

Liabilities transferred into and out of Level 3 totaled CHF 1.7 billion and CHF 4.1 billion, respectively. Transfers into Level 3 were primarily comprised of structured medium-term notes and equity-linked issued debt instruments due to decreased observability of the embedded derivative inputs. Transfers out of Level 3 were primarily comprised of interest rate-linked and equity-linked issued debt instruments resulting from changes in the observability of the respective OCA curve and equity volatility inputs used to determine the fair value of these instruments.

g) Financial instruments not measured at fair value

The table below reflects the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	30.6.18		31.3.18		31.12.17	
CHF billion	Carrying value	Fair value	Carrying value	Fair value	Carrying value	Fair value
Assets						
Cash and balances at central banks	102.3	102.3	92.8	92.8	87.8	87.8
Loans and advances to banks	15.6	15.6	13.3	13.3	13.7	13.7
Receivables from securities financing transactions	76.4	76.4	77.0	77.0	89.6	89.6
Cash collateral receivables on derivative instruments	24.9	24.9	24.3	24.3	23.4	23.4
Loans and advances to customers	318.3	318.8	316.2	317.0	318.5	319.9
Other financial assets measured at amortized cost	21.0	20.7	19.1	18.9	36.9	36.7
Liabilities						
Amounts due to banks	10.2	10.2	9.0	9.0	7.5	7.5
Payables from securities financing transactions	10.1	10.1	9.2	9.2	17.0	17.0
Cash collateral payables on derivative instruments	31.8	31.8	29.4	29.4	30.2	30.2
Customer deposits	403.4	403.4	398.6	398.6	409.0	409.0
Debt issued measured at amortized cost	137.5	140.1	137.9	140.9	139.6	143.5
Other financial liabilities measured at amortized cost	6.9	6.9	5.9	5.9	36.3	36.3

The fair values included in the table above were calculated for disclosure purposes only. The fair value valuation techniques and assumptions relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another.

Note 11 Derivative instruments

a) Derivative instruments

As of 30.6.18, CHF billion	Derivative financial assets	Notional values related to derivative financial assets[3]	Derivative financial liabilities	Notional values related to derivative financial liabilities[3]	Other notional values[4]
Derivative financial instruments[1,2]					
Interest rate contracts	38.8	1,169	34.0	1,093	11,322
Credit derivative contracts	2.1	81	3.2	83	0
Foreign exchange contracts	53.7	2,736	53.6	2,588	1
Equity / index contracts	24.9	446	26.5	530	101
Commodity contracts	1.6	44	1.4	39	11
Unsettled purchases of non-derivative financial instruments[5]	0.2	26	0.2	18	
Unsettled sales of non-derivative financial instruments[5]	0.3	31	0.3	20	
Total derivative financial instruments, based on IFRS netting[6]	121.6	4,533	119.2	4,371	11,435
Further netting potential not recognized on the balance sheet[7]	(106.6)		(103.1)		
of which: netting of recognized financial liabilities / assets	*(87.4)*		*(87.4)*		
of which: netting with collateral received / pledged	*(19.2)*		*(15.7)*		
Total derivative financial instruments, after consideration of further netting potential	15.1		16.2		
As of 31.3.18, CHF billion					
Derivative financial instruments[1,2]					
Interest rate contracts	41.2	1,231	36.3	1,103	11,173
Credit derivative contracts	2.4	88	3.4	93	0
Foreign exchange contracts	42.6	2,547	42.4	2,445	0
Equity / index contracts	25.0	412	27.8	474	91
Commodity contracts	1.4	39	1.2	39	9
Unsettled purchases of non-derivative financial instruments[5]	0.4	36	0.3	15	
Unsettled sales of non-derivative financial instruments[5]	0.3	28	0.5	28	
Total derivative financial instruments, based on IFRS netting[6]	113.3	4,382	111.9	4,197	11,273
Further netting potential not recognized on the balance sheet[7]	(99.3)		(96.8)		
of which: netting of recognized financial liabilities / assets	*(80.7)*		*(80.7)*		
of which: netting with collateral received / pledged	*(18.6)*		*(16.1)*		
Total derivative financial instruments, after consideration of further netting potential	14.1		15.2		
As of 31.12.17, CHF billion					
Derivative financial instruments[1]					
Interest rate contracts	44.0	1,142	38.4	1,044	10,462
Credit derivative contracts	2.8	92	3.8	98	1
Foreign exchange contracts	47.1	2,389	45.5	2,193	0
Equity / index contracts	22.2	380	26.7	487	83
Commodity contracts	1.7	33	1.6	37	8
Unsettled purchases of non-derivative financial instruments[5]	0.1	12	0.1	11	
Unsettled sales of non-derivative financial instruments[5]	0.1	15	0.1	9	
Total derivative financial instruments, based on IFRS netting[6]	118.2	4,063	116.1	3,878	10,555
Further netting potential not recognized on the balance sheet[7]	(104.2)		(98.5)		
of which: netting of recognized financial liabilities / assets	*(83.5)*		*(83.5)*		
of which: netting with collateral received / pledged	*(20.7)*		*(15.0)*		
Total derivative financial instruments, after consideration of further netting potential	14.0		17.7		

1 Derivative financial liabilities as of 30 June 2018 include CHF 0.0 billion related to derivative loan commitments (31 March 2018: CHF 0.1 billion; 31 December 2017: CHF 0.0 billion). No notional amounts related to these commitments are included in this table but they are disclosed within Note 16 under Loan commitments with a committed amount of CHF 8.1 billion as of 30 June 2018 (31 March 2018: CHF 3.9 billion; 31 December 2017: CHF 5.3 billion). 2 Upon adoption of IFRS 9 on 1 January 2018, certain forward starting repurchase and reverse repurchase agreements have been classified as measured at fair value through profit or loss and are recognized within derivative instruments. The fair value of these derivative instruments was not material as of 30 June 2018 or 31 March 2018. No notional amounts related to these instruments are included in this table, but they are disclosed within Note 16 under Forward starting transactions. 3 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional values of the netted derivative financial instruments are still presented on a gross basis. 4 Other notional values relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for all periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 7 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

Note 11 Derivative instruments (continued)

b) Cash collateral on derivative instruments

CHF billion	Receivables 30.6.18	Payables 30.6.18	Receivables 31.3.18	Payables 31.3.18	Receivables 31.12.17	Payables 31.12.17
Cash collateral on derivative instruments, based on IFRS netting[1]	24.9	31.8	24.3	29.4	23.4	30.2
Further netting potential not recognized on the balance sheet[2]	(13.0)	(15.5)	(13.5)	(14.4)	(12.5)	(17.4)
of which: netting of recognized financial liabilities / assets	*(12.5)*	*(14.5)*	*(12.9)*	*(13.3)*	*(11.7)*	*(16.3)*
of which: netting with collateral received / pledged	*(0.5)*	*(1.0)*	*(0.6)*	*(1.2)*	*(0.7)*	*(1.2)*
Cash collateral on derivative instruments, after consideration of further netting potential	11.9	16.4	10.7	15.0	11.0	12.8

1 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS or its counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 2 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of our Annual Report 2017 for more information.

Note 12 Other assets and liabilities

a) Other financial assets measured at amortized cost

CHF million	30.6.18	31.3.18	31.12.17
Prime brokerage receivables[1]			19,080
Debt securities	12,241	10,610	9,166
of which: government bills / bonds	*9,787*	*7,775*	*6,465*
Loans to financial advisors[2]	3,394	3,326	3,118
Fee- and commission-related receivables	1,751	1,679	1,780
Finance lease receivables	1,076	1,070	1,059
Settlement and clearing accounts	448	557	716
Accrued interest income	667	609	577
Other	1,417	1,279	1,365
Total other financial assets measured at amortized cost	20,996	19,129	36,861

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 19 for more information. 2 Related to financial advisors in the US and Canada.

b) Other non-financial assets

CHF million	30.6.18	31.3.18	31.12.17
Precious metals and other physical commodities	3,975	4,032	4,563
Bail deposit[1]	1,320	1,336	1,337
Prepaid expenses	1,037	1,065	1,013
Net defined benefit pension and post-employment assets	61	1	0
VAT and other tax receivables	384	365	359
Properties and other non-current assets held for sale	65	67	95
Other	482	459	266
Total other non-financial assets	7,324	7,324	7,633

1 Refer to item 1 in Note 15b for more information.

Note 12 Other assets and liabilities (continued)

c) Other financial liabilities measured at amortized cost

CHF million	30.6.18	31.3.18	31.12.17
Prime brokerage payables[1]			29,646
Other accrued expenses	2,178	2,277	2,444
Accrued interest expenses	1,288	1,291	1,513
Settlement and clearing accounts	1,257	1,067	1,395
Other	2,186	1,276	1,338
Total other financial liabilities measured at amortized cost	6,909	5,911	36,337

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 19 for more information.

d) Other financial liabilities designated at fair value

CHF million	30.6.18	31.3.18	31.12.17
Amounts due under unit-linked investment contracts	24,913	24,348	11,523
Structured securities financing transactions	6,533	5,812	375
Over-the-counter debt instruments	5,888	4,270	4,317
of which: life-to-date own credit (gain) / loss	*(41)*	*5*	*36*
Loan commitments and guarantees	8	7	9
Total other financial liabilities designated at fair value	37,342	34,438	16,223

e) Other non-financial liabilities

CHF million	30.6.18	31.3.18	31.12.17
Compensation-related liabilities	5,922	5,224	7,674
of which: accrued expenses	*1,765*	*1,141*	*2,670*
of which: Deferred Contingent Capital Plan	*1,770*	*1,629*	*1,993*
of which: other deferred compensation plans	*1,762*	*1,627*	*2,086*
of which: net defined benefit pension and post-employment liabilities	*625*	*828*	*925*
Current and deferred tax liabilities	907	947	912
VAT and other tax payables	503	534	415
Deferred income	240	244	150
Other	136	67	53
Total other non-financial liabilities	7,708	7,016	9,205

Note 13 Debt issued designated at fair value

CHF million	30.6.18	31.3.18	31.12.17
Issued debt instruments			
Equity-linked[1]	39,355	36,107	34,162
Rates-linked	7,505	5,972	5,811
Credit-linked	3,034	2,933	2,937
Fixed-rate	4,293	4,187	3,921
Other	2,661	2,860	2,671
Total debt issued designated at fair value	56,849	52,059	49,502
of which: issued by UBS AG with original maturity greater than one year[2]	*41,624*	*38,255*	*37,266*
of which: life-to-date own credit (gain) / loss	*(188)*	*14*	*159*

1 Includes investment fund unit-linked instruments issued. 2 Issued by the legal entity UBS AG. Based on original contractual maturity without considering any early redemption features. More than 99% of the balance as of 30 June 2018 was unsecured (31 March 2018: more than 99% of the balance was unsecured; 31 December 2017: more than 99% of the balance was unsecured).

Note 14 Debt issued measured at amortized cost

CHF million	30.6.18	31.3.18	31.12.17
Certificates of deposit	12,720	18,779	23,831
Commercial paper	28,878	23,304	23,532
Other short-term debt	3,730	4,078	3,590
Short-term debt[1]	45,328	46,162	50,953
Senior unsecured debt	33,699	34,729	32,268
of which: issued by UBS AG with original maturity greater than one year[2]	*33,697*	*34,725*	*32,256*
Senior unsecured debt that contributes to total loss-absorbing capacity	29,123	26,431	27,233
Covered bonds	4,029	4,105	4,112
Subordinated debt	16,931	18,030	16,555
of which: high-trigger loss-absorbing additional tier 1 capital instruments	*7,119*	*6,898*	*5,187*
of which: low-trigger loss-absorbing additional tier 1 capital instruments	*2,359*	*2,342*	*2,383*
of which: low-trigger loss-absorbing tier 2 capital instruments	*6,748*	*8,097*	*8,286*
of which: non-Basel III-compliant tier 2 capital instruments	*705*	*694*	*700*
Debt issued through the Swiss central mortgage institutions	8,357	8,349	8,345
Other long-term debt	63	77	87
of which: issued by UBS AG with original maturity greater than one year[2]	*54*	*58*	*66*
Long-term debt[3]	92,201	91,721	88,599
Total debt issued measured at amortized cost[4]	137,530	137,883	139,551

1 Debt with an original maturity of less than one year. 2 Issued by the legal entity UBS AG. Based on original contractual maturity without considering any early redemption features, 100% of the balance as of 30 June 2018 was unsecured (31 March 2018: 100% of the balance was unsecured; 31 December 2017: 100% of the balance was unsecured). 3 Debt with an original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 4 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

Note 15 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions recognized under both IAS 37 and IFRS 9.

CHF million	30.6.18	31.3.18	31.12.17
Provisions recognized under IAS 37	3,012	2,937	3,100
Provisions for off-balance sheet financial instruments[1]	76	72	33
Provisions for other credit lines[1]	35	35	0
Total provisions	3,123	3,044	3,133

1 Provisions recognized in 2018 relate to exposures in the scope of the expected credit loss requirements of IFRS 9. Refer to Notes 9 and 19 for more information. 2017 provisions for off-balance sheet financial instruments relate to loss provisions recognized under IAS 37.

The following table presents additional information for provisions recognized under IAS 37.

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restructuring	Real estate	Employee benefits[5]	Other	Total
Balance as of 31 December 2017	43	2,444	322	134	68	89	3,100
Balance as of 31 March 2018	41	2,331	280	134	66	85	2,937
Increase in provisions recognized in the income statement	5	154	39	0	1	2	201
Release of provisions recognized in the income statement	(1)	(13)	(29)	0	(2)	0	(44)
Provisions used in conformity with designated purpose	(4)	(94)	(48)	(2)	0	(4)	(151)
Capitalized reinstatement costs	0	0	0	(2)	0	0	(2)
Foreign currency translation / unwind of discount	0	64	6	1	0	0	71
Balance as of 30 June 2018	41	2,442	248[3]	132[4]	66	83	3,012

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Primarily consists of personnel-related restructuring provisions of CHF 60 million as of 30 June 2018 (31 March 2018: CHF 63 million, 31 December 2017: CHF 83 million) and provisions for onerous lease contracts of CHF 183 million as of 30 June 2018 (31 March 2018: CHF 212 million, 31 December 2017: CHF 235 million). 4 Consists of reinstatement costs for leasehold improvements of CHF 90 million as of 30 June 2018 (31 March 2018: CHF 92 million, 31 December 2017: CHF 92 million) and provisions for onerous lease contracts of CHF 41 million as of 30 June 2018 (31 March 2018: CHF 42 million, 31 December 2017: CHF 41 million). 5 Includes provisions for sabbatical and anniversary awards as well as provisions for severance that are not part of restructuring provisions.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 15b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

The Group operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS Group AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where the Group may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which the Group believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. The Group makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against the Group, but are nevertheless expected to be, based on the Group's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

Note 15 Provisions and contingent liabilities (continued)

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 15a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of this report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Global Wealth Manage-ment	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	UBS
Balance as of 31 December 2017	555	79	1	345	240	0	1,224	2,444
Balance as of 31 March 2018	546	79	1	323	216	0	1,166	2,331
Increase in provisions recognized in the income statement	69	0	0	3	1	0	82	154
Release of provisions recognized in the income statement	(12)	0	0	0	0	0	0	(13)
Provisions used in conformity with designated purpose	(47)	(3)	0	(1)	0	0	(42)	(94)
Foreign currency translation / unwind of discount	11	0	0	9	0	0	45	64
Balance as of 30 June 2018	567	75	0	333	216	0	1,251	2,442

1 Provisions, if any, for the matters described in this Note are recorded in Global Wealth Management (item 3 and item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this Note in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio.

Note 15 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that, in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders.

Since 2013, UBS (France) S.A., UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory, regarding the laundering of proceeds of tax fraud, and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). In March 2017, the investigating judges issued the trial order ("*ordonnance de renvoi*") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and that transfers the case to court. The trial is scheduled to start in October 2018. In October 2017, the Investigation Chamber of the Court of Appeals decided that UBS (France) S.A. shall not be constituted as a civil party in the guilty plea proceedings against the former UBS (France) S.A. Head of Front Office. UBS (France) S.A. has appealed this decision to the French Supreme Court ("*Cour de cassation*"). The appeal is pending, although the criminal court subsequently found the individual's guilty plea to be invalid.

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud, of banking and financial solicitation by unauthorized persons, and of serious tax fraud.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 30 June 2018 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Note 15 Provisions and contingent liabilities (continued)

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action (Trustee Suit) in the US District Court for the Southern District of New York (SDNY) seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations issued and underwritten by UBS with an original principal balance of approximately USD 2 billion. Approximately 9,000 loans were at issue in a bench trial in the SDNY in 2016, following which the court issued an order ruling on numerous legal and factual issues and applying those rulings to 20 exemplar loans. The court further ordered that a lead master be appointed to apply the court's rulings to the remaining loans. In 2017, UBS and certain holders of the RMBS in the Trustee Suit entered into an agreement under which UBS would have paid an aggregate of USD 543 million into the relevant RMBS trusts, plus certain attorneys' fees. The trustee for the RMBS trusts declined to become a party to the settlement and the agreement with the RMBS holders therefore lapsed. In July 2018, UBS and the trustee entered into an agreement under which UBS will pay USD 850 million to resolve this matter. A significant portion of this amount will be borne by other parties that indemnified UBS. The settlement remains subject to approval by the court and proceedings to determine how the settlement funds will be distributed to RMBS holders. After giving effect to this settlement, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS has also responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the US Securities and Exchange Commission (SEC) relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

Our balance sheet at 30 June 2018 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.6 billion, of which claims with aggregate claimed damages of USD 1.6 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims are filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans. A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied.

Defendants' requests for permission to appeal that ruling were denied by the Puerto Rico Court of Appeals and the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In 2016, defendants' motion to dismiss was granted in part and denied in part. In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA in December 2013 based on plaintiffs' allegation that the loans are not valid. The trial court denied defendant's motion for summary judgment based on a forum selection clause in the loan agreements. The Puerto Rico Supreme Court reversed that decision and remanded the case back to the trial court for reconsideration. On reconsideration the trial court granted defendant's motion and dismissed the action.

In 2014, UBS reached a settlement with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI) in connection with OCFI's examination of UBS's operations from January 2006 through September 2013, pursuant to which UBS is paying up to an aggregate of USD 7.7 million in investor education contributions and restitution.

In 2015, the SEC and the Financial Industry Regulatory Authority (FINRA) announced settlements with UBS PR of their separate investigations stemming from the 2013 market events. Without admitting or denying the findings in either matter, UBS PR agreed in the SEC settlement to pay USD 15 million and USD 18.5 million in the FINRA matter. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Note 15 Provisions and contingent liabilities (continued)

Beginning in 2015, and continuing through 2017, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. The funds hold significant amounts of those bonds and the defaults on interest payments have had, and are expected to continue to have, an adverse effect on dividends from the funds. Executive orders of the Governor of Puerto Rico that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of creditors' rights. In 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 30 June 2018 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Following an initial media report in 2013 of widespread irregularities in the foreign exchange markets, UBS immediately commenced an internal review of its foreign exchange business, which includes our precious metals and related structured products businesses. Numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority (FCA) and the US Commodity Futures Trading Commission (CFTC) in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System (Federal Reserve Board) and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In addition, the DOJ's Criminal Division (Criminal Division) terminated the 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation measures. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. They allege collusion by the defendants and assert claims under the antitrust laws and for unjust enrichment. In 2015, additional putative class actions were filed in federal court in New York against UBS and other banks on behalf of a putative class of persons who entered into or held any foreign exchange futures contracts and options on foreign exchange futures contracts since 2003. The complaints assert claims under the Commodity Exchange Act (CEA) and the US antitrust laws. In 2015, a consolidated complaint was filed on behalf of both putative classes of persons covered by the US federal court class actions described above. UBS has entered into a settlement agreement that would resolve all of these US federal court class actions. The settlement agreement, which has been preliminarily approved by the court and is subject to final court approval, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign currency exchange transactional services, exercised discretionary authority or discretionary control over management of such ERISA plan, or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. The parties filed a stipulation to dismiss the case with prejudice. The plaintiffs have appealed the dismissal. In July, the Second Circuit affirmed the dismissal.

Note 15 Provisions and contingent liabilities (continued)

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and their co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint.

In 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017. In March 2018, the court dismissed the consolidated complaint. Plaintiffs have filed a motion seeking leave to file an amended complaint.

Putative class actions are also pending against UBS and other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits assert claims under the antitrust laws and the CEA, and other claims. In 2016, the court in New York granted UBS's motions to dismiss the putative class actions relating to gold and silver. Plaintiffs in those cases sought to amend their complaints to add new allegations about UBS, which the court granted. The plaintiffs filed amended complaints in 2017, and motions to dismiss the amended complaints are pending. In March 2017, the court in New York granted UBS's motion to dismiss the platinum and palladium action. In May 2017, plaintiffs in the platinum and palladium action filed an amended complaint that did not allege claims against UBS.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office (SFO), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the FSA, the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission (WEKO) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation measures with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of other actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

USD LIBOR class and individual actions in the US: In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims. Although, the Second Circuit vacated the district court's judgment dismissing antitrust claims, the district court again dismissed antitrust claims against UBS in 2016. Certain plaintiffs have appealed that decision to the Second Circuit. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims. UBS entered into an agreement in 2016 with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs have sought permission to appeal that ruling to the Second Circuit. In July, the Second Circuit denied the petition to appeal of the class of USD lenders.

Note 15 Provisions and contingent liabilities (continued)

Other benchmark class actions and ISDAFIX class action in the US: In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including federal antitrust claims for lack of standing. In 2015, this court dismissed the plaintiff's federal racketeering claims on the same basis and affirmed its previous dismissal of the plaintiff's antitrust claims against UBS. In 2017, this court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR / SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR / SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2017, UBS agreed to pay USD 14 million to resolve putative class actions filed in federal court in New York and New Jersey against UBS and other financial institutions on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX. The final settlement was approved in June 2018.

Government bonds: Putative class actions have been filed since 2015 in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. A consolidated complaint was filed in 2017 in the SDNY alleging that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction and in the secondary market and asserting claims under the antitrust laws and for unjust enrichment. Defendants' motions to dismiss the consolidated complaint are pending.

Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 30 June 2018 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 30 June 2018 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong-listed initial public offerings for 18 months. UBS has appealed the decision.

Note 16 Guarantees, commitments and forward starting transactions

The table below presents the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

	30.6.18			31.3.18			31.12.17		
CHF million	Gross	Sub-participations	Net	Gross	Sub-participations	Net	Gross	Sub-participations	Net
Total guarantees	20,175	(2,976)	17,199	19,009	(2,923)	16,086	18,854	(2,867)	15,987
Loan commitments	39,567	(662)	38,905	34,534	(866)	33,667	39,069	(1,074)	37,995
Forward starting transactions[1]									
Reverse repurchase agreements	13,521			16,905			12,683		
Securities borrowing agreements	38			35			23		
Repurchase agreements	10,868			13,763			8,187		

1 Cash to be paid in the future by either UBS or the counterparty.

Note 17 Changes in organization

Following the announcement by the China Securities Regulatory Commission that foreign investors will be permitted to increase their ownership percentages in China affiliates to a cap of 51%, and may be allowed to increase their ownership up to 100% in 2021, UBS submitted in May 2018 a preliminary application to increase the shareholding in its China affiliate, UBS Securities Co. Limited (UBSS), from 24.99% to 51%. The transaction is subject to completion of a share purchase from existing shareholders and regulatory approval. If UBS acquires majority ownership, UBS would consolidate its investment in UBSS under IFRS and would be required to remeasure its current 24.99% holding in UBSS at fair value, likely resulting in a loss.

Note 18 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS's foreign operations into Swiss francs.

	Spot rate				Average rate[1]				
	As of				For the quarter ended			Year-to-date	
	30.6.18	31.3.18	31.12.17	30.6.17	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
1 USD	0.99	0.95	0.97	0.96	0.99	0.94	0.97	0.97	0.99
1 EUR	1.16	1.17	1.17	1.10	1.17	1.16	1.09	1.16	1.08
1 GBP	1.31	1.34	1.32	1.25	1.33	1.32	1.26	1.32	1.26
100 JPY	0.89	0.90	0.86	0.85	0.90	0.88	0.87	0.89	0.88

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a quarter represent an average of three month-end rates, weighted according to the income and expense volumes of all foreign operations of the Group with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for the Group.

Note 19 Transition to IFRS 9 as of 1 January 2018

19.1 Update to significant accounting policies disclosed in Note 1a) to the Financial Statements 2017 related to IFRS 9

The adoption of IFRS 9, *Financial Instruments* (IFRS 9) resulted in changes to UBS's accounting policies applicable from 1 January 2018. Accounting polices set out below replace item 3) b, c, g, h, i, l, o and p in Note 1a) in the UBS Group consolidated annual Financial Statements for the year ended 31 December 2017.

As permitted by the transition provisions of IFRS 9 UBS elected not to restate comparative period information, and the accounting policies as set out in Note 1 in the UBS Group AG consolidated annual Financial Statements for the period ended 31 December 2017 apply to comparative periods.

Update to Note 1a) 3) Financial instruments

b. Classification, measurement and presentation

On initial recognition, financial assets are classified as measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL).

A debt instrument is measured at amortized cost if it meets the following conditions:

- it is held within a business model that has an objective to hold financial assets to collect contractual cash flows; and
- the contractual terms of the financial asset result in cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

A debt instrument is measured at FVOCI if it meets both of the following conditions:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms of the financial asset result in cash flows that are SPPI.

Equity instruments are accounted for at FVTPL. All other financial assets are measured at FVTPL and consist of held for trading assets, assets mandatorily measured on a fair value basis and derivatives, except to the extent that they are designated in a hedging relationship, in which case the IAS 39 hedge accounting requirements continue to apply.

Business model assessment

UBS determines the nature of the business model, for example if the objective is to hold the financial asset and collect the contractual cash flows, by considering the way in which the financial assets are managed to achieve a particular business objective as determined by management.

Financial assets that are held for trading or managed on a fair value basis are measured at FVTPL insofar as the associated business model is neither to hold the financial assets to collect contractual cash flows nor to hold to collect contractual cash flows and sell.

The Group originates loans to hold to maturity and to sell or sub-participate to other parties, resulting in a transfer of substantially all the risks and rewards, and derecognition of the loan or portions of it. The Group considers the activities of lending to hold and lending to sell or sub-participate as two separate business models, with financial assets within the former considered to be within a business model that has an objective to hold the assets to collect contractual cash flows, and those within the latter included in a trading portfolio. In certain cases, it may not be possible on origination to identify whether loans or portions of loans will be sold or sub-participated and certain loans may be managed on a fair value basis through, for instance, using credit derivatives. These financial assets are mandatorily measured at FVTPL.

Critical accounting estimates and judgments

UBS exercises judgment to determine the appropriate level at which to assess its business models. In general the assessment is performed at the product level, e.g., retail and commercial mortgages. In other cases the assessment is carried out at a more granular level, e.g., loan portfolios by region, and, if required, further disaggregation is performed by business strategy. In addition, UBS exercises judgment in determining the effect of sales of financial instruments on the business model assessment.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Contractual cash flow characteristics

In assessing whether the contractual cash flows are SPPI, the Group considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument, which could affect whether the instrument is considered to meet the SPPI criteria.

For example, the Group holds portfolios of private mortgage contracts and corporate loans in Personal & Corporate Banking that commonly contain clauses that provide for two-way compensation if prepayment occurs. The amount of compensation paid by or to UBS reflects the effect of changes in market interest rates. The Group has determined that the inclusion of the change in market interest rates in the compensation amount is reasonable for the early termination of the contract, and therefore results in contractual cash flows that are SPPI.

Critical accounting estimates and judgments

UBS applies judgment when considering whether certain contractual features, such as interest rate reset frequency or non-recourse features, significantly affect future cash flows. Furthermore, judgment is required when assessing whether compensation paid or received on early termination of lending arrangements results in cash flows that are not SPPI.

All financial instruments are initially measured at fair value. In the case of financial instruments subsequently measured at amortized cost or FVOCI, the initial fair value is adjusted for directly attributable transaction costs.

After initial recognition, UBS classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9 as described in the table on the following pages.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		A debt financial asset is measured at amortized cost if: – it is held in a business model that has an objective to hold assets to collect contractual cash flows, and – the contractual terms give rise to cash flows that are SPPI. This classification includes: – cash and balances at central banks – loans and advances to banks – cash collateral receivable on securities borrowed – receivables on reverse repurchase agreements – cash collateral receivables on derivative instruments – residential and commercial mortgages – corporate loans – secured loans, including Lombard loans, and unsecured loans – loans to financial advisors – debt securities held as high-quality liquid assets (HQLA) – fee and lease receivables.	Measured at amortized cost using the effective interest rate (EIR) method less allowances for expected credit losses (ECL) (refer to items 3c and 3g in this Note for more information). The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments – when it is probable that UBS will enter into a specific lending relationship – are deferred and amortized over the life of the loan using the EIR method. When the financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amounts arising from exchange-traded derivatives (ETD) and certain over-the-counter (OTC) derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral receivables on derivative instruments.*
Measured at FVOCI	Debt instruments measured at FVOCI	A debt financial asset is measured at FVOCI if: – it is held in a business model whose objective is achieved by both holding assets to collect contractual cash flows and selling the assets, and – the contractual terms give rise to cash flows that are SPPI. This classification primarily includes debt securities and certain asset-backed securities held as HQLA for which the contractual cash flows meet the SPPI conditions.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized (when sold, collected or otherwise disposed). Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses. The amounts recognized in the income statement are determined on the same basis as for financial assets measured at amortized cost.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at FVTPL	Held for trading	Financial assets held for trading include: – all derivatives with a positive replacement value, except those that are designated as effective hedging instruments – other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans) and equity instruments.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Other net income from fair value changes on financial instruments*, except interest and dividend income on instruments other than derivatives (refer to item 3c in this Note for more information), interest on derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain long- and short-duration foreign exchange contracts, which are reported in *Net interest income*. Derivative assets are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral receivables on derivative instruments.* The presentation of fair value changes on derivatives that are designated and effective as hedging instruments depends on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information). Financial assets held for trading (other than derivatives) are presented as *Financial assets at fair value held for trading*. Other financial assets mandatorily measured at fair value through profit or loss are presented as *Financial assets at fair value not held for trading*, except for brokerage receivables, which are presented as a separate line item on the Group's balance sheet.
	Mandatorily measured at FVTPL – Other	A financial asset is mandatorily measured at FVTPL if: – it is not held in a business model whose objective is to hold assets to collect contractual cash flows or to hold them to collect contractual cash flows and sell, and / or – the contractual terms give rise to cash flows that are not SPPI, and / or – it is not held for trading. The following financial assets are mandatorily measured at FVTPL: – Certain structured loans, certain commercial loans, receivables under reverse repurchase and cash collateral on securities borrowing agreements that are managed on a fair value basis – Loans, managed on a fair value basis and hedged with credit derivatives – Certain debt securities held as HQLA and managed on a fair value basis – Certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets represent holdings in investments funds, whereby the contractual cash flows do not meet the SPPI conditions because the entry and exit price is based on the fair value of the fund's assets – Brokerage receivables, for which contractual cash flows do not meet the SPPI conditions due to the aggregate balance being accounted for as a single unit of account, with interest being calculated on the individual components – Auction rate securities, for which contractual cash flows do not meet the SPPI conditions because interest may be reset at rates that contain leverage – Equity instruments – Assets held under unit-linked investment contracts.	

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial liabilities classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – Demand and time deposits, retail savings / deposits, amounts payable under repurchase agreements, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit and covered bonds – Cash collateral payables on derivative instruments.	Measured at amortized cost using the EIR method. Upfront fees and direct costs relating to the issuance or origination of the liability are deferred and amortized over the life of the liability using the EIR method. When the financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amortized cost liabilities are presented on the balance sheet primarily as *Amounts due to banks, Customer deposits, Payables from securities financing transactions* and *Debt issued measured at amortized cost.* Amounts arising from ETD and certain OTC derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral payables on derivative instruments.*
Measured at fair value through profit or loss	Held for trading	Financial liabilities held for trading include: – All derivatives with a negative replacement value (including certain loan commitments) except those that are designated and effective hedging instruments – Obligations to deliver financial instruments, such as debt and equity instruments, that UBS has sold to third parties, but does not own (short positions).	Measurement of financial liabilities classified at FVTPL follows the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of the financial liability that is attributable to changes in UBS's own credit risk is presented in OCI. Financial liabilities measured at FVTPL are presented as *Financial liabilities at fair value held for trading* and *Other financial liabilities designated at fair value*, respectively, except for brokerage payables and debt issued, which are presented as separate sub-totals on the Group's balance sheet. Derivative liabilities are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral payables on derivative instruments.* Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective as hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information).
	Designated at FVTPL	UBS designated at FVTPL the following financial liabilities: – Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes – Issued debt instruments managed on a fair value basis – Certain payables under repurchase agreements and cash collateral on securities lending agreements that are managed in conjunction with associated reverse repurchase agreements and cash collateral on securities borrowed – Loan commitments that are hedged predominantly with credit derivatives and those managed on a fair value basis – Amounts due under unit-linked investment contracts whose cash flows are linked to financial assets measured at FVTPL and eliminate an accounting mismatch – Brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.	

c. Interest income and expense

Interest income and expense are recognized in the income statement applying the EIR method.

In determining interest income and expense, the EIR is applied to the gross carrying amount of the financial asset (unless the asset is credit-impaired) or the amortized cost of a financial liability, based on estimated future cash flows that take into account all contractual cash flows, except those related to ECL. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying EIR to the amortized cost of the instrument. Furthermore, for financial assets that were credit-impaired on initial recognition, interest is determined by applying a credit-adjusted EIR to the amortized cost of the instrument.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS also presents interest income and expense on financial instruments (excluding derivatives) measured at FVTPL separately from the rest of the fair value changes in the income statement. Interest income or expense on financial instruments measured at amortized cost and financial assets measured at FVOCI are presented separately within *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* and *Interest expense from financial instruments measured at amortized cost,* with interest on financial instruments at FVTPL presented in *Interest income (or expense) from financial instruments measured at fair value through profit or loss*. All are part of *Net interest income*.

Interest income from financial instruments measured at fair value through profit or loss includes forward points on certain short- and long-duration foreign exchange contracts and dividend income.

Furthermore, interest income and expense on derivatives designated as hedging instruments in effective hedge relationships are presented consistently with the interest income and expense of the respective hedged item.

→ **Refer to "Note 1a) Significant Accounting Policies" in the "Consolidated financial Statements" section of the Annual Report 2017 for more information**

g. Expected credit losses

Expected credit losses (ECL) are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees and loan commitments. ECL are also recognized on the undrawn portion of revolving revocable credit lines, which include UBS's credit card limits and master credit facilities, which are customary in the Swiss market for corporate and commercial clients. UBS refers to both as "other credit lines," with clients allowed to draw down on-demand balances (with the Swiss master credit facilities also allowing for term products) and which can be terminated by UBS at any time. Though these other credit lines are revocable, UBS is exposed to credit risk because the client has the ability to draw down funds before UBS can take credit risk mitigation actions.

Recognition of expected credit losses

ECL represent the difference between contractual cash flows and those UBS expects to receive, discounted at the EIR. For loan commitments and other credit facilities in scope of ECL, expected cash shortfalls are determined by considering expected future draw downs.

ECL are recognized on the following basis:

- Maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 1. For instruments with a remaining maturity of less than 12 months, ECL are determined for this shorter period.
- Lifetime ECL are recognized if a significant increase in credit risk (SICR) is detected subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 2. Where an SICR is no longer observed, the instrument will move back to stage 1.
- Lifetime ECL are always recognized for credit-impaired financial instruments, referred to as instruments in stage 3. The IFRS 9 determination of whether an instrument is credit-impaired is based on the occurrence of one or more loss events, with lifetime ECL generally derived by estimating expected cash flows based on a chosen recovery strategy with additional consideration given to forward-looking economic scenarios. Credit-impaired exposures may include positions for which no loss has occurred or no allowance has been recognized, for example, because they are expected to be fully recoverable through the collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired financial assets (POCI). POCI are initially recognized at fair value with interest income subsequently being recognized based on a credit-adjusted EIR. POCI include financial instruments that are newly recognized following a substantial restructuring and remain a separate category until maturity.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS does not apply the low-credit-risk practical expedient that allows a lifetime ECL for lease or fee receivables to be recognized irrespective of whether a significant increase in credit risk has occurred. Instead, UBS has incorporated lease and fee receivables into the standard ECL calculation.

A write-off is made when all or part of a financial asset is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / recovery*. Write-offs and partial write-offs represent derecognition / partial derecognition events.

ECL are recognized in profit or loss with a corresponding ECL allowance reported as a decrease in the carrying value of financial assets measured at amortized cost on the balance sheet. For financial assets measured at fair value through OCI, the carrying value is not reduced, but an accumulated amount is recognized in OCI. For off-balance sheet financial instruments and other credit lines, provisions for ECL are reported in *Provisions*. ECL are recognized within the income statement in *Credit loss expense / recovery.*

Default and credit impairment

The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for the Personal & Corporate Banking and Swiss wealth management portfolios. Counterparties are also classified as defaulted when bankruptcy, insolvency proceedings or enforced liquidation have commenced, obligations have been restructured on preferential terms or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If a counterparty is defaulted, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is POCI. An instrument is POCI if it has been purchased with a material discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCIs), it remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit-restructured, and there is general evidence of credit recovery. A minimum period of three months is applied whereby most instruments remain in stage 3 for a longer period.

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on either loss expectations resulting from default events over a maximum 12-month period from the reporting date or over the remaining life of a financial instrument. The method used to calculate individual probability-weighted unbiased ECL is based on a combination of the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). PDs and LGDs used in the ECL calculation are point in time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For each instrument or group of instruments, parameter time series are generated consisting of the instruments' PD, LGD and EAD profiles considering the respective period of exposure to credit risk.

For the purpose of determining the ECL-relevant parameters, UBS leverages its Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and new IFRS 9-related models have been developed, which consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III through the cycle (TTC) parameters. The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III are not affected by the IFRS 9 ECL calculation.

Probability of default (PD): The PD represents the likelihood of a default over a specified time period. A 12-month PD represents the likelihood of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. The lifetime PD calculation is based on a series of 12-month PIT PDs that are derived from TTC PDs and scenario forecasts. This modeling is region-, industry- and client segment-specific and considers both scenario-systematic and client-idiosyncratic information. To derive the cumulative lifetime PD per scenario, the series of 12-month PIT PDs are transformed into marginal PIT PDs taking any assumed default events from previous periods into account.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Exposure at default (EAD): The EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring during the life of a financial instrument. It represents the cash flows outstanding at the time of default, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios. IFRS 9-specific CCFs have been modeled to capture client segment- and product-specific patterns after removing Basel standard-specific limitations, i.e., conservativism and focus on a 12-month period prior to default.

Loss given default (LGD): The LGD represents an estimate of the loss at the time of a potential default occurring during the life of a financial instrument. The determination of the LGD takes into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. The LGD is commonly expressed as a percentage of the EAD.

PD and LGD are determined for four different scenarios whereas EAD projections are treated as scenario independent.

Parameters are generally determined on an individual financial asset level. For credit card exposures in Switzerland, personal account overdrafts and certain loans to financial advisors, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio.

Scenarios and scenario weights

The determination of the probability-weighted ECL requires evaluating a range of diverse and relevant future economic conditions.

To accommodate this requirement, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. Those variables range from above-trend economic growth to severe recession. A weight is computed for each scenario by using a probabilistic econometric model that considers recent information as well as several decades of historical data. The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur. The scenarios, including the narratives, the macroeconomic and financial variables and the scenario weights, are further discussed, challenged and potentially refined by a team of UBS-internal experts. The baseline scenario is aligned to the economic and market assumptions used for UBS business planning purposes.

Macroeconomic and other factors

The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS projects the relevant economic factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Certain variables may only be relevant for specific types of exposures, such as house price indices for mortgage loans, while other variables have key relevance in the ECL calculation for all exposures. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS's key ECL-relevant portfolios.

For UBS, the following forward-looking macroeconomic variables represent the most relevant factors in the ECL calculation:

- GDP growth rates
- House price indices
- Unemployment rates
- Interest rates, specifically LIBOR and government bond yields
- Equity indices
- Consumer price indices

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

The forward-looking macroeconomic assumptions used in the ECL calculation are developed by UBS economists, risk methodology personnel and credit risk officers. Assumptions and scenarios are validated and approved through a scenario committee and an operating committee, which also aim to ensure a consistent use of forward-looking information throughout UBS, including in the business planning process. ECL inputs are tested and reassessed for appropriateness at least each quarter and appropriate adjustments are made when needed.

ECL measurement period

The period for which lifetime ECL are determined is based on the maximum contractual period that UBS is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment where the contractual cancelation right does not limit UBS's exposure to credit risk to the contractual notice period as the client has the ability to draw down funds before UBS can take risk mitigating actions. In such cases, UBS is required to estimate the period over which it is exposed to credit risk. This applies to UBS's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one unit. The exposure arising from UBS's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS is exposed to credit risk. Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a Risk Officer, allowing for informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS has assessed these credit risk management practices and considers both the RbM approach and formal credit review as a substantive credit review providing for a re-origination of the facility. Following this, a 12-month measurement period is used for both types of facilities as an appropriate proxy of the period over which UBS is exposed to credit risk, with 12 months also used as a look back period for assessing SICR.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a 12-month ECL continues to be appropriate, it is assessed whether an SICR has occurred since initial recognition of the financial instrument. The assessment criteria include both quantitative and qualitative factors.

Primarily, UBS assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:

– at the reporting date and
– at inception of the instrument.

In both cases, the respective PDs are determined for the residual lifetime of the instrument, i.e., the period between the reporting date and maturity. If, based on UBS's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL being recognized.

The threshold applied varies depending on the original credit quality of the borrower. For instruments with lower default probabilities at inception due to good credit quality of the counterparty, the SICR threshold is set at a higher level than for instruments with higher default probabilities at inception. This implies that for instruments with initially lower default probabilities a relatively higher deterioration in credit quality is needed to trigger an SICR than for those instruments with originally higher PDs. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, expressed in rating downgrades, together with the corresponding ratings at origination of an instrument is provided in the "SICR thresholds" table below. This simplified view is aligned to internal ratings as disclosed in the internal ratings table presented in "Credit risk" in the "Risk management and control" section of the Annual Report 2017. The actual SICR thresholds applied are defined on a more granular level interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the borrower becomes more than 30 days past due on his contractual payments. This presumption is rebutted only where reasonable and supportable information is available that demonstrates that UBS is not exposed to an SICR even if contractual payments become more than 30 days past due.

For certain less material portfolios, specifically the Swiss credit card portfolio and the recruitment and retention loans to financial advisors within Global Wealth Management, the 30 days past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30 days past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking that are between 90 and 180 days past due, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR and hence for a transfer to stage 2. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected. Instruments for which an SICR since initial recognition is determined based on criteria other than changed default probabilities remain in stage 2 for at least six months post resolution of the stage 2 trigger event.

The overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions due to the risk management practices adopted, including daily monitoring processes with strict remargining requirements. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. ECL on these positions are not material.

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that involve significant uncertainty at the time they are made. Changes to these estimates and assumptions can result in significant changes to the timing and amount of ECL to be recognized.

Determination of a significant increase of credit risk
IFRS 9 does not include a definition of what constitutes an SICR. UBS assesses whether an SICR has occurred since initial recognition based on qualitative and quantitative reasonable and supportable forward-looking information that includes significant management judgment. More stringent criteria could significantly increase the number of instruments migrating to stage 2. An IFRS 9 Operating Committee has been established to review and challenge the SICR approach and any potential changes and determinations made in the quarter.

Scenarios, scenario weights and macroeconomic factors
ECL reflect an unbiased and probability-weighted amount, which UBS determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios and judges the suitability of respective weights to be applied. Each of the scenarios is based on management's assumptions around future economic conditions in the form of macroeconomic, market and other factors. Changes in the scenarios and weights, the corresponding set of macroeconomic variables and the assumptions made around those variables for the forecast horizon would have a significant effect on the ECL. An IFRS 9 Scenario Committee, in addition to the Operating Committee, has been established to derive, review and challenge the selection and weights.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. The ECL calculation is therefore sensitive to any extension of contractual maturities triggered by business decisions, consumer behaviors and an increased number of stage 2 positions. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period has been applied for master credit facilities.

Modeling and management adjustments
A number of complex models have been developed or modified to calculate ECL, with additional management adjustments required. Internal counterparty rating changes, new or revised models and data may significantly affect ECL. The models are governed by UBS's model validation controls, which aim to ensure independent verification, and are approved by the Group Model Governance Board (GMGB). The management adjustments are approved by the IFRS 9 Operating Committee and endorsed by the GMGB.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

h. Restructured and modified financial assets

When a counterparty is in financial difficulties or where default has already occurred, UBS may restructure financial assets by providing concessions that would otherwise not be considered and that are outside of UBS's normal risk appetite, such as preferential interest rates, extension of maturity and subordination. When a credit restructuring takes place, each case is considered individually and the counterparty is generally classified as defaulted until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions, or until the counterparty has recovered and the preferential conditions no longer exceed UBS's risk appetite.

Concessions granted when there is no evidence of financial difficulties, or where changes to terms and conditions are within UBS's usual risk appetite, are not considered to be a credit restructuring.

Modifications represent contract amendments that result in an alteration of future contractual cash flows and that can occur within UBS's normal risk appetite or as part of a credit restructuring where a counterparty is in financial difficulties.

A restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying value of a financial asset is recognized in profit or loss as a modification gain or loss. Further, the subsequent SICR assessment is made by comparing the risk of default at the reporting date based on the modified contractual terms of the financial asset with the risk of default at initial recognition based on the original, unmodified contractual terms of the financial asset.

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS once the commitments are communicated to the beneficiary or that are revocable only due to automatic cancelation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) derivative loan commitments measured at fair value through profit or loss, (ii) loan commitments designated at fair value through profit or loss or (iii) other loan commitments.

The Group recognizes ECL on non-cancelable other loan commitments. In addition, UBS also recognizes ECL on loan commitments that can be canceled at any time if UBS is exposed to credit risk (refer to item g in this Note). Corresponding ECL are presented within *Provisions* on the Group's balance sheet. ECL relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is presented within (i) *Financial assets at fair value held for trading*, consistent with the associated derivative loan commitment, (ii) *Financial assets at fair value not held for trading*, following loan commitments designated at fair value through profit or loss or (iii) *Loans and advances to customers*, when the associated loan commitment is not fair valued through profit or loss.

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss. Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of:

- the amount of ECL (refer to item g in this Note) and
- the amount initially recognized less the cumulative amount of income recognized as of the reporting date.

ECL resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

q. Other net income from fair value changes of financial instruments

The line item *Other net income from fair value changes of financial instruments* substantially includes fair value gains and losses on financial instruments at fair value through profit or loss, as well as the effects at derecognition, trading gains and losses and intermediation income arising from certain client-driven Global Wealth Management and Personal & Corporate Banking financial transactions. In addition, foreign currency translation effects and income and expenses from precious metals are presented under this income statement line item.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

19.2 Adoption of IFRS 9

19.2.1 Governance

The implementation of IFRS 9 has been a key strategic initiative for UBS implemented under the joint sponsorship of the Group Chief Financial Officer and the Group Chief Risk Officer. The incorporation of forward-looking information into the ECL calculation and the definition and assessment of what constitutes a significant increase in credit risk (SICR) are inherently subjective and involve the use of significant expert judgment. Therefore, UBS has developed a front-to-back governance framework over the ECL calculation process jointly owned by the Group Chief Financial Officer and the Group Chief Risk Officer and has designed controls to be in compliance with the requirements of the Sarbanes-Oxley Act. UBS has efficient credit risk management processes in place that continue to be applicable and aim to ensure the effects of economic developments are appropriately considered, mitigation actions are taken where required and risk appetite is reassessed and adjusted as needed.

→ **Refer to the "Risk management and control" section of the Annual Report 2017 for more information**

19.2.2 Retrospective amendments to UBS Group balance sheet presentation

Although the effect of IFRS 9 classification and measurement changes has been applied prospectively, UBS has made a series of changes to the presentation of its IFRS balance sheet to facilitate comparability and prior-period information is presented for periods ending before 1 January 2018 in this revised structure. The primary changes include:

- IAS 39-specific asset categories, such as "Financial assets held to maturity" and "Financial assets available for sale," have been superseded by the new categories "Financial assets measured at amortized cost" and "Financial assets measured at fair value through other comprehensive income."
- A new line, *Financial assets at fair value not held for trading*, has been created to accommodate in particular financial assets previously designated at fair value, all of which are mandatorily classified at fair value through profit or loss under IFRS 9.
- *Other assets* and *Other liabilities* have been split between measured at amortized cost, measured at fair value through profit or loss and other non-financial assets and liabilities.
- *Cash collateral on securities borrowed* and *Reverse repurchase agreements* have been combined into a single line, *Receivables from securities financing transactions.* Similarly, *Cash collateral on securities lent* and *Repurchase agreements* have been combined into a single line, *Payables from securities financing transactions.*
- Finance lease receivables, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
- Precious metal positions previously presented in *Trading portfolio assets* are now presented within the new line *Other non-financial assets.*
- *Financial liabilities designated at fair value* have been split into two lines: *Debt issued designated at fair value* and *Other financial liabilities designated at fair value.*

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

The table below illustrates the new balance sheet presentation of assets and liabilities as of 31 December 2017 in comparison with the presentation in the Annual Report 2017. The presentation of the components of equity has not changed, and therefore, for illustration purposes, total liabilities and equity are presented in a single line in the table. The table does not reflect any of the effects of adopting the classification and measurement requirements of IFRS 9, which are presented in section 19.2.3 under *Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9.*

Retrospective amendments to UBS Group balance sheet presentation as of 31 December 2017

CHF million		31.12.17	31.12.17
Assets	References	Former presentation	Revised presentation
Cash and balances at central banks		87,775	87,775
Loans and advances to banks (formerly: Due from banks)		13,739	13,739
Receivables from securities financing transactions (new line)	1		89,633
Cash collateral on securities borrowed (newly included in Receivables from securities financing transactions)	1	12,393	
Reverse repurchase agreements (newly included in Receivables from securities financing transactions)	1	77,240	
Cash collateral receivables on derivative instruments		23,434	23,434
Loans and advances to customers (formerly: Loans)	2	319,568	318,509
Financial assets held to maturity (superseded)	3	9,166	
Other financial assets measured at amortized cost (new line)	2,3,7		36,861
Total financial assets measured at amortized cost			569,950
Financial assets at fair value held for trading (formerly: Trading portfolio assets)	4	130,707	126,144
of which: assets pledged as collateral that may be sold or repledged by counterparties		*35,363*	*35,363*
Derivative financial instruments (formerly: Positive replacement values)		118,227	118,227
Brokerage receivables (new line, formerly included within Other assets)		n/a	n/a
Financial assets at fair value not held for trading (new line)	5		58,933
Financial assets designated at fair value	5	58,933	
Total financial assets measured at fair value through profit or loss			303,304
Financial assets available for sale (superseded)	6	8,665	
Financial assets measured at fair value through other comprehensive income (new line)	**6**		8,665
Investments in associates		1,018	1,018
Property, equipment and software		8,829	8,829
Goodwill and intangible assets		6,398	6,398
Deferred tax assets		9,844	9,844
Other non-financial assets (new line)	4,7		7,633
Other assets (superseded)	7	29,706	
Total assets		915,642	915,642
Liabilities			
Amounts due to banks		7,533	7,533
Payables from securities financing transactions (new line)	8		17,044
Cash collateral on securities lent (newly included in Payables from securities financing transactions)	8	1,789	
Repurchase agreements (newly included in Payables from securities financing transactions)	8	15,255	
Cash collateral payables on derivative instruments		30,247	30,247
Customer deposits (formerly: Due to customers)		408,999	408,999
Debt issued measured at amortized cost		139,551	139,551
Other financial liabilities measured at amortized cost (new line)	10		36,337
Total financial liabilities measured at amortized cost			639,711
Financial liabilities at fair value held for trading (formerly: Trading portfolio liabilities)		30,463	30,463
Derivative financial instruments (formerly: Negative replacement values)		116,133	116,133
Brokerage payables designated at fair value (new line, formerly included within Other liabilities)		n/a	n/a
Financial liabilities designated at fair value (superseded)	9	54,202	
Debt issued designated at fair value (new line)	9		49,502
Other financial liabilities designated at fair value (new line)	9,10		16,223
Total financial liabilities measured at fair value through profit or loss			212,322
Provisions		3,133	3,133
Other non-financial liabilities (new line)	10		9,205
Other liabilities (superseded)	10	57,064	
Total liabilities		864,371	864,371
Total liabilities and equity		915,642	915,642

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Retrospective amendments to UBS Group balance sheet presentation"

Table ref.	Description of presentation changes applied retrospectively to the balance sheet as of 31 December 2017
Balance sheet assets	
1	Cash collateral on securities borrowed of CHF 12,393 million and reverse repurchase agreements of CHF 77,240 million as of 31 December 2017 are now presented as a total of CHF 89,633 within a single line, *Receivables from securities financing transactions*.
2	Finance lease receivables of CHF 1,059 million as of 31 December 2017, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
3	*Financial assets held to maturity* measured at amortized cost of CHF 9,166 million as of 31 December 2017 are now presented within *Other financial assets measured at amortized cost*.
4	Precious metal positions of CHF 4,563 million as of 31 December 2017, previously presented in *Trading portfolio assets*, are now presented within *Other non-financial assets*.
5	Financial assets designated at fair value through profit or loss of CHF 58,933 million as of 31 December 2017, previously presented in a separate line, are now presented within *Financial assets at fair value not held for trading*.
6	Debt and equity instruments of CHF 8,665 million as of 31 December 2017, previously presented in *Financial assets available for sale,* are now presented within *Financial assets measured at fair value through other comprehensive income*.
7	The reporting line *Other assets* has been split into two new reporting lines, *Other financial assets measured at amortized cost* and *Other non-financial assets*. – Assets of CHF 29,706 million as of 31 December 2017, previously presented within *Other assets*, are now presented within *Other assets measured at amortized cost* (CHF 26,636 million) and *Other non-financial assets* (CHF 3,070 million). – Financial assets now presented within *Other financial assets measured at amortized cost* include brokerage receivables of CHF 19,080 million, debt securities of CHF 9,166 million, loans to financial advisors of CHF 3,118 million and other assets amounting to CHF 5,497 million. Refer to Note 12 a) for more information. – Refer to Note 12 b) for more information on assets now presented within *Other non-financial assets*.
Balance sheet liabilities	
8	Cash collateral on securities lent of CHF 1,789 million and repurchase agreements of CHF 15,255 million as of 31 December 2017 are now presented within a single line, *Payables from securities financing transactions*.
9	Financial liabilities designated at fair value through profit or loss of CHF 54,202 million as of 31 December 2017 are now presented within *Debt issued designated at fair value* (CHF 49,502 million) and *Other financial liabilities designated at fair value* (CHF 4,700 million).
10	The reporting line *Other liabilities* has been split into three new reporting lines, *Other financial liabilities measured at amortized cost*, *Other financial liabilities designated at fair value* and *Other non-financial liabilities*. – Liabilities amounting to CHF 57,064 million as of 31 December 2017, previously presented within *Other liabilities,* are now presented within *Other financial liabilities measured at amortized cost* (CHF 36,337 million, thereof CHF 29,646 million brokerage payables), within *Other financial liabilities designated at fair value* (amounts due under unit-linked investment contracts of CHF 11,523 million) and within *Other non-financial liabilities* (CHF 9,205 million). – Refer to note 12 c) for more information on financial liabilities now presented within *Other financial liabilities measured at amortized cost.* – Refer to note 12 d) for more information on financial liabilities now presented within *Other financial liabilities designated at fair value*. – Refer to note 12 e) for more information on liabilities now presented within *Other non-financial liabilities*.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

19.2.3 Transition to IFRS 9 as of 1 January 2018

Transition to Classification and measurement requirements

As set out in the amended accounting policies in section 19.1, IFRS 9 requires all financial assets, except equity instruments and derivatives, to be classified at amortized cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL), based on the business model for managing the respective assets and their contractual cash flow characteristics.

Changes resulting from the application of IFRS 9 classification and measurement requirements as of 1 January 2018 have been applied as follows:

- Determination of the business model was made based on facts and circumstances as of the 1 January 2018 transition date;
- De-designations and new designations of financial instruments at FVTPL, pursuant to transition requirements of IFRS 9, have been carried out as of 1 January 2018. These reassessments resulted in:
  i. the de-designation of certain financial assets designated at FVTPL, as they are managed on a fair value basis, and therefore are mandatorily measured at fair value, or no longer managed on a fair value basis but held to collect the contractual cash flows and therefore are measured at amortized cost;
  ii. newly designated financial liabilities at FVTPL (e.g., brokerage payables) in order to achieve measurement consistency with associated financial assets that are mandatorily measured at FVTPL (e.g., brokerage receivables).

For UBS, the most significant IFRS 9 classification and measurement changes on transition to IFRS 9 are as follows:

- financial assets that no longer qualify for amortized cost accounting under IFRS 9 have been classified at FVTPL because their cash flow characteristics do not satisfy the solely payments of principal and interest criteria (e.g., auction rate securities and certain brokerage receivables);
- lending arrangements that no longer qualify for amortized cost accounting under IFRS 9 are classified at FVTPL because the business model within which they are managed does not have an objective to hold financial assets in order to collect the contractual cash flows or to collect contractual cash flows and sell (e.g., certain Investment Bank lending arrangements);
- equity instruments classified as available for sale under IAS 39 are classified at FVTPL under IFRS 9; and
- financial liabilities are newly designated under IFRS 9 at FVTPL, from amortized cost accounting, to align with conclusions reached for associated financial assets that will be measured at FVTPL (e.g., brokerage payables).

Effect on UBS Group income statement presentation

Upon adoption of IFRS 9, the reclassification of auction rate securities, certain loans in the Investment Bank, certain repurchase agreements and brokerage balances from amortized cost to FVTPL has resulted in the interest income from these instruments moving from Interest income (expense) from financial instruments measured at amortized cost to interest income (expense) from financial instruments measured at fair value through profit or loss. These changes have been applied prospectively from 1 January 2018.

Effect on UBS Group Statement of cash flows

Following the adoption of IFRS 9, changes have been made to the Statement of cash flows to reflect the changes arising from financial instruments that have been reclassified on the balance sheet. In particular, cash flows from certain financial assets previously measured as available-for-sale assets at fair value through other comprehensive income have been reclassified from investing activities to operating activities as the assets are fair valued through profit or loss effective 1 January 2018.

Transition to expected credit loss requirements

As set out in the Group's amended accounting policies in section 19.1, IFRS 9 introduces a forward-looking ECL approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39 and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*.

The majority of ECL calculated as of the transition date relates to the private and commercial mortgage portfolio and corporate lending in Switzerland within Personal & Corporate Banking.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Models at transition
For the purpose of implementing ECL under IFRS 9, UBS has leveraged existing Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models.

Existing models have been adapted and 29 new models have been developed for the ECL calculation that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III TTC parameters. Management adjustments have also been made. UBS has leveraged its existing model risk framework, including the key model validation control executed by Model Risk Management & Control. New and revised models have been approved by UBS's GMGB.

The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III remain unchanged.

→ **Refer to "Credit risk models" in the "Risk, treasury and capital management" section of our Annual Report 2017 for more information**
→ **Refer to "Significant accounting and financial reporting changes in 2018" in the "Operating environment and strategy" section of our Annual Report 2017 for more information**

Scenarios and scenario weights at transition
As outlined in section 19.1, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL calculated on transition have been determined for each of the scenarios and subsequently weighted based on the probabilities in the table "Economic scenarios and weights applied."

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (1.1.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

UBS has established IFRS 9 ECL Scenario and Operating Committees to propose and approve the selection of the scenarios and weights to be applied and to monitor whether appropriate governance exists.

Macroeconomic and other factors: For each of the economic scenarios, UBS forecasts a wide range of forward-looking macroeconomic, market and other factors. Historical information was used to support the identification of the key factors and to project their development under the different scenarios. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS projected those factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS's key ECL-relevant portfolios.

The following represent the most significant macroeconomic factors for UBS and could substantially change the estimated ECL:

- GDP growth rates, given their significant effect on borrowers' performance
- House price indices, given their significant effect on mortgage collateral valuations
- Unemployment rates, given their significant effect on private clients' ability to meet contractual obligations
- Interest rates, given their significant effect on the counterparties' abilities to service their debt
- Equity indices, given their relevance for equity collateral valuation
- Consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability.

Macroeconomic and other factors at transition
Assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of the economic scenarios to determine ECL at the date of transition can be summarized as follows:

In the upside scenario, which assumes GDP growth rising above trend in most countries with only a moderate rise in inflation and ongoing accommodative monetary policies, GDP growth in Switzerland peaks at around 5% annually. Strong growth leads to a decline in unemployment to very low levels (below 1%) by 2020. Asset prices grow at robust pace, with equity prices increasing by approximately 10% annually and house prices (single-family homes) rising by approximately 4% annually. Policy and short-term interest rates remain low over the entire scenario, while government bond yields experience a sustained increase.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

In the US and the rest of the world, the scenario shows broadly similar features, with growth accelerating in Year 1 before steadily returning toward trend by Year 3. Specifically in the US, GDP growth accelerates at a slightly faster pace than in Switzerland, although the US experiences a slightly less substantial improvement in the unemployment rate by Year 3. The degree of policy tightening is marginally greater over the scenario horizon and, as in Switzerland, long-term government bond yields rise more significantly than short-term rates, and to a greater degree.

For the baseline scenario, which is modeled along our business plan assumptions of a continuation of overall important global growth, Swiss GDP growth remains between 1% and 2% annually over the three years of the scenario. Moderate growth results in a very mild increase of unemployment, which stabilizes at around 3.5%. Asset price growth is also moderate, with the Swiss equity price index rising by approximately 8% annually, while house prices grow by less than 1% annually. Policy rates, short-term interest rates and government bond yields increase very gradually over the three years of the scenario by approximately 50 basis points.

GDP growth in the US remains relatively stable, and faster than in Switzerland. Monetary policy tightens at a similar pace to Switzerland and, combined with a modest decline in the unemployment rate, helps to keep inflation in check. US equity prices slightly underperform their Swiss counterparts, while house prices outperform relatively stagnant Swiss house price growth. In the rest of the world, growth remains buoyant, with moderating growth in both Europe and China contrasting with accelerating growth in other emerging markets.

The mild downside scenario is based on a monetary policy tightening assumption, implemented to deflate a potential asset price bubble, causing Swiss GDP to decline by almost 1% in the first year of the scenario. The unemployment rate rises to roughly 5%. Equity prices fall by more than 20% over three years, while house prices decline by 15% over the same period. The fall of the nominal asking rent index is cushioned by higher interest rates, which register a more moderate decline than house prices. Short-term interest rates rise significantly due to monetary tightening, as well as government bond yields.

In this scenario, inflation in the US accelerates rapidly, leading to a sharp rise in short-term interest rates, similar to Switzerland. GDP growth averages a similar pace to Switzerland over three years, while equity and house prices also fall by a broadly similar degree to their Swiss equivalents. In the rest of the world, growth is also weighed down, particularly in more vulnerable emerging markets such as Russia, Turkey and Brazil, as interest rates and credit spreads rise sharply.

The severe downside scenario is modeled to mimic a severe recession caused by an event affecting Switzerland's competitiveness in key export markets, with Swiss GDP shrinking almost 7% in the first year of the scenario. The severe recession results in a substantial increase in unemployment, which peaks at around 9%. Asset prices plummet, with the Swiss equity index falling more than 55% over three years, and house prices declining 27% over the same period. Policy and short-term interest rates remain low over the entire scenario horizon.

US GDP and unemployment deteriorate by a lesser degree than in Switzerland, and while house and equity prices decline sharply, the effects are also less severe than in Switzerland. With more scope to cut rates than the Swiss National Bank, short-term rates fall in the US. In the rest of the world, growth also slows sharply, particularly in the eurozone and neighboring emerging markets such as Turkey and Russia.

ECL measurement period at transition

As set out in section 19.1, for the majority of ECL-relevant instruments, the contractual maturity is used to calculate the measurement period, with this capped at 12 months when stage 1 ECL are required. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit cards and 12 months for master credit facilities. UBS's ECL-relevant financial instruments have relatively short average maturities, which significantly contribute to the level of ECL on transition.

SICR determination at transition

The identification of instruments for which an SICR has been determined since initial recognition and the corresponding allocation to stage 2 at transition generally follow the principles described in the relevant accounting policy provided in section 19.1. Furthermore, the following principles have been applied:

General: In estimating the retrospective lifetime PDs, we have considered the economic conditions over the relevant prior periods and the general significant uncertainty inherent in such approximation to determine the allocation of instruments to stage 2 at transition.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Real estate financing: The Basel III rating methodology applied to the majority of income-producing real estate financings within Personal & Corporate Banking, which is leveraged for IFRS 9 ECL calculations, was significantly changed in 2017. As a consequence, there is no comparable rating on origination to determine whether an SICR has arisen over time. As permitted by the IFRS 9 transition requirements, a lifetime ECL allowance has therefore been recognized for certain real estate financing positions and will continue to be recognized until the positions are derecognized.

Other portfolios, including private mortgages and commercial SME clients: The Basel III rating models for other key portfolios in Personal & Corporate Banking, in particular for private client mortgages and commercial clients in the small and medium-sized enterprise (SME) segment, have recently been subject to a major redesign. While the methodology remained essentially the same and the calibration to the portfolios' average TTC PD value unchanged, the effect on the stage allocation is significant. This is due to the fact that the introduction of new models has led to a broader and different distribution of borrowers across the rating spectrum; while there was no material effect on those counterparties with an uplift in their rating, some of those that had a downward shift in their rating triggered the SICR threshold and a reclassification into stage 2 at transition.

The table on the following pages provides a detailed overview of the IFRS 9 transition effects as of 1 January 2018. This includes:
– reclassification of IAS 39 carrying amounts to the new categories applicable under IFRS 9;
– remeasurement of carrying amounts due to reclassification (any remeasurement to fair value and / or reversal of IAS 39 allowances or IAS 37 provisions for assets moving from amortized cost to fair value); and
– recognition of IFRS 9 ECL for in-scope assets, off-balance sheet positions and other credit lines.

The following table also includes the effects recognized for deferred tax assets and therefore the total impact provided in *Retained earnings* in the table is net of tax effects. Explanatory footnotes provided after the table provide additional details on these changes.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Assets						
Cash and balances at central banks	Loans and receivables	87,775			0	87,775
Loans and advances to banks	Loans and receivables	13,739	(17)		(3)[12]	13,719
to: Brokerage receivables	*Loans and receivables*		*(17)*[1]			
Receivables from securities financing transactions	Loans and receivables	89,633	(4,957)		(2)[12]	84,674
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(4,957)*[2]			
Cash collateral receivables on derivative instruments	Loans and receivables	23,434			0	23,434
Loans and advances to customers	Loans and receivables	318,509	(7,822)	0	(235)[12]	310,451
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(2,678)*[3]			
to: Brokerage receivables	*Loans and receivables*		*(4,691)*[1]			
to: Financial assets at fair value held for trading	*Loans and receivables*		*(468)*[4]			
from: Financial assets at fair value not held for trading	*FVTPL (designated)*		*8*[5]	*0*		
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*6*[5]			
Other financial assets measured at amortized cost	Loans and receivables, held to maturity	36,861	(18,525)	0	(35)[12]	18,302
to: Brokerage receivables	*Loans and receivables*		*(19,080)*[1]			
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*555*[6]	*0*		
Total financial assets measured at amortized cost		569,950	(31,321)	0	(275)	538,354
Financial assets at fair value held for trading	FVTPL (held for trading)	126,144	(10,854)	(15)		115,275
to: Loans and advances to customers	*FVTPL (held for trading)*		*(6)*[5]			
to: Financial assets at fair value not held for trading	*FVTPL (held for trading)*		*(11,316)*[7]			
from: Loans and advances to customers	*Loans and receivables*		*468*[4]	*(15)*[a]		
of which: assets pledged as collateral that may be sold or repledged by counterparties	*FVTPL (held for trading)*	*35,363*				*35,363*
Derivative financial instruments	FVTPL (derivatives)	118,227				118,227
Brokerage receivables	Loans and receivables		23,787			23,787
from: Loans and advances to banks	*Loans and receivables*		*17*[1]			
from: Loans and advances to customers	*Loans and receivables*		*4,691*[1]			
from: Other financial assets measured at amortized cost	*Loans and receivables*		*19,080*[1]			
Financial assets at fair value not held for trading	FVTPL (designated)	58,933[9]	20,297	(287)		78,943
to: Loans and advances to customers	*FVTPL (designated)*		*(8)*[5]			
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*11,316*[7]			
from: Receivables from securities financing transactions	*Loans and receivables*		*4,957*[2]	*(1)*		
from: Loans and advances to customers	*Loans and receivables*		*2,678*[3]	*(286)*[3]		
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*1,356*[8]			
Total financial assets measured at fair value through profit or loss		303,304	33,231	(303)		336,232
Financial assets measured at fair value through other comprehensive income	**Available-for-sale**	8,665	(1,911)			6,755[10]
to: Other financial assets measured at amortized cost	*Available-for-sale*		*(555)*[6]			
to: Financial assets at fair value not held for trading	*Available-for-sale*		*(1,356)*[8]			
Investments in associates		1,018				1,018
Property, equipment and software		8,829				8,829
Goodwill and intangible assets		6,398				6,398
Deferred tax assets		9,844		58[11]	64[11]	9,967
Other non-financial assets		7,633				7,633
Total assets		915,642		(245)	(211)	915,187

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9 (continued)

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Liabilities						
Amounts due to banks	Amortized cost	7,533				7,533
Payables from securities financing transactions	Amortized cost	17,044	(5,081)			11,963
to: Other financial liabilities designated at fair value	*Amortized cost*		*(5,081)*[13]			
Cash collateral payables on derivative instruments	Amortized cost	30,247				30,247
Customer deposits	Amortized cost	408,999	(5,268)			403,731
to: Brokerage payables designated at fair value	*Amortized cost*		*(5,268)*[14]			
Debt issued measured at amortized cost	Amortized cost	139,551				139,551
Other financial liabilities measured at amortized cost	Amortized cost	36,337	(29,646)	(4)		6,686
to: Brokerage payables designated at fair value	*Amortized cost*		*(29,646)*[14]			
Derecognition: deferred fees on other loan commitments	*Amortized cost*			*(4)*[4]		
Total financial liabilities measured at amortized cost		639,711	(39,996)	(4)		599,712
Financial liabilities at fair value held for trading	FVTPL (held for trading)	30,463				30,463
Derivative financial instruments	FVTPL (derivatives)	116,133		57		116,191
Recognition: Loan commitments	*Amortized cost – off-balance sheet*			*60*[4]		
Derecognition: Loan commitments	*FVTPL (derivatives)*			*(2)*[5]		
Brokerage payables designated at fair value	Amortized cost		34,915			34,915
from: Customer deposits	*Amortized cost*		*5,268*[14]			
from: Other financial liabilities measured at amortized cost	*Amortized cost*		*29,646*[14]			
Debt issued designated at fair value	FVTPL (designated)	49,502				49,502
Other financial liabilities designated at fair value	FVTPL (designated)	16,223	5,081	(5)		21,300
from: Payables from securities financing transactions	*Amortized cost*		*5,081*[13]	*(5)*[13]		
Total financial liabilities measured at fair value through profit or loss		212,322	39,996	53		252,370
Provisions		3,133			74[12]	3,207
Other non-financial liabilities		9,205				9,205
Total liabilities		864,371		49	74	864,494
Equity						
Share capital		385				385
Share premium		25,942				25,942
Treasury shares		(2,133)				(2,133)
Retained earnings		32,752	72[8,15]	(293)	(284)	32,247
Other comprehensive income recognized directly in equity, net of tax		(5,732)	(72)[8,15]			(5,804)
Equity attributable to shareholders		51,214	0	(293)[15]	(284)[15]	50,637
Equity attributable to non-controlling interests		57				57
Total equity		51,271	0	(293)	(284)	50,694
Total liabilities and equity		915,642	0	(245)	(211)	915,187

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9"

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018
1	Certain customer and prime brokerage receivable balances, in the Investment Bank and Global Wealth Management, fail the solely payments of principal and interest (SPPI) criteria for measurement at amortized cost. These include CHF 4,691 million previously included within *Loans and advances to customers*, CHF 17 million from *Loans and advances to banks* and CHF 19,080 million previously included within *Other financial assets measured at amortized cost*. The receivables are managed under a business model whose objective is to hold the assets to collect contractual cash flows. However, the reported receivables represent an aggregation of cash receivable and payable balances that form a single unit of account at the client level and generate a return that does not constitute consideration for the time value of money, credit risk and other basic lending risks. The SPPI criterion is therefore not met and under IFRS 9 the receivables are mandatorily measured at FVTPL and separately presented as *Brokerage receivables*. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
2	Based on the business model assessment under IFRS 9, certain reverse repurchase agreements with a carrying amount of CHF 4,957 million as of 31 December 2017 were determined to be managed on a fair value basis and were therefore reclassified from amortized cost to FVTPL measurement under IFRS 9. The carrying value has been reclassified from *Receivables from securities financing transactions* to *Financial assets at fair value not held for trading* as of 1 January 2018. A remeasurement loss of CHF 1 million has been recorded in *Retained earnings*. CHF 11,490 million of forward starting reverse repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
3	Certain positions previously included within *Loans and advances to customers* with a carrying amount of CHF 2,678 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* upon adoption of IFRS 9. This includes: – auction rate securities (CHF 2,114 million) that are held in Corporate Center and that contain an embedded leverage feature triggering the failure of the SPPI criteria, and – certain loans in the Investment Bank (CHF 552 million) and in Corporate Center (CHF 12 million), which either fail the SPPI criteria or are held within a business model with an intent to sell or substantially hedge the primary risks. These assets are mandatorily measured at FVTPL under IFRS 9. A corresponding net remeasurement loss of CHF 286 million was recognized in *Retained earnings* related to these reclassifications. This remeasurement loss also included reversal of specific credit loss allowances (CHF 11 million).
4	Due to a change in the underlying business model, loans and advances to customers with a carrying amount of CHF 468 million as of 31 December 2017 have been reclassified to *Financial assets at fair value held for trading* as of 1 January 2018. A corresponding net remeasurement loss of CHF 15 million, which includes the reversal of specific IAS 39 credit loss allowances, was recognized in *Retained earnings* related to this reclassification. Irrevocable loan commitments that are contractually linked with these financial assets are now recognized as *Derivative financial instruments* (derivative liabilities) and are measured at FVTPL as of 1 January 2018. This reclassification resulted in a CHF 60 million loss with a corresponding entry to *Retained earnings*. Liabilities related to deferred fees of CHF 4 million related to these loan commitments recorded as *Other financial liabilities measured at amortized cost* at 31 December 2017 were derecognized with a corresponding entry to *Retained earnings*.
5	Financial assets with a carrying amount of CHF 14 million as of 31 December 2017 were reclassified to *Loans and advances to customers* from *Financial assets at fair value not held for trading* (CHF 8 million) and from *Financial assets at fair value held for trading* (CHF 6 million) given management's intent to hold these financial assets to collect contractual cash flows. Loan commitments related to these financial assets, which were recognized as derivative liabilities with a carrying value of CHF 2 million as of 31 December 2017, were accordingly derecognized on 1 January 2018 with a corresponding entry to *Retained earnings*.
6	Certain debt instruments with a carrying amount of CHF 555 million as of 31 December 2017 were formerly classified as available for sale and measured at FVOCI under IAS 39 but are measured at amortized cost under IFRS 9. Those positions, which are held to collect cash flows solely representing payment of principal and interest, are presented within *Other financial assets measured at amortized cost* as of 1 January 2018. The fair value of these assets was consistent with the amortized cost value as of 1 January 2018 and no remeasurement gain or loss has been recognized.
7	Upon adopting IFRS 9, UBS has elected to refine the assets classified within *Financial assets at fair value held for trading* to carve out those that are segregated from UBS's trading activities, where UBS's role is primarily to manage the assets on a fair value basis on behalf of others. Instead, such assets will be presented alongside others managed on a fair value basis within *Financial assets at fair value not held for trading*. As a consequence of this refinement, UBS has reclassified assets held to hedge unit-linked investment contracts of CHF 11,316 million from *Financial assets at fair value held for trading* to *Financial assets at fair value not held for trading* as of 1 January 2018. No remeasurement gain or loss has been recognized.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018 (continued)
8	UBS holds certain global and local liquidity buffers that were determined to be managed on a fair value basis as management utilizes fair value information for reporting and decision making purposes. Therefore, assets previously classified as available for sale under IAS 39 with a carrying amount of CHF 620 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading*. An unrealized gain of CHF 5 million related to these positions was reclassified from *Other comprehensive income* to *Retained earnings*. Additionally, equity instruments and investment fund units previously classified as available for sale under IAS 39 with a carrying amount of CHF 736 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules. A related unrealized gain in OCI of CHF 199 million has been reclassified to *Retained earnings*. Additionally, a net tax expense of CHF 131 million was transferred from OCI to *Retained earnings* related to the positions above which were reclassified out of the IAS 39 available-for-sale category.
9	Assets previously designated at FVTPL with a carrying amount of CHF 58,933 million as of 31 December 2017 are no longer designated as such under IFRS 9, as it was determined that these assets were either held in a business model that is managed on a fair value basis, did not meet the SPPI criteria, or did meet the SPPI criteria and are held in a hold to collect business model. Of the total, assets with a carrying amount of CHF 58,924 million are now mandatorily measured at FVTPL and included within *Financial assets at fair value not held for trading*. The remaining assets with a carrying amount of CHF 8 million have been de-designated and were reclassified to *Loans and advances to customers* given a change in business model to hold to collect (refer to footnote 5).
10	Certain debt instruments with a carrying amount of CHF 6,755 million as of 31 December 2017 were formerly classified as available for sale under IAS 39 and are measured at FVOCI under IFRS 9. These instruments include US government bonds and US government sponsored mortgage-backed securities and other debt that are held in a business model whose objective is achieved by both collecting contractual cash flows and selling, and that meet the SPPI criteria. These positions are now presented within *Financial assets measured at fair value through other comprehensive income*.
11	Deferred tax assets of CHF 122 million have been recognized in connection with the adoption of IFRS 9. Of the total effect, CHF 64 million relates to the recognition of ECL and CHF 58 million relates to classification and measurement changes upon adoption of IFRS 9.
12	Upon adoption of the ECL requirements of IFRS 9, a transition impact of CHF 348 million was recognized, consisting of CHF 144 million of stage 1 allowances, CHF 188 million of stage 2 allowances and an incremental increase in stage 3 allowances of CHF 16 million. The effect was mainly recognized within *Loans and advances to customers* (CHF 235 million), with effects also recognized in *Other financial assets measured at amortized cost* (CHF 35 million), *Loans and advances to banks* (CHF 3 million), *Receivables from securities financing transactions* (CHF 2 million) and *Provisions* (CHF 74 million).
13	Certain repurchase agreements with a carrying amount of CHF 5,081 million as of 31 December 2017 have been designated at FVTPL as they are managed in conjunction with reverse repurchase agreements that are mandatorily measured at FVTPL under IFRS 9. These amounts are included within *Other financial liabilities designated at fair value* as of 1 January 2018. A remeasurement gain of CHF 5 million has been recognized in *Retained earnings* as of 1 January 2018 related to this reclassification. CHF 7,730 million of forward starting repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
14	To achieve measurement consistency with reclassified customer and prime brokerage receivables that are measured at FVTPL following adoption of IFRS 9, certain customer deposits with a carrying amount of CHF 5,268 million and prime brokerage payables with a carrying amount of CHF 29,646 million as of 31 December 2017 have been designated at FVTPL and are presented within *Brokerage payables designated at fair value* as of 1 January 2018. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
15	The adoption of IFRS 9 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of ECL credit loss methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. In addition, CHF 72 million has been reclassified from *Other comprehensive income* recognized directly in equity, net of tax, to *Retained earnings* (refer to footnote 8 above), with no overall impact on equity attributable to shareholders.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reconciliation of allowances and provisions on adoption of IFRS 9 as of 1 January 2018

The table below provides a reconciliation from the IAS 39 allowances / IAS 37 provisions to the IFRS 9 ECL allowances / provisions recognized as of 1 January 2018 upon adoption of IFRS 9.

Reconciliation of allowances and provisions on adoption of IFRS 9

	31.12.2017	1.1.2018		
CHF million	Loss allowances and provisions (IAS 39 / IAS 37)	Reversal of allowances (IAS 39)	Recognition of ECL (IFRS 9)[1]	Allowances for ECL / Provisions for ECL (IFRS 9)
On-balance sheet				
Cash and balances at central banks			0	0
Loans and advances to banks	(3)		(3)	(5)
Receivables from securities financing transactions			(2)	(2)
Cash collateral receivables on derivative instruments			0	
Loans and advances to customers	(658)	26[2]	(235)[3]	(867)
Other financial assets measured at amortized cost	(101)[4]		(35)	(136)
Total on-balance sheet	(761)	26	(275)	(1,011)
Off-balance sheet financial instruments and other credit lines				
Guarantees	(29)		(8)	(37)
Loan commitments	(4)		(32)	(36)
Other credit lines			(34)	(34)
Total off-balance sheet financial instruments and other credit lines	(33)		(74)	(107)
Total	(794)	26	(348)	(1,117)
of which Stage 1			*(144)*	*(144)*
of which Stage 2			*(188)*	*(188)*
of which Stage 3			*(16)*[5]	*(785)*

1 Includes stage 1 and stage 2 expected credit losses and additional stage 3 expected credit losses. 2 The reversal of CHF 26 million of IAS 39 loss allowances relates to instruments reclassified from amortized cost to fair value through profit or loss on transition to IFRS 9. Refer also to footnotes 3 and 4 to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9." 3 Includes the reversal of collective allowances of CHF 13 million. 4 Includes CHF 82 million related to loans to financial advisors for which an allowance was reported as a direct reduction of the carrying amount as of 31 December 2017. 5 The incremental increase in stage 3 allowances of CHF 16 million arises from additional consideration of forward looking scenarios under IFRS 9.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

IFRS 9 transition impact on other comprehensive income and retained earnings as of 1 January 2018

The table below presents the transition effects recognized in OCI and retained earnings upon adoption of IFRS 9.

IFRS 9 impact on other comprehensive income and retained earnings

CHF million	
Other comprehensive income recognized directly in equity, net of tax	
Reclassification of financial assets (available for sale to fair value through profit or loss) – equity instruments	(199)
Reclassification of financial assets (available for sale to fair value through profit or loss) – debt instruments	(5)
Tax (expense) / benefit	131
Total change in other comprehensive income	(72)
Retained earnings	
Remeasurement of financial assets (reclassified from amortized cost to fair value through profit or loss)	(303)
Reclassification of financial assets (reclassified from available for sale to fair value through profit or loss)	204
Recognition of ECL for on-balance sheet financial assets	(275)
Remeasurement of financial liabilities (reclassified from amortized cost to designated at fair value through profit or loss)	5
Recognition of derivative loan commitments measured at fair value through profit or loss	(60)
Derecognition of liabilities for deferred fees on other loan commitments	4
Derecognition of derivative loan commitments measured at fair value through profit or loss	2
Recognition of ECL for off-balance sheet positions	(74)
Tax (expense) / benefit	(9)
Total change in retained earnings	(505)
Total change in equity due to the adoption of IFRS 9	(577)

Appendix 8 – Excerpts from the UBS AG Second Quarter 2018 Report

It should be noted that the term "pro-forma" as used in this Appendix 8 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

UBS AG interim consolidated financial statements (unaudited)

Income statement

		For the quarter ended			Year-to-date	
CHF million	Note	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income		2,473	2,253	2,495	4,726	4,932
Interest expense from financial instruments measured at amortized cost		(1,583)	(1,330)	(1,297)	(2,913)	(2,491)
Interest income from financial instruments measured at fair value through profit or loss		1,715	1,594	1,095	3,309	2,050
Interest expense from financial instruments measured at fair value through profit or loss		(1,637)	(790)	(890)	(2,426)	(1,399)
Net interest income		967	1,727	1,404	2,694	3,092
Other net income from fair value changes on financial instruments		2,182	1,466	1,459	3,648	2,900
Credit loss (expense) / recovery	8	(28)	(25)	(46)	(53)	(46)
Fee and commission income		4,799	4,900	4,745	9,699	9,552
Fee and commission expense		(416)	(409)	(449)	(825)	(885)
Net fee and commission income	3	4,383	4,491	4,296	8,874	8,667
Other income	4	137	164	285	301	345
Total operating income		7,641	7,823	7,398	15,464	14,958
Personnel expenses	5	3,524	3,556	3,611	7,080	7,654
General and administrative expenses	6	2,308	2,236	2,111	4,544	3,712
Depreciation and impairment of property, equipment and software		241	232	220	473	473
Amortization and impairment of intangible assets		16	16	16	32	37
Total operating expenses		6,089	6,040	5,957	12,128	11,876
Operating profit / (loss) before tax		1,553	1,783	1,441	3,336	3,082
Tax expense / (benefit)	7	369	411	317	780	681
Net profit / (loss)		1,184	1,371	1,124	2,556	2,401
Net profit / (loss) attributable to preferred noteholders				0		46
Net profit / (loss) attributable to non-controlling interests		1	1	1	3	1
Net profit / (loss) attributable to shareholders		1,183	1,370	1,123	2,553	2,354

Statement of comprehensive income

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Comprehensive income attributable to shareholders					
Net profit / (loss)	1,183	1,370	1,123	2,553	2,354
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation					
Foreign currency translation movements, before tax (revaluation of net investment)	787	(479)	(1,250)	309	(1,566)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax	(55)	94	258	40	201
Foreign currency translation differences on foreign operations reclassified to the income statement	15	0	21	15	25
Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to the income statement	0	0	0	0	0
Income tax relating to foreign currency translations, including the impact of net investment hedges	(1)	1	1	0	3
Subtotal foreign currency translation, net of tax	747	(383)	(969)	364	(1,337)
Financial assets measured at fair value through other comprehensive income					
Net unrealized gains / (losses), before tax	(24)	(71)	10	(95)	53
Impairment charges reclassified to the income statement from equity	0	0	(1)	0	13
Realized gains reclassified to the income statement from equity	0	0	(135)	0	(143)
Realized losses reclassified to the income statement from equity	0	0	5	0	7
Income tax relating to net unrealized gains / (losses)	6	19	6	26	(2)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax	(18)	(51)	(115)	(69)	(72)
Cash flow hedges of interest rate risk					
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	(127)	(441)	165	(569)	136
Net (gains) / losses reclassified to the income statement from equity	(70)	(127)	(211)	(197)	(431)
Income tax relating to cash flow hedges	37	114	11	151	63
Subtotal cash flow hedges, net of tax	(161)	(454)	(35)	(615)	(233)
Total other comprehensive income that may be reclassified to the income statement, net of tax	569	(889)	(1,119)	(320)	(1,641)
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans					
Gains / (losses) on defined benefit plans, before tax	250	(34)	115	216	164
Income tax relating to defined benefit plans	2	21	0	23	2
Subtotal defined benefit plans, net of tax	252	(13)	115	239	166
Own credit on financial liabilities designated at fair value					
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	248	171	(72)	419	(252)
Income tax relating to own credit on financial liabilities designated at fair value	0	(2)	(1)	(2)	(1)
Subtotal own credit on financial liabilities designated at fair value, net of tax	248	170	(73)	417	(254)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	499	157	42	656	(87)
Total other comprehensive income	1,068	(732)	(1,077)	336	(1,729)
Total comprehensive income attributable to shareholders	2,251	638	46	2,889	625

Statement of comprehensive income (continued)

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Comprehensive income attributable to preferred noteholders					
Net profit / (loss)	0	0	0	0	46
Other comprehensive income that will not be reclassified to the income statement					
Foreign currency translation movements, before tax	0	0	16	0	14
Income tax relating to foreign currency translation movements	0	0	0	0	0
Subtotal foreign currency translation, net of tax	0	0	16	0	14
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	0	16	0	14
Total comprehensive income attributable to preferred noteholders	0	0	16	0	60
Comprehensive income attributable to non-controlling interests					
Net profit / (loss)	1	1	1	3	1
Other comprehensive income that will not be reclassified to the income statement					
Foreign currency translation movements, before tax	(2)	0	(2)	(2)	(1)
Income tax relating to foreign currency translation movements	0	0	0	0	0
Subtotal foreign currency translation, net of tax	(2)	0	(2)	(2)	(1)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(2)	0	(2)	(2)	(1)
Total comprehensive income attributable to non-controlling interests	(1)	1	(2)	1	1
Total comprehensive income					
Net profit / (loss)	1,184	1,371	1,124	2,556	2,401
Other comprehensive income	1,066	(732)	(1,064)	334	(1,715)
of which: other comprehensive income that may be reclassified to the income statement	*569*	*(889)*	*(1,119)*	*(320)*	*(1,641)*
of which: other comprehensive income that will not be reclassified to the income statement	*497*	*157*	*55*	*654*	*(74)*
Total comprehensive income	2,250	639	60	2,889	686

Balance sheet

CHF million	Note	30.6.18	31.3.18	31.12.17
Assets				
Cash and balances at central banks		102,262	92,800	87,775
Loans and advances to banks		15,518	13,284	13,693
Receivables from securities financing transactions		76,450	77,016	89,633
Cash collateral receivables on derivative instruments	10	24,937	24,271	23,434
Loans and advances to customers	8	320,569	318,394	320,659
Other financial assets measured at amortized cost	11	21,072	19,235	36,935
Total financial assets measured at amortized cost		560,808	545,000	572,129
Financial assets at fair value held for trading	9	112,258	105,785	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties		*36,580*	*34,536*	*35,363*
Derivative financial instruments	9,10	121,605	113,334	118,229
Brokerage receivables	9	18,415	20,250	
Financial assets at fair value not held for trading	9	92,875	97,213	58,556
Total financial assets measured at fair value through profit or loss		345,153	336,581	303,028
Financial assets measured at fair value through other comprehensive income	9	6,941	6,758	8,665
Investments in associates		1,026	1,037	1,018
Property, equipment and software		8,216	8,015	7,985
Goodwill and intangible assets		6,391	6,235	6,398
Deferred tax assets		9,804	9,671	9,783
Other non-financial assets	11	6,956	6,984	7,358
Total assets		945,296	920,280	916,363

Balance sheet (continued)

CHF million	Note	30.6.18	31.3.18	31.12.17
Liabilities				
Amounts due to banks		10,242	9,024	7,533
Payables from securities financing transactions		10,130	9,167	17,044
Cash collateral payables on derivative instruments	10	31,843	29,426	30,247
Customer deposits		407,171	401,514	412,392
Funding from UBS Group AG and its subsidiaries		38,771	35,925	34,749
Debt issued measured at amortized cost	13	98,929	102,213	104,749
Other financial liabilities measured at amortized cost	11	7,187	6,372	37,133
Total financial liabilities measured at amortized cost		604,274	593,640	643,847
Financial liabilities at fair value held for trading	9	31,416	34,747	30,463
Derivative financial instruments	9,10	119,224	111,945	116,134
Brokerage payables designated at fair value	9	37,904	34,793	
Debt issued designated at fair value	9,12	56,849	52,059	49,502
Other financial liabilities designated at fair value	9,11	37,342	34,438	16,223
Total financial liabilities measured at fair value through profit or loss		282,736	267,983	212,323
Provisions	14	3,084	2,999	3,084
Other non-financial liabilities	11	5,181	4,808	6,335
Total liabilities		895,275	869,430	865,588
Equity				
Share capital		386	386	386
Share premium		26,984	26,998	26,966
Retained earnings		28,718	30,099	29,102
Other comprehensive income recognized directly in equity, net of tax		(6,127)	(6,696)	(5,736)
Equity attributable to shareholders		49,961	50,788	50,718
Equity attributable to non-controlling interests		60	62	57
Total equity		50,021	50,850	50,775
Total liabilities and equity		945,296	920,280	916,363

Statement of changes in equity

CHF million	Share capital	Share premium	Retained earnings	Other comprehensive income recognized directly in equity, net of tax[1]
Balance as of 1 January 2017	**386**	**29,505**	**28,265**	**(4,494)**
Issuance of share capital				
Premium on shares issued and warrants exercised		6		
Tax (expense) / benefit		5		
Dividends		(2,250)		
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		(313)		
Total comprehensive income for the period			2,267	(1,641)
of which: net profit / (loss)			*2,354*	
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				*(1,641)*
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans			*166*	
of which: OCI that will not be reclassified to the income statement, net of tax – own credit			*(254)*	
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 June 2017	**386**	**26,953**	**30,532**	**(6,136)**
Balance as of 1 January 2018 before the adoption of IFRS 9 and IFRS 15	386	26,966	29,102	(5,736)
Effect of adoption of IFRS 9			(505)	(72)
Effect of adoption of IFRS 15			(24)	
Balance as of 1 January 2018 after the adoption of IFRS 9 and IFRS 15	386	26,966	28,573	(5,808)
Issuance of share capital				
Premium on shares issued and warrants exercised		20		
Tax (expense) / benefit		7		
Dividends			(3,065)	
New consolidations / (deconsolidations) and other increases / (decreases)		(9)		
Total comprehensive income for the period			3,209	(320)
of which: net profit / (loss)			*2,553*	
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				*(320)*
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans			*239*	
of which: OCI that will not be reclassified to the income statement, net of tax – own credit			*417*	
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 June 2018	386	26,984	28,718	(6,127)

1 Excludes defined benefit plans and own credit that are recorded directly in Retained earnings.

of which: foreign currency translation	*of which: financial assets measured at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Preferred noteholders	Non-controlling interests	Total equity
(5,564)	*98*	*972*	53,662	**642**	**40**	**54,343**
			0			0
			6			6
			5			5
			(2,250)	(46)	(4)	(2,300)
			0	0		0
			(313)		0	(312)
(1,337)	*(72)*	*(233)*	625	60	1	686
			2,354	*46*	*1*	*2,401*
(1,337)	*(72)*	*(233)*	*(1,641)*			*(1,641)*
			166			*166*
			(254)			*(254)*
			0	*14*	*(1)*	*14*
(6,902)	*26*	*739*	51,735	**657**	**37**	**52,428**
(6,099)	*12*	*351*	50,718		57	50,775
	(72)		(577)			(577)
			(24)			(24)
(6,099)	*(60)*	*351*	50,117		57	50,174
			0			0
			20			20
			7			7
			(3,065)		(6)	(3,071)
			(9)		8	(1)
364	*(69)*	*(615)*	2,889		1	2,889
			2,553		*3*	*2,556*
364	*(69)*	*(615)*	*(320)*			*(320)*
			239			*239*
			417			*417*
			0		*(2)*	*(2)*
(5,735)	*(128)*	*(264)*	49,961		60	50,021

Statement of cash flows[1]

	Year-to-date	
CHF million	30.6.18	30.6.17
Cash flow from / (used in) operating activities		
Net profit / (loss)	2,556	2,401
Non-cash items included in net profit and other adjustments:		
Depreciation and impairment of property, equipment and software	473	473
Amortization and impairment of intangible assets	32	37
Credit loss expense / (recovery)	53	46
Share of net profits of associates / joint ventures and impairment of associates	(30)	(36)
Deferred tax expense / (benefit)	420	257
Net loss / (gain) from investing activities	(35)	246
Net loss / (gain) from financing activities	1,340	(307)
Other net adjustments	(1,571)	674
Net change in operating assets and liabilities:		
Loans and advances to banks / amounts due to banks	2,634	484
Securities financing transactions	6,727	(6,568)
Cash collateral on derivative instruments	225	15
Loans and advances to customers	(6,998)	(7,561)
Customer deposits	(720)	(12,222)
Financial assets and liabilities at FV held for trading and derivative financial instruments	1,692	(7,400)
Brokerage receivables and payables	8,439	
Financial assets at fair value not held for trading, other financial assets and liabilities	1,732	7,560
Provisions, other non-financial assets and liabilities	(642)	(883)
Income taxes paid, net of refunds	(337)	(685)
Net cash flow from / (used in) operating activities	15,990	(23,469)
Cash flow from / (used in) investing activities		
Purchase of subsidiaries, associates and intangible assets	(3)	(5)
Disposal of subsidiaries, associates and intangible assets[2]	58	95
Purchase of property, equipment and software	(710)	(688)
Disposal of property, equipment and software	30	23
Purchase of financial assets measured at fair value through other comprehensive income	(831)	(4,729)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	668	6,150
Net (purchase) / redemption of debt securities measured at amortized cost	(2,391)	
Net (purchase) / redemption of financial assets held to maturity		168
Net cash flow from / (used in) investing activities	(3,178)	1,014

Table continues on the next page.

Statement of cash flows (continued)[1]

Table continued from previous page.

	Year-to-date	
CHF million	30.6.18	30.6.17
Cash flow from / (used in) financing activities		
Net short-term debt issued / (repaid)	(5,801)	18,738
Distributions paid on UBS shares	(3,065)	(2,250)
Issuance of long-term debt, including debt issued designated at fair value[3]	38,980	24,829
Repayment of long-term debt, including debt issued designated at fair value[3]	(26,066)	(23,407)
Dividends paid and repayments of preferred notes	0	(46)
Net changes in non-controlling interests	16	(5)
Net cash flow from / (used in) financing activities	4,065	17,861
Total cash flow		
Cash and cash equivalents at the beginning of the period	102,154	121,107
Net cash flow from / (used in) operating, investing and financing activities	16,877	(4,594)
Effects of exchange rate differences on cash and cash equivalents	136	(1,502)
Cash and cash equivalents at the end of the period[4]	119,167	115,010
of which: cash and balances with central banks	*102,145*	*100,006*
of which: due from banks	*14,229*	*12,646*
of which: money market paper[5]	*2,794*	*2,358*
Additional information		
Net cash flow from / (used in) operating activities includes:		
Interest received in cash	6,713	6,012
Interest paid in cash	4,616	3,650
Dividends on equity investments, investment funds and associates received in cash[6]	1,190	985

1 Upon adoption of IFRS 9 on 1 January 2018, cash flows from certain financial instruments have been reclassified from investing to operating activities. Refer to Note 19 for more information. 2 Includes dividends received from associates. 3 Includes funding from UBS Group AG and its subsidiaries. 4 CHF 4,042 million and CHF 2,576 million of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 30 June 2018 and 30 June 2017, respectively. Refer to "Note 23 Restricted and transferred financial assets" in the "Consolidated financial statements" section in the Annual Report 2017 for more information. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading and Other financial assets measured at amortized cost. 6 Includes dividends received from associates reported within Cash flow from / (used in) investing activities.

Notes to the UBS AG interim consolidated financial statements (unaudited)

Note 1 Basis of accounting

1.1 Basis of preparation

The consolidated financial statements (the Financial Statements) of UBS AG and its subsidiaries (together "UBS AG") are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), which is also the functional currency of UBS AG's Head Office and its Swiss-based operations.[1] These interim Financial Statements are prepared in accordance with IAS 34, *Interim Financial Reporting*.

In preparing these interim Financial Statements, the same accounting policies and methods of computation have been applied as in the UBS AG consolidated annual Financial Statements for the period ended 31 December 2017, except for the changes described in this note, in Note 19 of this report and in "Note 1 Basis of accounting" in the "Consolidated financial statements" section of the first quarter 2018 report. These interim Financial Statements are unaudited and should be read in conjunction with UBS AG's audited consolidated Financial Statements included in the Annual Report 2017. In the opinion of management, all necessary adjustments were made for a fair presentation of UBS AG's financial position, results of operations and cash flows.

Preparation of these interim Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities. These estimates and assumptions are based on the best available information. Actual results in the future could differ from such estimates and such differences may be material to the Financial Statements. Revisions to estimates, based on regular reviews, are recognized in the period in which they occur. For more information on areas of estimation uncertainty considered to require critical judgment, refer to "Note 1a) Significant accounting policies" in the "Consolidated financial statements" section of the Annual Report 2017 and in Note 19.1 of this report.

1.2 Adoption of IFRS 9 and IFRS 15 in the first quarter of 2018

IFRS 9, *Financial instruments*

As disclosed in the UBS AG first quarter 2018 report, effective 1 January 2018, UBS AG adopted IFRS 9, *Financial Instruments*, which replaces IAS 39*, Financial Instruments: Recognition and Measurement* and substantially changes accounting and financial reporting in three key areas: classification and measurement of financial assets, impairment and hedge accounting. In addition, UBS AG early adopted the Amendment to IFRS 9*, Prepayment Features with Negative Compensation*, issued in October 2017, which allows UBS AG to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs. UBS AG has retained hedge accounting under IAS 39 as permitted and early adopted the own credit requirements of IFRS 9 during the first quarter of 2016.

As permitted by the transitional provisions of IFRS 9, UBS AG elected not to restate comparative period information. Any effect on the carrying amounts of financial assets and liabilities at the date of transition to IFRS 9 was recognized as an adjustment to opening retained earnings. The adoption of IFRS 9 effective 1 January 2018 resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of impairment requirements based on an ECL methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax.

UBS AG continues to test and refine the new accounting processes, internal controls and governance framework necessitated by the adoption of IFRS 9. Therefore, the estimation of ECL and related effects remain subject to change until finalization of the financial statements for the year ending 31 December 2018.

1 As explained in the Annual Report 2017 of UBS Group AG and UBS AG, in light of cumulative changes in UBS's legal structure, business activities and evolving changes to its structural currency management strategy, it is anticipated that during the second half of 2018 the functional currency of UBS AG's Head Office in Switzerland may change from Swiss francs to US dollars, and the functional currency of UBS AG's London Branch operations may change from British pounds to US dollars, where such changes would be made on a prospective basis. If such changes occur, we expect that management would change the presentation currency of UBS AG's consolidated financial statements from Swiss francs to US dollars to align to the change in functional currency, with prior periods restated.

Note 1 Basis of accounting (continued)

The updated accounting policies for classification and measurement of financial instruments and impairment of financial assets as applied from 1 January 2018 are presented in Note 19.1 of this report and the detailed effects of the adoption of IFRS 9 on 1 January 2018 are presented in Note 19.2.

→ **Refer to the 31 March 2018 Pillar 3 report – UBS Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the effect of the IFRS 9 transition on UBS's capital adequacy**

IFRS 15, *Revenue from Contracts with Customers*

As disclosed in the UBS AG first quarter 2018 report, effective from 1 January 2018, UBS AG adopted IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue* and establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied.

The adoption of IFRS 15 resulted in changes to UBS AG's accounting policies applicable from 1 January 2018. Accounting policies set out in Note 1.3.2 in the "Consolidated financial statements" section of the first quarter 2018 report replace item 4 of Note 1a) in the UBS AG consolidated annual Financial Statements for the year ended 31 December 2017. The primary changes stem from IFRS 15 requirements that fee and commission income is measured based on consideration specified in a legally enforceable contract and variable consideration that is contingent on an uncertain event can only be recognized to the extent that it is highly probable that a significant reversal will not occur. UBS AG does not consider the highly probable criteria to be met where the contingency is beyond the control of UBS AG.

As permitted by the transitional provisions of IFRS 15, UBS AG elected not to restate comparative figures. Instead, the cumulative effect of initially applying the standard was recognized as an adjustment to the opening balance of retained earnings. A transition adjustment of CHF 27 million on a pre-tax basis and CHF 24 million net of tax was posted to retained earnings to reverse income recognized prior to 1 January 2018 under IAS 18 that must be deferred under IFRS 15 either due to the variable consideration constraint (asset management performance fees of CHF 16 million) or because UBS AG does not have an enforceable right to a specified amount of consideration (commission-sharing agreements for research services of CHF 11 million).

IFRS 15 also resulted in changes to presentation. Fee and commission income and expenses are presented gross rather than net on the face of the income statement when UBS AG is considered principal to the contract with a customer. In turn, fees and expenses can only be presented net when UBS AG is considered to be an agent.

→ **Refer to Note 3 for more information**

1.3 New accounting standards and changes in accounting policies effective second quarter 2018

IFRS Interpretations Committee, *Payments relating to taxes other than income tax*

During the second quarter of 2018, UBS AG refined its treatment of prepayments or overpayments in relation to uncertain tax positions outside of the scope of IAS 12, *Income Taxes*, following the IFRS Interpretation Committee's discussion on *Payments relating to taxes other than income tax*. More specifically, prepayments for uncertain tax positions that have not yet given rise to a liability are recognized as assets because UBS AG will either receive a cash rebate or a benefit through the extinguishment of a future liability. Adoption of the change did not have a material effect on UBS AG's financial statements.

Note 2 Segment reporting

UBS AG's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which are supported by Corporate Center. The four business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center and its units, reflect the management structure of UBS AG. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Refer to "Note 1a Significant accounting policies" item 2 and "Note 2 Segment reporting" in the "Consolidated financial statements" section of the Annual Report 2017 for more information on UBS AG's reporting segments.

Effective 1 February 2018, UBS AG integrated its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division. Refer to "Note 1.2 Changes to segment reporting effective first quarter 2018" in the "Consolidated financial statements" section of the first quarter 2018 report for more information.

	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
CHF million					Services	Group ALM	Non-core and Legacy Portfolio	
For the six months ended 30 June 2018[1]								
Net interest income	1,999	989	(16)	290	(184)	(398)	13	2,694
Non-interest income	6,264	897	907	4,412	254	(92)	180	12,823
Allocations from CC – Group ALM	88	29	7	(204)	25	100	(44)	0
Income	8,350	1,915	899	4,498	96	(389)	148	15,517
Credit loss (expense) / recovery	2	(35)	0	(21)	0	1	(1)	(53)
Total operating income	8,353	1,880	899	4,478	96	(389)	147	15,464
Personnel expenses	3,764	396	356	1,663	863	18	19	7,080
General and administrative expenses	613	118	99	325	3,302	20	67	4,544
Services (to) / from CC and other BDs	1,805	572	236	1,355	(4,060)	1	91	0
of which: services from CC – Services	*1,755*	*614*	*256*	*1,311*	*(4,096)*	*81*	*79*	*0*
Depreciation and impairment of property, equipment and software	2	6	1	4	460	0	0	473
Amortization and impairment of intangible assets	25	0	1	5	1	0	0	32
Total operating expenses	6,208	1,093	692	3,352	566	40	178	12,128
Operating profit / (loss) before tax	**2,144**	**788**	**207**	**1,126**	**(470)**	**(428)**	**(31)**	**3,336**
Tax expense / (benefit)								780
Net profit / (loss)								**2,556**
As of 30 June 2018								
Total assets	**197,728**	**136,007**	**27,570**	**262,377**	**19,483**	**263,350**	**38,781**	**945,296**
For the six months ended 30 June 2017[1]								
Net interest income	1,764	940	(15)	452	(155)	97	10	3,092
Non-interest income	5,986	870	935	3,859	197	30	34	11,912
Allocations from CC – Group ALM	190	103	9	(174)	60	(139)	(50)	0
Income	7,940	1,914	929	4,137	102	(12)	(6)	15,004
Credit loss (expense) / recovery	(2)	(21)	0	(12)	0	0	(11)	(46)
Total operating income	7,938	1,893	929	4,125	102	(12)	(16)	14,958
Personnel expenses	3,766	436	357	1,598	1,454	17	25	7,654
General and administrative expenses	606	136	109	298	2,568	7	(12)	3,712
Services (to) / from CC and other BDs	1,757	541	246	1,334	(3,982)	(13)	116	0
of which: services from CC – Services	*1,703*	*586*	*266*	*1,286*	*(4,003)*	*65*	*97*	*0*
Depreciation and impairment of property, equipment and software	2	6	1	5	460	0	0	473
Amortization and impairment of intangible assets	23	0	2	6	6	0	0	37
Total operating expenses	6,154	1,119	716	3,241	506	12	129	11,876
Operating profit / (loss) before tax	**1,784**	**774**	**213**	**884**	**(404)**	**(23)**	**(145)**	**3,082**
Tax expense / (benefit)								681
Net profit / (loss)								**2,401**
As of 31 December 2017								
Total assets	**190,074**	**135,587**	**14,270**	**263,046**	**19,447**	**247,739**	**46,200**	**916,363**

1 Prior period information may not be comparable as a result of the adoption of IFRS 9 and IFRS 15, both effective 1 January 2018. Refer to Note 1 for more information on these changes.

Note 3 Net fee and commission income[1]

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Underwriting fees	189	241	275	430	570
of which: equity underwriting fees	*88*	*118*	*148*	*206*	*310*
of which: debt underwriting fees	*101*	*123*	*126*	*224*	*260*
M&A and corporate finance fees	178	194	170	372	347
Brokerage fees	877	968	945	1,845	1,968
Investment fund fees	1,213	1,207	1,046	2,420	2,107
Portfolio management and related services	1,902	1,837	1,852	3,739	3,646
Other	440	452	457	893	914
Total fee and commission income[2]	4,799	4,900	4,745	9,699	9,552
of which: recurring	*3,161*	*3,071*		*6,232*	
of which: transaction-based	*1,617*	*1,811*		*3,428*	
of which: performance-based	*22*	*17*		*39*	
Brokerage fees paid	75	85	179	160	344
Other	341	324	270	665	541
Total fee and commission expense	416	409	449	825	885
Net fee and commission income	4,383	4,491	4,296	8,874	8,667
of which: net brokerage fees	*802*	*884*	*766*	*1,685*	*1,624*

1 Upon adoption of IFRS 15, certain brokerage fees paid in an agency capacity have been reclassified from Fee and commission expense to Fee and commission income on a prospective basis from 1 January 2018, primarily relating to third-party execution costs for exchange-traded derivative transactions and fees payable to third-party research providers on behalf of clients. In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, have been reclassified between reporting lines to better reflect the nature of the revenues, with prior period information restated accordingly. This resulted in the following impacts: for the quarter ended 30 June 2017, CHF 84 million was reclassified from Underwriting fees to Brokerage fees and CHF 255 million was reclassified from Portfolio management and related services to Investment fund fees. For the first six months of 2017, CHF 164 million was reclassified from total Underwriting fees to Brokerage fees and CHF 499 million was reclassified from Portfolio management and related services to Investment fund fees. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from General and administrative expenses to Fee and commission expense to improve the alignment of transaction-based costs with the associated revenue stream, primarily impacting clearing costs, client loyalty costs, fund and custody expenses. As the impact of this reclassification was not material, prior period information was not restated. 2 Reflects third-party fee and commission income for the second quarter of 2018 of CHF 2,832 million for Global Wealth Management (first quarter of 2018: CHF 2,891 million), CHF 301 million for Personal & Corporate Banking (first quarter of 2018: CHF 300 million), CHF 801 million for Asset Management (first quarter of 2018: CHF 777 million), CHF 863 million for the Investment Bank (first quarter of 2018: CHF 917 million) and CHF 3 million for Corporate Center (first quarter of 2018: CHF 14 million).

Note 4 Other income

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Associates, joint ventures and subsidiaries					
Net gains / (losses) from disposals of subsidiaries[1]	(10)	0	(18)	(10)	(22)
Share of net profits of associates and joint ventures	15	15	17	30	36
Total	5	15	(2)	20	14
Financial assets measured at fair value through other comprehensive income					
Net gains / (losses) from disposals	0	0	129	0	136
Impairments	0	0	1	0	(13)
Total	0	0	131	0	123
Net gains / (losses) from disposals of financial assets measured at amortized cost	(1)	0	(2)	0	16
Net income from properties (excluding net gains / (losses) from disposals)[2]	6	6	6	12	12
Net gains / (losses) from disposals of properties held for sale	0	0	0	0	(1)
Income from shared services provided to UBS Group AG or its subsidiaries[3]	105	120	121	225[4]	135
Other	22	23	31	45	47
Total other income	137	164	285	301	345

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to disposed foreign subsidiaries and branches. 2 Includes net rent received from third parties and net operating expenses. 3 Relates to subsidiaries not in the UBS AG scope of consolidation. 4 The increase compared with the first six months of 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG in 2017. Refer to the Annual Report 2017 for more information.

Note 5 Personnel expenses

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Salaries and variable compensation	2,084	2,211	2,125	4,295	4,559
Financial advisor variable compensation[1]	996	974	992	1,970	1,979
Contractors	50	41	72	90	164
Social security	156	189	166	346	364
Pension and other post-employment benefit plans	119	21[2]	133	140[2]	332
Other personnel expenses	118	120	123	238	256
Total personnel expenses	3,524	3,556	3,611	7,080[3]	7,654

1 Financial advisor variable compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated on the basis of financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 2 Changes to the Pension Fund of UBS in Switzerland in the first quarter of 2018 resulted in a reduction in the pension obligation recognized by UBS AG. As a consequence, a pre-tax gain of CHF 123 million was recognized in the income statement in the first quarter of 2018, with no overall effect on total equity. Refer to "Note 5 Personnel expenses" in the "Consolidated financial statements" section of the first quarter 2018 report for more information. 3 The decrease compared with the first six months of 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG in 2017. Refer to the Annual Report 2017 for more information.

Note 6 General and administrative expenses

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Occupancy	207	205	208	412	423
Rent and maintenance of IT and other equipment	77	76	97	153	241
Communication and market data services	123	124	126	247	280
Administration	1,217	1,293	1,005	2,509	1,227
of which: shared services costs charged by UBS Group AG or its subsidiaries[1]	*1,151*	*1,154*	*909*	*2,305[2]*	*1,033*
of which: UK bank levy[3]	*(45)*	*0*	*(46)*	*(45)*	*(71)*
Marketing and public relations	61	70	67	131	159
Travel and entertainment	96	79	97	175	183
Professional fees	208	195	253	403	506
Outsourcing of IT and other services	181	176	218	357	588
Litigation, regulatory and similar matters[4]	131	(11)	9	120	42
Other	7	30	31	36	62
Total general and administrative expenses	2,308	2,236	2,111	4,544	3,712

1 Relates to subsidiaries not in the UBS AG scope of consolidation. 2 The increase compared with the first six months of 2017 was mainly due to the transfer of shared services functions from UBS AG to UBS Business Solutions AG in 2017. Refer to the Annual Report 2017 for more information. 3 The credits presented for the periods shown are related to prior years. 4 Reflects the net increase / (decrease) in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 14 for more information. Also includes recoveries from third parties (second quarter of 2018: CHF 10 million; first quarter of 2018: CHF 17 million; second quarter of 2017: CHF 1 million).

Note 7 Income taxes

UBS AG recognized an income tax expense of CHF 369 million for the second quarter of 2018 compared with an income tax expense of CHF 317 million for the second quarter of 2017.

Deferred tax expenses were CHF 192 million in the second quarter of 2018 compared with CHF 129 million in the second quarter of 2017 and mainly related to the amortization of deferred tax assets previously recognized in relation to tax losses carried forward and deductible temporary differences to reflect their offset against profits for the quarter.

The current tax expense was CHF 176 million compared with CHF 188 million in the second quarter of 2017 and related to taxable profits of UBS Switzerland AG and other subsidiaries and branches of UBS AG.

Note 8 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses amounted to CHF 28 million in the second quarter of 2018, reflecting expected credit losses (ECL) of CHF 21 million related to stage 1 and 2 positions and net losses of CHF 7 million related to credit impaired (stage 3) positions.

Stage 1 and 2 ECL have been recognized in the period, primarily arising from credit quality changes in Personal & Corporate Banking and, to a lesser extent, from new loans, facilities and other exposure movements across the Investment Bank, Personal & Corporate Banking and Global Wealth Management.

Stage 3 net losses of CHF 7 million were recognized across a number of defaulted positions, predominantly in Personal & Corporate Banking.

There have not been any material changes to the models used to calculate ECL and to determine stage allocation.

As outlined in Note 19, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. The scenarios and scenario weights applied to calculate ECL as of 30 June 2018 were reviewed and remain unchanged from those applied as of 31 March 2018 and as of 1 January 2018, the date of transition to IFRS 9.

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (30.6.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

Further, assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of those economic scenarios to determine ECL at the reporting date have not changed from the date of transition to IFRS 9. The point-in-time probability of default values applied to the ECL calculation at the reporting date reflect, however, market data updates, such as house price and equity indices and foreign exchange rates. Details on assumptions applied around the most important forward-looking economic factors are discussed in Note 19.

b) ECL-relevant balance sheet and off-balance sheet positions including ECL allowances and provisions

The tables on the following pages provide information on financial instruments and certain non-financial instruments that are subject to ECL. For amortized cost instruments, the net carrying value represents the maximum exposure to credit risk, taking into account the allowance for credit losses. Financial assets measured at fair value through other comprehensive income (FVOCI) are also subject to ECL; however, unlike amortized cost instruments, the allowance does not reduce the carrying value of these financial assets. The carrying value of financial assets measured at FVOCI represents the maximum exposure to credit risk. Tables provided for 30 June 2018 and 31 March 2018 include additional detail on certain segments that have not been provided for balances as of 1 January 2018.

In addition to on-balance sheet financial assets, certain off-balance sheet and other credit lines are also subject to ECL. The maximum exposure to credit risk for off-balance sheet financial instruments is calculated based on notional amounts.

Note 8 Expected credit loss measurement (continued)

UBS AG has established ECL disclosure segments or "ECL segments" to disaggregate portfolios based on shared risk characteristics and on the same or similar rating methods applied. The key segments are presented in the table below.

Segment	Segment description	Description of credit risk sensitivity	Business division / Corporate Center
Private clients with mortgages	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Sensitive to the interest rate environment, employment status and influence from regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Real estate financing	Rental or income-producing real estate financing to corporate clients secured by real estate	Sensitive to GDP development, the interest rate environment and regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Large corporate clients	Lending to large corporate and multinational clients	Sensitive to GDP development, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking – Investment Bank
SME clients	Lending to small- and medium-sized corporate clients	Sensitive to GDP development, the interest rate environment and to some extent, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking
Financial intermediaries and hedge funds	Financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Sensitive to GDP development, the interest rate environment, regulatory changes and political risk	– Personal & Corporate Banking – Investment Bank – Corporate Center
Lombard	Loans secured by pledges of marketable securities, guarantees and other forms of collateral	Sensitive to the market (e.g., changes in collateral, as well as in invested assets)	– Personal & Corporate Banking – Global Wealth Management
Credit cards	Credit card solutions in Switzerland and the US	Sensitive to the interest rate environment and employment status	– Personal & Corporate Banking – Global Wealth Management
Commodity trade finance	Working capital financing of commodity traders, generally extended on a self-liquidating transactional basis	Sensitive primarily to the strength of individual transaction structures and collateral values (price volatility of commodities) as the primary source for debt service is directly linked to the shipments financed	– Personal & Corporate Banking
Leasing (finance lease receivables)	Financing of private aircraft Financing of investment goods	Sensitive to changes in collateral values Sensitive to GDP development, the interest rate environment, seasonality and business cycles and collateral values	– Personal & Corporate Banking

Note 8 Expected credit loss measurement (continued)

CHF million	30.6.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	102,262	102,262	0	0	0	0	0	0
Loans and advances to banks	15,518	15,510	8	0	(4)	(2)	0	(2)
Receivables from securities financing transactions	76,450	76,450	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,937	24,937	0	0	0	0	0	0
Loans and advances to customers	320,569	295,332	23,612	1,625	(847)	(53)	(174)	(620)
of which: Private clients with mortgage	*121,858*	*108,533*	*12,498*	*826*	*(122)*	*(9)*	*(79)*	*(34)*
of which: Real estate financing	*35,659*	*26,826*	*8,795*	*39*	*(60)*	*(3)*	*(49)*	*(8)*
of which: Large corporate clients	*10,486*	*9,841*	*555*	*91*	*(82)*	*(5)*	*(9)*	*(68)*
of which: SME clients	*9,920*	*8,055*	*1,284*	*581*	*(292)*	*(8)*	*(25)*	*(258)*
of which: Lombard	*116,795*	*116,779*	*0*	*16*	*(90)*	*(4)*	*0*	*(86)*
of which: Credit cards	*1,406*	*1,123*	*268*	*14*	*(37)*	*(6)*	*(11)*	*(20)*
of which: Commodity trade finance	*3,075*	*3,049*	*13*	*13*	*(88)*	*(4)*	*0*	*(84)*
Other financial assets measured at amortized cost	21,072	20,264	292	516	(168)	(39)	(6)	(123)
of which: Loans to financial advisors	*3,394*	*3,139*	*85*	*171*	*(124)*	*(32)*	*(2)*	*(90)*
Total financial assets measured at amortized cost[1]	560,808	534,755	23,912	2,141	(1,022)	(97)	(179)	(746)
Financial assets measured at fair value through other comprehensive income	6,941	6,941	0	0	0	0	0	0
Total on-balance sheet financial assets in scope of ECL requirements	567,749	541,696	23,912	2,141	(1,022)	(97)	(179)	(746)

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	18,529	17,826	506	197	(34)	(7)	(1)	(26)
of which: Large corporate clients	*3,818*	*3,462*	*218*	*138*	*(7)*	*(1)*	*0*	*(5)*
of which: SME clients	*1,262*	*996*	*221*	*45*	*(16)*	*0*	*(1)*	*(15)*
of which: Financial intermediaries and hedge funds	*7,473*	*7,464*	*9*	*0*	*(4)*	*(4)*	*0*	*0*
of which: Lombard	*2,493*	*2,493*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*2,398*	*2,342*	*43*	*13*	*(4)*	*(1)*	*0*	*(3)*
Irrevocable loan commitments	31,009	30,407	563	38	(42)	(34)	(8)	0
of which: Large corporate clients	*21,914*	*21,342*	*550*	*22*	*(34)*	*(27)*	*(7)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	1,545	1,545	0	0	0	0	0	0
Committed unconditionally revocable credit lines	34,129	33,011	1,053	65	(33)	(21)	(13)	0
of which: Real estate financing	*2,676*	*2,404*	*272*	*0*	*(16)*	*(8)*	*(8)*	*0*
of which: Large corporate clients	*4,065*	*4,000*	*65*	*0*	*(1)*	*(1)*	*0*	*0*
of which: SME clients	*4,407*	*3,961*	*390*	*57*	*(8)*	*(5)*	*(2)*	*0*
of which: Lombard	*6,231*	*6,231*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*6,980*	*6,712*	*267*	*0*	*(5)*	*(3)*	*(1)*	*0*
of which: Commodity trade finance	*2,707*	*2,703*	*0*	*5*	*(1)*	*(1)*	*0*	*0*
Irrevocable committed prolongation of existing loans	2,760	2,741	19	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	87,972	85,531	2,142	300	(111)	(62)	(23)	(26)
Total allowances and provisions					(1,133)	(159)	(202)	(772)

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 8 Expected credit loss measurement (continued)

CHF million	31.3.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	92,800	92,800	0	0	0	0	0	0
Loans and advances to banks	13,284	13,246	38	0	(5)	(3)	0	(2)
Receivables from securities financing transactions	77,016	77,016	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,271	24,271	0	0	0	0	0	0
Loans and advances to customers	318,394	289,306	27,543	1,545	(838)	(54)	(162)	(622)
of which: Private clients with mortgage	*120,535*	*104,614*	*15,149*	*772*	*(127)*	*(11)*	*(71)*	*(44)*
of which: Real estate financing	*36,003*	*26,415*	*9,553*	*36*	*(62)*	*(3)*	*(51)*	*(8)*
of which: Large corporate clients	*11,610*	*10,828*	*684*	*97*	*(62)*	*(7)*	*(2)*	*(54)*
of which: SME clients	*10,072*	*7,893*	*1,629*	*550*	*(281)*	*(9)*	*(24)*	*(248)*
of which: Lombard	*114,436*	*114,423*	*0*	*13*	*(86)*	*(4)*	*0*	*(82)*
of which: Credit cards	*1,334*	*1,069*	*252*	*14*	*(34)*	*(5)*	*(9)*	*(19)*
of which: Commodity trade finance	*3,008*	*2,942*	*61*	*5*	*(92)*	*(4)*	*(4)*	*(85)*
Other financial assets measured at amortized cost	19,235	18,477	271	488	(146)	(35)	(5)	(106)
of which: Loans to financial advisors	*3,326*	*3,104*	*74*	*149*	*(115)*	*(28)*	*(2)*	*(85)*
Total financial assets measured at amortized cost[1]	**545,000**	**515,116**	**27,851**	**2,033**	**(992)**	**(94)**	**(168)**	**(730)**
Financial assets measured at fair value through other comprehensive income	**6,758**	**6,758**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**551,757**	**521,873**	**27,851**	**2,033**	**(992)**	**(94)**	**(168)**	**(730)**

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,404	16,624	577	203	(40)	(7)	(2)	(31)
of which: Large corporate clients	*3,775*	*3,380*	*249*	*146*	*(10)*	*(1)*	*0*	*(9)*
of which: SME clients	*1,313*	*1,029*	*235*	*50*	*(16)*	*0*	*(1)*	*(15)*
of which: Financial intermediaries and hedge funds	*5,740*	*5,694*	*47*	*0*	*(3)*	*(3)*	*0*	*0*
of which: Lombard	*2,537*	*2,537*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*1,783*	*1,752*	*24*	*7*	*(4)*	*(1)*	*0*	*(3)*
Irrevocable loan commitments	29,746	29,181	547	18	(32)	(24)	(7)	(1)
of which: Large corporate clients	*22,234*	*21,693*	*535*	*7*	*(26)*	*(20)*	*(5)*	*(1)*
Forward starting reverse repurchase and securities borrowing agreements	1,231	1,231	0	0	0	0	0	0
Committed unconditionally revocable credit lines	35,892	33,937	1,879	75	(34)	(17)	(17)	0
of which: Real estate financing	*2,942*	*2,134*	*808*	*0*	*(12)*	*(2)*	*(9)*	*0*
of which: Large corporate clients	*4,804*	*4,700*	*99*	*5*	*0*	*0*	*0*	*0*
of which: SME clients	*4,617*	*4,065*	*496*	*56*	*(7)*	*(4)*	*(3)*	*0*
of which: Lombard	*5,960*	*5,960*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*6,879*	*6,609*	*269*	*0*	*(5)*	*(4)*	*(1)*	*0*
of which: Commodity trade finance	*3,413*	*3,307*	*92*	*14*	*(2)*	*(1)*	*(1)*	*0*
Irrevocable committed prolongation of existing loans	1,912	1,912	0	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	**86,184**	**82,885**	**3,003**	**296**	**(106)**	**(49)**	**(26)**	**(32)**
Total allowances and provisions					**(1,098)**	**(143)**	**(194)**	**(762)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 8 Expected credit loss measurement (continued)

CHF million	1.1.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	87,775	87,775	0	0	0	0	0	0
Loans and advances to banks	13,673	13,654	18	0	(5)	(2)	0	(3)
Receivables from securities financing transactions	84,674	84,674	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	23,434	23,434	0	0	0	0	0	0
Loans and advances to customers	312,602	283,256	27,855	1,491	(867)	(61)	(163)	(644)
of which: Private clients with mortgage	*119,560*	*103,867*	*15,006*	*686*	*(124)*	*(12)*	*(69)*	*(44)*
of which: Real estate financing	*35,896*	*26,210*	*9,657*	*29*	*(62)*	*(3)*	*(53)*	*(6)*
of which: Large corporate clients	*11,004*	*10,358*	*557*	*88*	*(69)*	*(6)*	*0*	*(63)*
of which: SME clients	*10,322*	*8,218*	*1,518*	*585*	*(287)*	*(8)*	*(23)*	*(256)*
of which: Lombard	*110,601*	*110,584*	*0*	*17*	*(84)*	*(5)*	*0*	*(79)*
Other financial assets measured at amortized cost	18,375	17,877	32	465	(136)	(29)	(1)	(106)
of which: Loans to financial advisors	*3,086*	*2,874*	*32*	*179*	*(115)*	*(28)*	*(1)*	*(87)*
Total financial assets measured at amortized cost[1]	**540,533**	**510,671**	**27,906**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
Financial assets measured at fair value through other comprehensive income	**6,755**	**6,755**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**547,288**	**517,426**	**27,906**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,152	16,331	633	189	(37)	(6)	(2)	(29)
Irrevocable loan commitments	30,852	30,153	662	37	(36)	(24)	(8)	(4)
of which: Large corporate clients	*21,999*	*21,344*	*629*	*26*	*(27)*	*(19)*	*(4)*	*(4)*
Forward starting reverse repurchase and securities borrowing agreements	1,216	1,216	0	0	0	0	0	0
Committed unconditionally revocable credit lines	36,690	34,471	2,157	62	(34)	(19)	(15)	0
of which: Real estate financing	*3,103*	*2,097*	*1,007*	*0*	*(9)*	*(2)*	*(7)*	*0*
of which: SME clients	*4,770*	*4,311*	*406*	*53*	*(7)*	*(5)*	*(2)*	*0*
Irrevocable committed prolongation of existing loans	1,635	1,634	0	1	0	0	0	0
Total off-balance sheet financial instruments and other credit lines	**87,545**	**83,805**	**3,452**	**288**	**(107)**	**(49)**	**(24)**	**(33)**
Total allowances and provisions					**(1,117)**	**(144)**	**(188)**	**(785)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances. 2 Upon adoption of IFRS 9 as of 1 January 2018, an instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is purchased or originated credit-impaired and includes credit impaired exposures for which no loss has occurred, or for which no allowance has been recognized (e.g., because they are expected to be fully recoverable through the collateral held). Refer to Note 19 for more information on the adoption of IFRS 9.

Note 9 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and should be read in conjunction with "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017, which provides more information on valuation principles, valuation governance, fair value hierarchy classification, valuation adjustments, valuation techniques and inputs, sensitivity of fair value measurements and methods applied to calculate fair values for financial instruments not measured at fair value.

Adoption of IFRS 9

Upon adoption of IFRS 9 on 1 January 2018, certain classification and measurement changes were made, primarily resulting in a reclassification of certain financial assets and liabilities from amortized cost to fair value through profit or loss. This included:

- brokerage receivables and payables held in the Investment Bank and Global Wealth Management;
- auction rate securities held in Corporate Center; and
- certain loans held in the Investment Bank.

Certain financial assets and liabilities that have been newly classified at fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018 are designated as Level 3 in the fair value hierarchy. Refer to the tables and text within this Note for more information.

An immaterial amount of financial assets were reclassified from *Financial assets at fair value held for trading* and *Financial assets at fair value not held for trading* to *Loans* and *advances to customers* upon adoption of IFRS 9. An immaterial amount of associated loan commitments, which were recognized as derivative liabilities as of 31 December 2017, were also derecognized from the balance sheet. No material fair value gains and losses would have been recognized in the income statement in the second quarter of 2018 had these instruments not been reclassified. Similarly, no material fair value gains or losses would have been recognized in Other comprehensive income related to debt instruments that were reclassified from *Financial assets available for sale* to *Other financial assets measured at amortized cost* upon adoption of IFRS 9.

→ **Refer to Note 19 for more information on the adoption of IFRS 9**

Note 9 Fair value measurement (continued)

a) Fair value hierarchy

The fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value is summarized in the table below.

Determination of fair values from quoted market prices or valuation techniques[1]

	30.6.18				31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis												
Financial assets at fair value held for trading	96,133	12,862	3,263	112,258	89,282	14,566	1,937	105,785	108,963	15,309	1,972	126,244
of which:												
Government bills / bonds	10,650	877	0	11,527	13,769	1,115	0	14,885	11,935	918	0	12,854
Corporate and municipal bonds	550	7,596	627	8,773	342	8,379	233	8,953	37	8,072	552	8,662
Loans	0	2,096	1,733	3,829	0	3,005	606	3,611	0	3,346	501	3,847
Investment fund units	8,716	1,974	540	11,230	6,951	1,560	704	9,215	7,223	1,839	571	9,632
Asset-backed securities	0	110	157	266	0	169	157	326	0	194	174	368
Equity instruments	76,218	210	188	76,615	68,220	338	237	68,796	79,276	186	105	79,566
Financial assets for unit-linked investment contracts[2]									10,492	755	69	11,316
Derivative financial instruments	878	119,245	1,481	121,605	853	111,136	1,344	113,334	458	116,222	1,549	118,229
of which:												
Interest rate contracts	0	38,555	226	38,782	8	41,153	35	41,196	1	43,913	135	44,049
Credit derivative contracts	0	1,674	452	2,127	0	1,894	458	2,352	0	2,266	550	2,816
Foreign exchange contracts	563	52,941	186	53,690	385	42,026	239	42,650	207	46,749	189	47,145
Equity / index contracts	7	24,320	612	24,939	21	24,374	608	25,002	16	21,541	675	22,232
Commodity contracts	0	1,564	0	1,564	0	1,379	0	1,379	0	1,727	0	1,727
Brokerage receivables[3]	0	18,415	0	18,415	0	20,250	0	20,250				
Financial assets at fair value not held for trading	42,929	45,177	4,769	92,875	44,989	47,557	4,667	97,213	23,032	34,104	1,419	58,556
of which:												
Government bills / bonds	21,853	3,452	0	25,305	24,255	3,646	0	27,901	22,062	3,900	0	25,961
Corporate and municipal bonds	958	21,849	0	22,807	760	23,265	0	24,025	765	20,702	0	21,467
Financial assets for unit-linked investment contracts[2]	19,824	4,735	8	24,568	19,655	4,528	0	24,183				
Loans (including structured loans)	0	7,394	1,904	9,298	0	8,353	1,924	10,277	0	9,385	758	10,143
Structured securities financing transactions[4]	0	7,556	65	7,622	0	7,621	140	7,760	0	118	173	291
Auction-rate securities[3]	0	0	1,832	1,832	0	0	1,713	1,713				
Investment fund units	194	117	118	429	167	96	107	370	205	0	0	205
Equity instruments[5]	101	16	484	602	151	47	369	567				
Other	0	57	357	414	0	1	413	415	0	0	489	489
Financial assets measured at fair value through other comprehensive income on a recurring basis												
Financial assets measured at fair value through other comprehensive income	2,608	4,333	0	6,941	2,560	4,197	0	6,758	3,000	5,157	507	8,665
of which:												
Government bills / bonds	2,563	111	0	2,675	2,515	118	0	2,634	2,733	133	0	2,866
Corporate and municipal bonds	44	390	0	434	45	428	0	473	121	1,060	9	1,189
Asset-backed securities	0	3,832	0	3,832	0	3,651	0	3,651	0	3,880	0	3,880
Other[5]	0	0	0	0	0	0	0	0	146	85	499	730
Non-financial assets measured at fair value on a recurring basis												
Other non-financial assets												
Precious metals and other physical commodities	3,975	0	0	3,975	4,032	0	0	4,032	4,563	0	0	4,563
Non-financial assets measured at fair value on a non-recurring basis												
Other non-financial assets[6]	0	57	9	65	0	58	9	67	0	54	42	95
Total assets measured at fair value	146,523	200,090	9,522	356,135	141,716	197,764	7,957	347,438	140,017	170,848	5,489	316,353

Note 9 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	30.6.18				31.3.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis												
Financial liabilities at fair value held for trading	26,211	5,117	88	31,416	29,657	4,999	91	34,747	26,037	4,309	117	30,463
of which:												
Government bills / bonds	*4,386*	*299*	*0*	*4,685*	*7,574*	*398*	*0*	*7,972*	*5,153*	*256*	*0*	*5,409*
Corporate and municipal bonds	*138*	*4,113*	*34*	*4,285*	*11*	*4,133*	*31*	*4,176*	*50*	*3,453*	*35*	*3,538*
Investment fund units	*785*	*214*	*2*	*1,002*	*291*	*67*	*4*	*362*	*541*	*263*	*16*	*820*
Equity instruments	*20,901*	*488*	*52*	*21,440*	*21,781*	*392*	*56*	*22,229*	*20,293*	*336*	*66*	*20,695*
Derivative financial instruments	875	115,955	2,394	119,224	837	108,437	2,671	111,945	398	112,929	2,807	116,134
of which:												
Interest rate contracts	*6*	*33,738*	*285*	*34,030*	*12*	*36,125*	*212*	*36,349*	*5*	*38,196*	*186*	*38,387*
Credit derivative contracts	*0*	*2,620*	*613*	*3,233*	*0*	*2,777*	*629*	*3,407*	*0*	*3,196*	*601*	*3,797*
Foreign exchange contracts	*585*	*52,922*	*115*	*53,621*	*343*	*41,891*	*118*	*42,353*	*213*	*45,151*	*122*	*45,486*
Equity / index contracts	*2*	*25,122*	*1,369*	*26,493*	*6*	*26,131*	*1,708*	*27,845*	*42*	*24,803*	*1,896*	*26,741*
Commodity contracts	*0*	*1,365*	*1*	*1,366*	*0*	*1,227*	*1*	*1,227*	*0*	*1,561*	*1*	*1,562*
Financial liabilities designated at fair value on a recurring basis												
Brokerage payables designated at fair value[3]	0	37,904	0	37,904	0	34,793	0	34,793				
Debt issued designated at fair value	0	46,683	10,166	56,849	0	40,213	11,846	52,059	0	38,617	10,885	49,502
Other financial liabilities designated at fair value	2	36,252	1,089	37,342	2	33,061	1,375	34,438	0	14,282	1,941	16,223
of which:												
Amounts due under unit-linked investment contracts	*0*	*24,913*	*0*	*24,913*	*0*	*24,348*	*0*	*24,348*	*0*	*11,523*	*0*	*11,523*
Structured securities financing transactions[4]	*0*	*6,533*	*0*	*6,533*	*0*	*5,812*	*1*	*5,812*	*0*	*372*	*4*	*376*
Over-the-counter debt instruments	*2*	*4,801*	*1,085*	*5,888*	*2*	*2,898*	*1,371*	*4,270*	*0*	*2,385*	*1,930*	*4,315*
Non-financial liabilities measured at fair value on a non-recurring basis												
Other non-financial liabilities	0	0	0	0	0	0	0	0	0	1	0	1
Total liabilities measured at fair value	27,087	241,911	13,737	282,736	30,495	221,504	15,984	267,983	26,435	170,139	15,750	212,324

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The fair value of these derivatives was not material for the periods presented. 2 Financial assets for unit-linked investment contracts were reclassified from Financial assets at fair value held for trading to Financial assets at fair value not held for trading as of 1 January 2018. Refer to Note 19 for more information. 3 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 4 The increases in Structured securities financing transactions from 31 December 2017 to 31 March 2018 primarily relate to the reclassification of certain balances from amortized cost to fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 5 Upon adoption of IFRS 9 on 1 January 2018, equity instruments that were formerly classified as available for sale under IAS 39 were reclassified to Financial assets at fair value not held for trading. Refer to Note 19 for more information. 6 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
- Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Product description, valuation and classification in the fair value hierarchy for products newly classified at fair value upon adoption of IFRS 9 on 1 January 2018

Product description, valuation and fair value hierarchy information is provided on the next page for significant products classified at fair value that are not described in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Note 9 Fair value measurement (continued)

Auction rate securities

There are two types of auction rate securities (ARS): auction preferred securities (APS) and auction rate certificates (ARC). ARC are issued by municipalities and are used by investors as tax-exempt alternatives to money market instruments. Interest rates for these instruments are reset through a periodic Dutch auction. APS are similar to ARC with the primary difference being that they are issued from closed-end funds. ARS are valued directly using market prices that reflect recent transactions after applying an adjustment for trade size or quoted dealer prices where available. Suitably deep and liquid pricing information is generally not available for ARS securities. As a result, these securities are classified as Level 3.

Brokerage receivables and payables

Brokerage receivables and payables include callable, on-demand balances, including long cash credits, short cash debits, margin debit balances and short sale proceeds. The business model for these accounts is similar to any current or on-demand account, with account holders using the account to house subscriptions, redemptions and billed amounts. Fair value is determined based on value of the underlying balances. Due to the on-demand nature of its underlying, these receivables and payables are designated as Level 2.

b) Valuation adjustments

Own credit

Own credit is estimated using an own credit adjustment (OCA) curve, which incorporates observable market data, including market-observed secondary prices for UBS senior debt, UBS credit default swap spreads and senior debt curves of peers.

In June 2018, UBS AG issued a 30-year senior unsecured bond as part of its ongoing funding requirements. The market-observable secondary prices for this bond have been incorporated into the OCA curve construction, resulting in a widening of the curve at the long-end. An own credit gain of CHF 248 million has been recognized in Other comprehensive income in the second quarter of 2018, mainly reflecting aforementioned changes to the OCA curve.

Day-1 reserves

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss is generally released into *Other net income from fair value changes on financial instruments* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

In the second quarter of 2018, a day-1 reserve release of CHF 192 million was recognized in the income statement related to long-dated UBS-issued structured notes, which are reported within *Debt issued designated at fair value* on the balance sheet. The day-1 reserve release was driven by increased observability of the OCA curve used to value these positions following the 30-year bond issuance described in the previous section.

Other valuation adjustments

In the second quarter of 2018, a CHF 64 million expense was recognized in the income statement reflecting the model valuation adjustment recorded to capture the spread between OCA and LIBOR volatility impacting the valuation of certain structured note issuances.

Deferred day-1 profit or loss

	For the quarter ended			Year-to-date	
CHF million	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
Balance at the beginning of the period	457	329	365	329	371
Profit / (loss) deferred on new transactions	53	187	65	240	116
(Profit) / loss recognized in the income statement	(248)	(53)	(66)	(301)	(119)
Foreign currency translation	13	(6)	(15)	7	(18)
Balance at the end of the period	274	457	349	274	349

c) Transfers between Level 1 and Level 2

The amounts disclosed below reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets totaling approximately CHF 0.6 billion, which were mainly comprised of financial assets at fair value held for trading, primarily equity instruments and investment fund units, were transferred from Level 2 to Level 1 during the first six months of 2018, generally due to increased levels of trading activity observed within the market. Liabilities transferred from Level 2 to Level 1 during the first six months of 2018 were not material. Assets and liabilities transferred from Level 1 to Level 2 during the first six months of 2018 were also not material.

Note 9 Fair value measurement (continued)

d) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Further, the ranges and weighted averages of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

The significant unobservable inputs disclosed in the table below are generally consistent with those included in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017. A description of the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown, is also provided in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				30.6.18			31.12.17			
CHF billion	30.6.18	31.12.17	30.6.18	31.12.17	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading, Financial assets at fair value not held for trading[3]													
Corporate and municipal bonds	0.6	0.6	0.0	0.0	Relative value to market comparable	Bond price equivalent	0	134	95	0	133	92	points
Traded loans, loans mandatorily at fair value, loan commitments and guarantees	3.9	1.7	0.0	0.0	Relative value to market comparable	Loan price equivalent	0	101	97	50	102	98	points
					Discounted expected cash flows	Credit spread	111	153		23	124		basis points
					Market comparable and securitization model	Discount margin	0	14	2	0	14	2	%
Auction-rate securities[4]	1.8		0.0		Relative value to market comparable	Price	77	99					points
Investment fund units[5]	0.7	0.7	0.0	0.0	Relative value to market comparable	Net asset value							
Equity instruments[5]	0.7	0.5	0.1	0.1	Relative value to market comparable	Price							
Debt issued designated at fair value[6]			10.2	10.9									
Other financial liabilities designated at fair value[6]			1.1	1.9									
Derivative financial instruments													
Interest rate contracts	0.2	0.1	0.3	0.2	Option model	Volatility of interest rates[7]	42	76		28	70		basis points
Credit derivative contracts	0.5	0.5	0.6	0.6	Discounted expected cash flows	Credit spreads	4	394		6	550		basis points
						Bond price equivalent	1	99		2	102		points
Equity / index contracts	0.6	0.7	1.4	1.9	Option model	Equity dividend yields	0	11		0	13		%
						Volatility of equity stocks, equity and other indices	0	75		0	172		%
						Equity-to-FX correlation	(45)	71		(39)	70		%
						Equity-to-equity correlation	(50)	97		(50)	97		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 Comparative period information includes equity instruments that were formerly classified as available for sale under IAS 39 and have been reclassified to Financial assets at fair value not held for trading upon adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 4 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 19 for more information. 5 The range of inputs is not disclosed due to the dispersion of values given the diverse nature of the investments. 6 Valuation techniques, significant unobservable inputs and the respective input ranges for Debt issued designated at fair value and Other financial liabilities designated at fair value, which are primarily comprised of over-the-counter debt instruments, are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table. 7 Effective 31 March 2018, the range of inputs reported for this significant unobservable input is based on normal volatility and the unit has been updated to basis points. Log-normal volatility with the unit as points was reported previously. Prior-period information has been restated to reflect this change in presentation.

Note 9 Fair value measurement (continued)

e) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity of fair value measurements for debt issued designated at fair value and over-the-counter debt instruments designated at fair value is reported with the equivalent derivative or structured financing instrument within the table below.

The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and do not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Further, direct interrelationships between the Level 3 parameters are not a significant element of the valuation uncertainty.

Sensitivity of fair value measurements to changes in unobservable input assumptions

	30.6.18		31.3.18		31.12.17	
CHF million	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	89	(15)	83	(18)	79	(11)
Structured securities financing transactions	20	(15)	65	(65)	34	(34)
Auction-rate securities[1]	92	(92)	87	(87)		
Asset-backed securities	31	(26)	31	(26)	19	(15)
Equity instruments	182	(115)	134	(106)	79	(53)
Interest rate derivative contracts, net	12	(37)	12	(28)	13	(26)
Credit derivative contracts, net	40	(35)	33	(36)	64	(99)
Foreign exchange derivative contracts, net	6	(3)	8	(5)	12	(6)
Equity / index derivative contracts, net	212	(228)	189	(205)	190	(193)
Other	21	(21)	14	(14)	13	(13)
Total	704	(586)	656	(591)	502	(450)

1 Comparative period information as of 31 December 2017 is not disclosed for financial assets that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information.

f) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Upon adoption of IFRS 9 on 1 January 2018, certain financial assets and liabilities were newly classified at fair value through profit or loss and were designated as Level 3 in the fair value hierarchy. These financial instruments are presented in the table on the following pages, including the associated effect upon adoption. This includes auction rate securities held in Corporate Center and certain loans held in the Investment Bank.

In addition to various financial assets and liabilities being newly classified at fair value through profit or loss, certain equity investments and investment fund units measured at fair value through other comprehensive income were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules, which resulted in an opening balance reclassification between reporting lines in the table on the following pages.

In the second quarter of 2018, CHF 2.8 billion of UBS-issued structured notes, which are reported within *Debt issued designated at fair value* on the balance sheet, were transferred from Level 3 to Level 2 in the fair value hierarchy, reflecting increased observability of the OCA curve used to value these notes.

Note 9 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2016	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	Total gains / (losses) included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 June 2017
Financial assets at fair value held for trading	1.7	0.0	*0.0*	0.7	(2.3)	1.6	0.0	0.2	(0.2)	0.0	1.6
of which:											
Corporate and municipal bonds	*0.6*	*0.0*	*0.0*	*0.3*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.8*
Loans	*0.7*	*0.1*	*0.0*	*0.3*	*(2.1)*	*1.6*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
Investment fund units	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other	*0.4*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*
Financial assets at fair value not held for trading	2.1	0.0	*0.0*	0.0	0.0	0.3	(0.7)	0.0	(0.1)	0.0	1.6
of which:											
Loans (including structured loans)	*1.2*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*(0.7)*	*0.0*	*(0.1)*	*0.0*	*0.5*
Auction-rate securities[3]											
Equity instruments											
Other	*0.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*	*(0.1)*	*0.0*	*0.0*	*0.0*	*1.1*
Financial assets measured at fair value through other comprehensive income	0.5	0.0	*0.0*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Derivative financial instruments – assets	2.5	(0.2)	*(0.3)*	0.0	0.0	0.4	(0.5)	0.1	(0.5)	0.0	1.9
of which:											
Credit derivative contracts	*1.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*(0.3)*	*0.0*	*0.8*
Equity / index contracts	*0.7*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*	*(0.2)*	*0.1*	*(0.1)*	*0.0*	*0.8*
Other	*0.5*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*0.0*	*0.3*
Derivative financial instruments – liabilities	4.0	(0.1)	*(0.2)*	0.0	0.0	0.5	(1.0)	0.1	(0.7)	0.0	2.8
of which:											
Credit derivative contracts	*1.5*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.3)*	*0.0*	*1.0*
Equity / index contracts	*1.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.5*	*(0.5)*	*0.1*	*(0.4)*	*0.0*	*1.4*
Other	*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*0.0*	*0.5*
Debt issued designated at fair value	9.7	1.0	*0.8*	0.0	0.0	2.5	(2.0)	0.2	(0.9)	(0.3)	10.2
Other financial liabilities designated at fair value	1.3	0.0	*0.0*	0.0	0.0	1.3	(0.5)	0.0	(0.2)	0.0	1.9

1 Net gains / (losses) included in comprehensive income are comprised of Net interest income, Other net income from fair value changes on financial instruments and Other income. 2 Total Level 3 assets as of 30 June 2018 were CHF 9.5 billion (31 March 2018: CHF 8.0 billion, 31 December 2017: CHF 5.5 billion). Total Level 3 liabilities as of 30 June 2018 were CHF 13.7 billion (31 March 2018: CHF 16.0 billion, 31 December 2017: CHF 15.7 billion). 3 Comparative period information is not disclosed for items that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information.

Note 9 Fair value measurement (continued)

Balance as of 31 December 2017	Reclassifications and remeasurements upon adoption of IFRS 9	Balance as of 1 January 2018	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	*of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 June 2018[2]
2.0	0.4	2.4	(0.3)	*(0.2)*	1.0	(4.8)	4.2	0.0	0.8	(0.1)	0.0	3.3
0.6		*0.6*	*(0.1)*	*(0.1)*	*0.4*	*(0.8)*	*0.0*	*0.0*	*0.6*	*0.0*	*0.0*	*0.6*
0.5	*0.4*	*0.9*	*0.0*	*0.0*	*0.3*	*(3.6)*	*4.2*	*0.0*	*0.0*	*0.0*	*0.0*	*1.7*
0.6		*0.6*	*(0.1)*	*(0.1)*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.5*
0.3		*0.3*	*(0.1)*	*(0.1)*	*0.3*	*(0.3)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.3*
1.4	2.9	4.3	0.1	*0.0*	1.0	(0.9)	0.0	0.0	0.1	(0.1)	0.1	4.8
0.8	*0.6*	*1.3*	*(0.1)*	*(0.1)*	*1.0*	*(0.3)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*1.9*
	1.8	*1.8*	*0.1*	*0.1*	*0.0*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*1.8*
	0.4	*0.4*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.5*
0.7	*0.1*	*0.8*	*0.1*	*0.0*	*0.0*	*(0.3)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
0.5	(0.5)											
1.5		1.5	0.0	*0.1*	0.0	0.0	0.4	(0.6)	0.1	0.0	0.0	1.5
0.5		*0.5*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.5*
0.7		*0.7*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*	*(0.5)*	*0.1*	*(0.1)*	*0.0*	*0.6*
0.3		*0.3*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
2.8	0.0	2.8	(0.3)	*(0.3)*	0.0	0.0	0.7	(0.8)	0.4	(0.5)	0.0	2.4
0.6		*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.6*
1.9		*1.9*	*(0.3)*	*(0.2)*	*0.0*	*0.0*	*0.6*	*(0.7)*	*0.2*	*(0.4)*	*0.0*	*1.4*
0.3	*0.0*	*0.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.4*
10.9		10.9	0.6	*0.5*	0.0	0.0	3.2	(2.4)	1.3	(3.6)	0.1	10.2
1.9		1.9	(0.6)	*(0.6)*	0.0	0.0	0.4	(0.7)	0.0	0.0	0.0	1.1

Note 9 Fair value measurement (continued)

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into and out of Level 3 totaled CHF 1.0 billion and CHF 0.2 billion, respectively. Transfers into Level 3 were primarily comprised of corporate and municipal bonds reflecting decreased observability of the respective bond price equivalent inputs. Transfers out of Level 3 were primarily comprised of equity / index contracts due to increased observability of the respective equity volatility inputs.

Liabilities transferred into and out of Level 3 totaled CHF 1.7 billion and CHF 4.1 billion, respectively. Transfers into Level 3 were primarily comprised of structured medium-term notes and equity-linked issued debt instruments due to decreased observability of the embedded derivative inputs. Transfers out of Level 3 were primarily comprised of interest rate-linked and equity-linked issued debt instruments resulting from changes in the observability of the respective OCA curve and equity volatility inputs used to determine the fair value of these instruments.

g) Financial instruments not measured at fair value

The table below reflects the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	30.6.18		31.3.18		31.12.17	
CHF billion	Carrying value	Fair value	Carrying value	Fair value	Carrying value	Fair value
Assets						
Cash and balances at central banks	102.3	102.3	92.8	92.8	87.8	87.8
Loans and advances to banks	15.5	15.5	13.3	13.3	13.7	13.7
Receivables from securities financing transactions	76.4	76.4	77.0	77.0	89.6	89.6
Cash collateral receivables on derivative instruments	24.9	24.9	24.3	24.3	23.4	23.4
Loans and advances to customers	320.6	321.1	318.4	319.2	320.7	322.1
Other financial assets measured at amortized cost	21.1	20.8	19.2	19.0	36.9	36.8
Liabilities						
Amounts due to banks	10.2	10.2	9.0	9.0	7.5	7.5
Payables from securities financing transactions	10.1	10.1	9.2	9.2	17.0	17.0
Cash collateral payables on derivative instruments	31.8	31.8	29.4	29.4	30.2	30.2
Customer deposits	407.2	407.2	401.5	401.5	412.4	412.4
Funding from UBS Group AG and its subsidiaries	38.8	39.5	35.9	36.9	34.7	36.4
Debt issued measured at amortized cost	98.9	100.7	102.2	104.2	104.8	107.0
Other financial liabilities measured at amortized cost	7.2	7.2	6.4	6.4	37.1	37.1

The fair values included in the table above were calculated for disclosure purposes only. The fair value valuation techniques and assumptions relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another.

Note 10 Derivative instruments

a) Derivative instruments

As of 30.6.18, CHF billion	Derivative financial assets	Notional values related to derivative financial assets[3]	Derivative financial liabilities	Notional values related to derivative financial liabilities[3]	Other notional values[4]
Derivative financial instruments[1,2]					
Interest rate contracts	38.8	1,169	34.0	1,093	11,322
Credit derivative contracts	2.1	81	3.2	83	0
Foreign exchange contracts	53.7	2,736	53.6	2,588	1
Equity / index contracts	24.9	446	26.5	530	101
Commodity contracts	1.6	44	1.4	39	11
Unsettled purchases of non-derivative financial instruments[5]	0.2	26	0.2	18	
Unsettled sales of non-derivative financial instruments[5]	0.3	31	0.3	20	
Total derivative financial instruments, based on IFRS netting[6]	121.6	4,533	119.2	4,371	11,435
Further netting potential not recognized on the balance sheet[7]	(106.6)		(103.1)		
of which: netting of recognized financial liabilities / assets	*(87.4)*		*(87.4)*		
of which: netting with collateral received / pledged	*(19.2)*		*(15.7)*		
Total derivative financial instruments, after consideration of further netting potential	15.1		16.2		
As of 31.3.18, CHF billion					
Derivative financial instruments[1,2]					
Interest rate contracts	41.2	1,231	36.3	1,103	11,173
Credit derivative contracts	2.4	88	3.4	93	0
Foreign exchange contracts	42.7	2,548	42.4	2,445	0
Equity / index contracts	25.0	412	27.8	474	91
Commodity contracts	1.4	39	1.2	39	9
Unsettled purchases of non-derivative financial instruments[5]	0.4	36	0.3	15	
Unsettled sales of non-derivative financial instruments[5]	0.3	28	0.5	28	
Total derivative financial instruments, based on IFRS netting[6]	113.3	4,382	111.9	4,197	11,273
Further netting potential not recognized on the balance sheet[7]	(99.3)		(96.8)		
of which: netting of recognized financial liabilities / assets	*(80.7)*		*(80.7)*		
of which: netting with collateral received / pledged	*(18.6)*		*(16.1)*		
Total derivative financial instruments, after consideration of further netting potential	14.1		15.2		
As of 31.12.17, CHF billion					
Derivative financial instruments[1]					
Interest rate contracts	44.0	1,142	38.4	1,044	10,462
Credit derivative contracts	2.8	92	3.8	98	1
Foreign exchange contracts	47.1	2,389	45.5	2,193	0
Equity / index contracts	22.2	380	26.7	487	83
Commodity contracts	1.7	33	1.6	37	8
Unsettled purchases of non-derivative financial instruments[5]	0.1	12	0.1	11	
Unsettled sales of non-derivative financial instruments[5]	0.1	15	0.1	9	
Total derivative financial instruments, based on IFRS netting[6]	118.2	4,063	116.1	3,878	10,555
Further netting potential not recognized on the balance sheet[7]	(104.2)		(98.5)		
of which: netting of recognized financial liabilities / assets	*(83.5)*		*(83.5)*		
of which: netting with collateral received / pledged	*(20.7)*		*(15.0)*		
Total derivative financial instruments, after consideration of further netting potential	14.0		17.7		

1 Derivative financial liabilities as of 30 June 2018 include CHF 0.0 billion related to derivative loan commitments (31 March 2018: CHF 0.1 billion; 31 December 2017: CHF 0.0 billion). No notional amounts related to these commitments are included in this table but they are disclosed within Note 15 under Loan commitments with a committed amount of CHF 8.1 billion as of 30 June 2018 (31 March 2018: CHF 3.9 billion; 31 December 2017: CHF 5.3 billion). 2 Upon adoption of IFRS 9 on 1 January 2018, certain forward starting repurchase and reverse repurchase agreements have been classified as measured at fair value through profit or loss and are recognized within derivative instruments. The fair value of these derivative instruments was not material as of 30 June 2018 or 31 March 2018. No notional amounts related to these instruments are included in this table, but they are disclosed within Note 15 under Forward starting transactions. 3 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional values of the netted derivative financial instruments are still presented on a gross basis. 4 Other notional values relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for all periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 7 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

Note 10 Derivative instruments

b) Cash collateral on derivative instruments

CHF billion	Receivables 30.6.18	Payables 30.6.18	Receivables 31.3.18	Payables 31.3.18	Receivables 31.12.17	Payables 31.12.17
Cash collateral on derivative instruments, based on IFRS netting[1]	24.9	31.8	24.3	29.4	23.4	30.2
Further netting potential not recognized on the balance sheet[2]	(13.0)	(15.5)	(13.5)	(14.4)	(12.5)	(17.4)
of which: netting of recognized financial liabilities / assets	*(12.5)*	*(14.5)*	*(12.9)*	*(13.3)*	*(11.7)*	*(16.3)*
of which: netting with collateral received / pledged	*(0.5)*	*(1.0)*	*(0.6)*	*(1.2)*	*(0.7)*	*(1.2)*
Cash collateral on derivative instruments, after consideration of further netting potential	11.9	16.4	10.7	15.0	11.0	12.8

1 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS or its counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 2 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of our Annual Report 2017 for more information.

Note 11 Other assets and liabilities

a) Other financial assets measured at amortized cost

CHF million	30.6.18	31.3.18	31.12.17
Prime brokerage receivables[1]			19,080
Debt securities	12,241	10,610	9,166
of which: government bills / bonds	*9,787*	*7,775*	*6,465*
Loans to financial advisors[2]	3,394	3,326	3,118
Fee- and commission-related receivables	1,747	1,694	1,748
Finance lease receivables	1,076	1,070	1,059
Settlement and clearing accounts	448	557	716
Accrued interest income	669	610	578
Other	1,496	1,368	1,470
Total other financial assets measured at amortized cost	21,072	19,235	36,935

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 19 for more information. 2 Related to financial advisors in the US and Canada.

b) Other non-financial assets

CHF million	30.6.18	31.3.18	31.12.17
Precious metals and other physical commodities	3,975	4,032	4,563
Bail deposit[1]	1,320	1,336	1,337
Prepaid expenses	795	834	819
Net defined benefit pension and post-employment assets	61	1	0
VAT and other tax receivables	304	299	292
Properties and other non-current assets held for sale	65	67	95
Other	436	415	251
Total other non-financial assets	6,956	6,984	7,358

1 Refer to item 1 in Note 14b for more information.

Note 11 Other assets and liabilities (continued)

c) Other financial liabilities measured at amortized cost

CHF million	30.6.18	31.3.18	31.12.17
Prime brokerage payables[1]			29,646
Other accrued expenses	1,884	1,960	2,105
Accrued interest expenses	1,084	1,311	1,533
Settlement and clearing accounts	1,239	1,058	1,380
Other	2,981	2,043	2,468
Total other financial liabilities measured at amortized cost	7,187	6,372	37,133

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 19 for more information.

d) Other financial liabilities designated at fair value

CHF million	30.6.18	31.3.18	31.12.17
Amounts due under unit-linked investment contracts	24,913	24,348	11,523
Structured securities financing transactions	6,533	5,812	375
Over-the-counter debt instruments	5,888	4,270	4,317
of which: life-to-date own credit (gain) / loss	*(41)*	*5*	*36*
Loan commitments and guarantees	8	7	9
Total other financial liabilities designated at fair value	37,342	34,438	16,223

e) Other non-financial liabilities

CHF million	30.6.18	31.3.18	31.12.17
Compensation-related liabilities	3,601	3,130	4,909
of which: accrued expenses	*1,578*	*1,007*	*2,372*
of which: other deferred compensation plans	*1,400*	*1,296*	*1,613*
of which: net defined benefit pension and post-employment liabilities	*623*	*827*	*925*
Current and deferred tax liabilities	814	867	844
VAT and other tax payables	391	501	378
Deferred income	239	243	150
Other	136	67	53
Total other non-financial liabilities	5,181	4,808	6,335

Note 12 Debt issued designated at fair value

CHF million	30.6.18	31.3.18	31.12.17
Issued debt instruments			
Equity-linked[1]	39,355	36,107	34,162
Rates-linked	7,505	5,972	5,811
Credit-linked	3,034	2,933	2,937
Fixed-rate	4,293	4,187	3,921
Other	2,661	2,860	2,671
Total debt issued designated at fair value	56,849	52,059	49,502
of which: issued by UBS AG with original maturity greater than one year[2]	*41,624*	*38,255*	*37,266*
of which: life-to-date own credit (gain) / loss	*(188)*	*14*	*159*

1 Includes investment fund unit-linked instruments issued. 2 Issued by the legal entity UBS AG. Based on original contractual maturity without considering any early redemption features. More than 99% of the balance as of 30 June 2018 was unsecured (31 March 2018: more than 99% of the balance was unsecured; 31 December 2017: more than 99% of the balance was unsecured).

Note 13 Debt issued measured at amortized cost

CHF million	30.6.18	31.3.18	31.12.17
Certificates of deposit	12,720	18,779	23,831
Commercial paper	28,878	23,304	23,532
Other short-term debt	3,730	4,078	3,590
Short-term debt[1]	45,328	46,162	50,953
Senior unsecured debt	33,699	34,729	32,268
of which: issued by UBS AG with original maturity greater than one year[2]	*33,697*	*34,725*	*32,256*
Covered bonds	4,029	4,105	4,112
Subordinated debt	7,453	8,791	8,985
of which: low-trigger loss-absorbing tier 2 capital instruments	*6,748*	*8,097*	*8,286*
of which: non-Basel III-compliant tier 2 capital instruments	*705*	*694*	*700*
Debt issued through the Swiss central mortgage institutions	8,357	8,349	8,345
Other long-term debt	63	77	87
of which: issued by UBS AG with original maturity greater than one year[2]	*54*	*58*	*66*
Long-term debt[3]	53,601	56,051	53,796
Total debt issued measured at amortized cost[4]	98,929	102,213	104,749

1 Debt with an original maturity of less than one year. 2 Issued by the legal entity UBS AG. Based on original contractual maturity without considering any early redemption features. 100% of the balance as of 30 June 2018 was unsecured (31 March 2018: 100% of the balance was unsecured; 31 December 2017: 100% of the balance was unsecured). 3 Debt with an original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 4 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

Note 14 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions recognized under both IAS 37 and IFRS 9.

CHF million	30.6.18	31.3.18	31.12.17
Provisions recognized under IAS 37	2,973	2,893	3,051
Provisions for off-balance sheet financial instruments[1]	76	72	33
Provisions for other credit lines[1]	35	35	0
Total provisions	3,084	2,999	3,084

1 Provisions recognized in 2018 relate to exposures in the scope of the expected credit loss requirements of IFRS 9. Refer to Notes 8 and 19 for more information. 2017 provisions for off-balance sheet financial instruments relate to loss provisions recognized under IAS 37.

The following table presents additional information for provisions recognized under IAS 37.

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restructuring	Real estate	Employee benefits[5]	Other	Total
Balance as of 31 December 2017	43	2,444	294	125	55	89	3,051
Balance as of 31 March 2018	41	2,331	257	126	54	83	2,893
Increase in provisions recognized in the income statement	5	154	30	0	1	2	192
Release of provisions recognized in the income statement	(1)	(13)	(25)	0	(2)	0	(40)
Provisions used in conformity with designated purpose	(4)	(94)	(37)	(2)	0	(4)	(141)
Capitalized reinstatement costs	0	0	0	(2)	0	0	(2)
Foreign currency translation / unwind of discount	0	64	6	1	0	0	71
Balance as of 30 June 2018	41	2,442	232[3]	123[4]	53	81	2,973

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Primarily consists of personnel-related restructuring provisions of CHF 44 million as of 30 June 2018 (31 March 2018: CHF 41 million, 31 December 2017: CHF 54 million) and provisions for onerous lease contracts of CHF 183 million as of 30 June 2018 (31 March 2018: CHF 212 million, 31 December 2017: CHF 235 million). 4 Consists of reinstatement costs for leasehold improvements of CHF 84 million as of 30 June 2018 (31 March 2018: CHF 86 million, 31 December 2017: CHF 86 million) and provisions for onerous lease contracts of CHF 39 million as of 30 June 2018 (31 March 2018: CHF 40 million, 31 December 2017: CHF 39 million). 5 Includes provisions for sabbatical and anniversary awards as well as provisions for severance that are not part of restructuring provisions.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 14b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

UBS operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where UBS may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which UBS believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. UBS makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that UBS has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS, but are nevertheless expected to be, based on UBS's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

Note 14 Provisions and contingent liabilities (continued)

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 14a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of the UBS Group second quarter 2018 report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	UBS
Balance as of 31 December 2017	555	79	1	345	240	0	1,224	2,444
Balance as of 31 March 2018	546	79	1	323	216	0	1,166	2,331
Increase in provisions recognized in the income statement	69	0	0	3	1	0	82	154
Release of provisions recognized in the income statement	(12)	0	0	0	0	0	0	(13)
Provisions used in conformity with designated purpose	(47)	(3)	0	(1)	0	0	(42)	(94)
Foreign currency translation / unwind of discount	11	0	0	9	0	0	45	64
Balance as of 30 June 2018	567	75	0	333	216	0	1,251	2,442

1 Provisions, if any, for the matters described in this Note are recorded in Global Wealth Management (item 3 and item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this Note in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio.

Note 14 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that, in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders.

Since 2013, UBS (France) S.A., UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory, regarding the laundering of proceeds of tax fraud, and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). In March 2017, the investigating judges issued the trial order ("*ordonnance de renvoi*") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and that transfers the case to court. The trial is scheduled to start in October 2018. In October 2017, the Investigation Chamber of the Court of Appeals decided that UBS (France) S.A. shall not be constituted as a civil party in the guilty plea proceedings against the former UBS (France) S.A. Head of Front Office. UBS (France) S.A. has appealed this decision to the French Supreme Court ("*Cour de cassation*"). The appeal is pending, although the criminal court subsequently found the individual's guilty plea to be invalid.

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud, of banking and financial solicitation by unauthorized persons, and of serious tax fraud.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 30 June 2018 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Note 14 Provisions and contingent liabilities (continued)

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action (Trustee Suit) in the US District Court for the Southern District of New York (SDNY) seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations issued and underwritten by UBS with an original principal balance of approximately USD 2 billion. Approximately 9,000 loans were at issue in a bench trial in the SDNY in 2016, following which the court issued an order ruling on numerous legal and factual issues and applying those rulings to 20 exemplar loans. The court further ordered that a lead master be appointed to apply the court's rulings to the remaining loans. In 2017, UBS and certain holders of the RMBS in the Trustee Suit entered into an agreement under which UBS would have paid an aggregate of USD 543 million into the relevant RMBS trusts, plus certain attorneys' fees. The trustee for the RMBS trusts declined to become a party to the settlement and the agreement with the RMBS holders therefore lapsed. In July 2018, UBS and the trustee entered into an agreement under which UBS will pay USD 850 million to resolve this matter. A significant portion of this amount will be borne by other parties that indemnified UBS. The settlement remains subject to approval by the court and proceedings to determine how the settlement funds will be distributed to RMBS holders. After giving effect to this settlement, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS has also responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the US Securities and Exchange Commission (SEC) relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

Our balance sheet at 30 June 2018 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed.

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.6 billion, of which claims with aggregate claimed damages of USD 1.6 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims are filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans. A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied.

Defendants' requests for permission to appeal that ruling were denied by the Puerto Rico Court of Appeals and the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In 2016, defendants' motion to dismiss was granted in part and denied in part. In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA in December 2013 based on plaintiffs' allegation that the loans are not valid. The trial court denied defendant's motion for summary judgment based on a forum selection clause in the loan agreements. The Puerto Rico Supreme Court reversed that decision and remanded the case back to the trial court for reconsideration. On reconsideration the trial court granted defendant's motion and dismissed the action.

In 2014, UBS reached a settlement with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI) in connection with OCFI's examination of UBS's operations from January 2006 through September 2013, pursuant to which UBS is paying up to an aggregate of USD 7.7 million in investor education contributions and restitution.

In 2015, the SEC and the Financial Industry Regulatory Authority (FINRA) announced settlements with UBS PR of their separate investigations stemming from the 2013 market events. Without admitting or denying the findings in either matter, UBS PR agreed in the SEC settlement to pay USD 15 million and USD 18.5 million in the FINRA matter. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Note 14 Provisions and contingent liabilities (continued)

Beginning in 2015, and continuing through 2017, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. The funds hold significant amounts of those bonds and the defaults on interest payments have had, and are expected to continue to have, an adverse effect on dividends from the funds. Executive orders of the Governor of Puerto Rico that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of creditors' rights. In 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 30 June 2018 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Following an initial media report in 2013 of widespread irregularities in the foreign exchange markets, UBS immediately commenced an internal review of its foreign exchange business, which includes our precious metals and related structured products businesses. Numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority (FCA) and the US Commodity Futures Trading Commission (CFTC) in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System (Federal Reserve Board) and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In addition, the DOJ's Criminal Division (Criminal Division) terminated the 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation measures. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. They allege collusion by the defendants and assert claims under the antitrust laws and for unjust enrichment. In 2015, additional putative class actions were filed in federal court in New York against UBS and other banks on behalf of a putative class of persons who entered into or held any foreign exchange futures contracts and options on foreign exchange futures contracts since 2003. The complaints assert claims under the Commodity Exchange Act (CEA) and the US antitrust laws. In 2015, a consolidated complaint was filed on behalf of both putative classes of persons covered by the US federal court class actions described above. UBS has entered into a settlement agreement that would resolve all of these US federal court class actions. The settlement agreement, which has been preliminarily approved by the court and is subject to final court approval, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign currency exchange transactional services, exercised discretionary authority or discretionary control over management of such ERISA plan, or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. The parties filed a stipulation to dismiss the case with prejudice. The plaintiffs have appealed the dismissal. In July, the Second Circuit affirmed the dismissal.

Note 14 Provisions and contingent liabilities (continued)

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and their co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint.

In 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017. In March 2018, the court dismissed the consolidated complaint. Plaintiffs have filed a motion seeking leave to file an amended complaint.

Putative class actions are also pending against UBS and other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits assert claims under the antitrust laws and the CEA, and other claims. In 2016, the court in New York granted UBS's motions to dismiss the putative class actions relating to gold and silver. Plaintiffs in those cases sought to amend their complaints to add new allegations about UBS, which the court granted. The plaintiffs filed amended complaints in 2017, and motions to dismiss the amended complaints are pending. In March 2017, the court in New York granted UBS's motion to dismiss the platinum and palladium action. In May 2017, plaintiffs in the platinum and palladium action filed an amended complaint that did not allege claims against UBS.

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office (SFO), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the FSA, the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission (WEKO) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation measures with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of other actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

USD LIBOR class and individual actions in the US: In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims. Although, the Second Circuit vacated the district court's judgment dismissing antitrust claims, the district court again dismissed antitrust claims against UBS in 2016. Certain plaintiffs have appealed that decision to the Second Circuit. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims. UBS entered into an agreement in 2016 with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs have sought permission to appeal that ruling to the Second Circuit. In July, the Second Circuit denied the petition to appeal of the class of USD lenders.

Note 14 Provisions and contingent liabilities (continued)

Other benchmark class actions and ISDAFIX class action in the US: In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including federal antitrust claims for lack of standing. In 2015, this court dismissed the plaintiff's federal racketeering claims on the same basis and affirmed its previous dismissal of the plaintiff's antitrust claims against UBS. In 2017, this court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR / SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR / SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2017, UBS agreed to pay USD 14 million to resolve putative class actions filed in federal court in New York and New Jersey against UBS and other financial institutions on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX. The final settlement was approved in June 2018.

Government bonds: Putative class actions have been filed since 2015 in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. A consolidated complaint was filed in 2017 in the SDNY alleging that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction and in the secondary market and asserting claims under the antitrust laws and for unjust enrichment. Defendants' motions to dismiss the consolidated complaint are pending.

Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 30 June 2018 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 30 June 2018 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong-listed initial public offerings for 18 months. UBS has appealed the decision.

Note 15 Guarantees, commitments and forward starting transactions

The table below presents the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

	30.6.18			31.3.18			31.12.17		
CHF million	Gross	Sub-participations	Net	Gross	Sub-participations	Net	Gross	Sub-participations	Net
Total guarantees	20,175	(2,976)	17,199	19,009	(2,923)	16,086	18,854	(2,867)	15,987
Loan commitments	39,567	(662)	38,905	34,534	(866)	33,667	39,069	(1,074)	37,995
Forward starting transactions[1]									
Reverse repurchase agreements	13,521			16,905			12,683		
Securities borrowing agreements	38			35			23		
Repurchase agreements	10,868			13,763			8,187		

1 Cash to be paid in the future by either UBS or the counterparty.

Note 16 Changes in organization

Following the announcement by the China Securities Regulatory Commission that foreign investors will be permitted to increase their ownership percentages in China affiliates to a cap of 51%, and may be allowed to increase their ownership up to 100% in 2021, UBS AG submitted in May 2018 a preliminary application to increase the shareholding in its China affiliate, UBS Securities Co. Limited (UBSS), from 24.99% to 51%. The transaction is subject to completion of a share purchase from existing shareholders and regulatory approval. If UBS AG acquires majority ownership, UBS AG would consolidate its investment in UBSS under IFRS and would be required to remeasure its current 24.99% holding in UBSS at fair value, likely resulting in a loss.

Note 17 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS AG's foreign operations into Swiss francs.

	Spot rate				Average rate[1]				
	As of				For the quarter ended			Year-to-date	
	30.6.18	31.3.18	31.12.17	30.6.17	30.6.18	31.3.18	30.6.17	30.6.18	30.6.17
1 USD	0.99	0.95	0.97	0.96	0.99	0.94	0.97	0.97	0.99
1 EUR	1.16	1.17	1.17	1.10	1.17	1.16	1.09	1.16	1.08
1 GBP	1.31	1.34	1.32	1.25	1.33	1.32	1.26	1.32	1.26
100 JPY	0.89	0.90	0.86	0.85	0.90	0.88	0.87	0.89	0.88

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a quarter represent an average of three month-end rates, weighted according to the income and expense volumes of all foreign operations of UBS AG with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for UBS AG.

Note 18 Supplemental guarantor information required under SEC regulations

Joint liability of UBS Switzerland AG

In 2015, the Personal & Corporate Banking and Wealth Management businesses booked in Switzerland were transferred from UBS AG to UBS Switzerland AG through an asset transfer in accordance with the Swiss Merger Act. Under the terms of the asset transfer agreement, UBS Switzerland AG assumed joint liability for contractual obligations of UBS AG existing on the asset transfer date, including the full and unconditional guarantee of certain registered debt securities issued by UBS AG. To reflect this joint liability, UBS Switzerland AG is presented in a separate column as a subsidiary co-guarantor.

The joint liability of UBS Switzerland AG for contractual obligations of UBS AG decreased by CHF 36 billion in the first half of 2018 to CHF 33 billion as of 30 June 2018, mainly as the joint liability related to demand obligations booked in foreign branches expired three years after the effective date of the asset transfer.

Guarantee of PaineWebber securities

Prior to its acquisition by UBS in 2000, Paine Webber Group Inc. (PaineWebber) was an SEC registrant. Upon acquisition, PaineWebber was merged into UBS Americas Inc., a wholly owned subsidiary of UBS AG. Following the acquisition, UBS AG entered into a full and unconditional guarantee of the senior notes (Debt Securities) issued by PaineWebber. Under the guarantee, if UBS Americas Inc. failed to make any timely payment under the Debt Securities agreements, the holders of the Debt Securities or the Debt Securities trustee may have demanded payment from UBS AG without first proceeding against UBS Americas Inc. These Debt Securities matured in May 2018 and the guarantee ceased to exist. UBS Americas Inc. is therefore no longer presented in a separate column for periods ended after 31 December 2017.

Adoption of IFRS 9

Effective 1 January 2018, UBS AG adopted IFRS 9, Financial Instruments. The adoption of IFRS 9 has resulted in changes to the classification and measurement of certain financial instruments, which have been applied prospectively in the balance sheet from 1 January 2018.

Although the effect of IFRS 9 classification and measurement changes has been applied prospectively, UBS AG has made a series of changes to the presentation of its IFRS balance sheet to facilitate comparability and prior-period information is presented for periods ending before 1 January 2018 in this revised structure.

→ **Refer to Note 19 for more information on the adoption of IFRS 9 and the effect on comparability**

Transfer of shared services functions to Group service companies

Amounts presented in the following pages for UBS AG standalone for the first six months ended 30 June 2017 include the results of shared services functions in Switzerland, the UK and the US, which were substantially transferred to Group service companies during 2017. Following the transfer, these Group service companies charge other legal entities within the Group for services provided, including a markup on costs incurred.

→ **Refer to the 2017 standalone financial statements of UBS AG, available under "Holding company and significant regulated subsidiaries and sub-groups" at *www.ubs.com/investors* for more information on the transfer of shared services functions in 2017**

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million For the six months ended 30 June 2018	UBS AG (standalone)	UBS Switzerland AG (standalone)	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income					
Interest income	4,915	2,048	2,422	(1,351)	8,034
Interest expense	(4,828)	(410)	(1,476)	1,374	(5,340)
Net interest income	86	1,638	946	24	2,694
Other net income from fair value changes on financial instruments	2,641	466	531	10	3,648
Credit loss (expense) / recovery	(12)	(18)	5	(28)	(53)
Fee and commission income	1,426	2,194	6,454	(376)	9,699
Fee and commission expense	(456)	(196)	(533)	360	(825)
Net fee and commission income	970	1,999	5,921	(15)	8,874
Other income	3,839[1]	86	1,175	(4,799)	301
Total operating income	7,524	4,171	8,577	(4,809)	15,464
Operating expenses					
Personnel expenses	1,869	928	4,283	0	7,080
General and administrative expenses	2,060	1,664	2,587	(1,768)	4,544
Depreciation and impairment of property, equipment and software	319	9	146	0	473
Amortization and impairment of intangible assets	1	0	30	0	32
Total operating expenses	4,249	2,601	7,046	(1,768)	12,128
Operating profit / (loss) before tax	3,275	1,570	1,531	(3,041)	3,336
Tax expense / (benefit)	282	330	170	(3)	780
Net profit / (loss)	2,993	1,240	1,361	(3,038)	2,556
Net profit / (loss) attributable to non-controlling interests	0	0	3	0	3
Net profit / (loss) attributable to shareholders	2,993	1,240	1,358	(3,038)	2,553

1 UBS AG received dividends from UBS Switzerland AG of CHF 2,351 million in the second quarter of 2018. 2 Following the maturity of the remaining outstanding debt securities issued by PaineWebber in May 2018, we no longer present UBS Americas Inc. separately from other subsidiaries. The column "Other subsidiaries" includes consolidated information for the significant sub-groups UBS Americas Holding LLC, UBS Europe SE, UBS Asset Management AG and UBS Limited, as well as standalone information for other subsidiaries.

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the six months ended 30 June 2018	UBS AG (standalone)	UBS Switzerland AG (standalone)	Other subsidiaries[1]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders					
Net profit / (loss)	2,993	1,240	1,358	(3,038)	2,553
Other comprehensive income					
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation, net of tax	38	0	331	(5)	364
Financial assets measured at fair value through other comprehensive income, net of tax	0	0	(69)	0	(69)
Cash flow hedges, net of tax	(568)	(28)	(17)	(3)	(615)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(530)	(28)	245	(8)	(320)
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans, net of tax	285	(95)	49	(1)	239
Own credit on financial liabilities designated at fair value, net of tax	417				417
Total other comprehensive income that will not be reclassified to the income statement, net of tax	703	(95)	49	(1)	656
Total other comprehensive income	173	(123)	294	(8)	336
Total comprehensive income attributable to shareholders	3,166	1,117	1,652	(3,046)	2,889
Total comprehensive income attributable to non-controlling interests			1		1
Total comprehensive income	3,166	1,117	1,653	(3,046)	2,889

1 Following the maturity of the remaining outstanding debt securities issued by PaineWebber in May 2018, we no longer present UBS Americas Inc. separately from other subsidiaries. The column "Other subsidiaries" includes consolidated information for the significant sub-groups UBS Americas Holding LLC, UBS Europe SE, UBS Asset Management AG and UBS Limited, as well as standalone information for other subsidiaries.

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated balance sheet

CHF million As of 30 June 2018	UBS AG (standalone)	UBS Switzerland AG (standalone)	Other subsidiaries[1]	Elimination entries	UBS AG (consolidated)
Assets					
Cash and balances at central banks	46,774	42,990	12,498	0	102,262
Loans and advances to banks	33,332	7,562	21,173	(46,549)	15,518
Receivables from securities financing transactions	53,612	30,111	49,378	(56,651)	76,450
Cash collateral receivables on derivative instruments	23,006	636	13,433	(12,137)	24,937
Loans and advances to customers	106,877	184,655	59,417	(30,380)	320,569
Other financial assets measured at amortized cost	4,927	9,799	9,696	(3,350)	21,072
Total financial assets measured at amortized cost	268,528	275,753	165,595	(149,068)	560,808
Financial assets at fair value held for trading	98,761	33	19,454	(5,990)	112,258
of which: assets pledged as collateral that may be sold or repledged by counterparties	*56,093*	*0*	*8,984*	*(28,497)*	*36,580*
Derivative financial instruments	116,798	4,431	34,918	(34,542)	121,605
Brokerage receivables	10,508	0	7,909	(1)	18,415
Financial assets at fair value not held for trading	46,134	9,702	45,509	(8,470)	92,875
Total financial assets measured at fair value through profit or loss	272,200	14,166	107,790	(49,003)	345,153
Financial assets measured at fair value through other comprehensive income	171	0	6,770	0	6,941
Investments in subsidiaries and associates	50,081	20	36	(49,111)	1,026
Property, equipment and software	6,491	149	1,576	0	8,216
Goodwill and intangible assets	293	0	6,157	(58)	6,391
Deferred tax assets	1,177	316	8,258	52	9,804
Other non-financial assets	4,584	1,625	755	(8)	6,956
Total assets	603,526	292,029	296,938	(247,196)	945,296
Liabilities					
Amounts due to banks	32,508	20,389	49,887	(92,543)	10,242
Payables from securities financing transactions	39,644	2,794	24,353	(56,661)	10,130
Cash collateral payables on derivative instruments	28,423	22	15,531	(12,132)	31,843
Customer deposits	78,703	241,516	74,022	12,930	407,171
Funding from UBS Group AG and its subsidiaries	38,771	0	0	0	38,771
Debt issued measured at amortized cost	90,548	8,367	973	(958)	98,929
Other financial liabilities measured at amortized cost	4,552	1,582	4,258	(3,204)	7,187
Total financial liabilities measured at amortized cost	313,150	274,670	169,023	(152,569)	604,274
Financial liabilities at fair value held for trading	24,751	475	12,079	(5,889)	31,416
Derivative financial instruments	114,721	4,010	35,078	(34,584)	119,224
Brokerage payables designated at fair value	26,985	0	10,926	(7)	37,904
Debt issued designated at fair value	55,188	0	1,680	(19)	56,849
Other financial liabilities designated at fair value	13,110	0	28,920	(4,687)	37,342
Total financial liabilities measured at fair value through profit or loss	234,754	4,484	88,683	(45,186)	282,736
Provisions	983	134	1,884	83	3,084
Other non-financial liabilities	1,390	796	3,015	(20)	5,181
Total liabilities	550,277	280,084	262,605	(197,691)	895,275
Equity attributable to shareholders	53,249	11,945	34,272	(49,505)	49,961
Equity attributable to non-controlling interests			60		60
Total equity	53,249	11,945	34,333	(49,505)	50,021
Total liabilities and equity	603,526	292,029	296,938	(247,196)	945,296

1 Following the maturity of the remaining outstanding debt securities issued by PaineWebber in May 2018, we no longer present UBS Americas Inc. separately from other subsidiaries. The column "Other subsidiaries" includes consolidated information for the significant sub-groups UBS Americas Holding LLC, UBS Europe SE, UBS Asset Management AG and UBS Limited, as well as standalone information for other subsidiaries.

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the six months ended 30 June 2018	UBS AG[1]	UBS Switzerland AG[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	6,707	6,860	2,425	15,990
Cash flow from / (used in) investing activities				
Purchase of subsidiaries, associates and intangible assets	0	(4)	0	(3)
Disposal of subsidiaries, associates and intangible assets[2]	53	0	5	58
Purchase of property, equipment and software	(424)	(68)	(218)	(710)
Disposal of property, equipment and software	1	3	27	30
Purchase of financial assets measured at fair value through other comprehensive income	(132)	0	(699)	(831)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	142	0	526	668
Net (purchase) / redemption of debt securities measured at amortized cost	(944)	504	(1,952)	(2,391)
Net cash flow from / (used in) investing activities	(1,304)	435	(2,310)	(3,178)
Cash flow from / (used in) financing activities				
Net short-term debt issued / (repaid)	(5,907)	(2)	109	(5,801)
Distributions paid on UBS shares	(3,065)	0	0	(3,065)
Issuance of long-term debt, including financial liabilities designated at fair value[3]	38,501	400	79	38,980
Repayment of long-term debt, including financial liabilities designated at fair value[3]	(25,291)	(397)	(378)	(26,066)
Dividends paid and repayments of preferred notes	0	0	0	0
Net changes in non-controlling interests	0	0	16	16
Net activity in investments in subsidiaries	2,540	(2,331)	(209)	0
Net cash flow from / (used in) financing activities	6,778	(2,331)	(383)	4,065
Total cash flow				
Cash and cash equivalents at the beginning of the period	40,522	39,928	21,703	102,154
Net cash flow from / (used in) operating, investing and financing activities	12,181	4,964	(269)	16,877
Effects of exchange rate differences on cash and cash equivalents	291	(13)	(142)	136
Cash and cash equivalents at the end of the period[4]	52,994	44,879	21,294	119,167
of which: cash and balances with central banks	*46,657*	*42,990*	*12,498*	*102,145*
of which: due from banks	*3,894*	*1,703*	*8,632*	*14,229*
of which: money market paper[5]	*2,443*	*186*	*164*	*2,794*

1 Cash flows generally represent a third-party view from a UBS AG consolidated perspective. 2 Includes dividends received from associates. 3 Includes funding from UBS Group AG and its subsidiaries. 4 Comprises balances with an original maturity of three months or less. CHF 4,042 million of cash and cash equivalents were restricted. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading, and Other financial assets measured at amortized cost.

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated income statement

CHF million For the six months ended 30 June 2017	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Operating income						
Interest income	4,232	2,001	1,272	749	(1,271)	6,982
Interest expense	(3,594)	(314)	(569)	(625)	1,211	(3,890)
Net interest income	638	1,687	703	124	(60)	3,092
Other net income from fair value changes on financial instruments	2,163	468	286	184	(200)	2,900
Credit loss (expense) / recovery	(23)	(21)	(2)	0	0	(46)
Fee and commission income	1,300	2,166	4,352	2,150	(415)	9,552
Fee and commission expense	(443)	(187)	(215)	(435)	395	(885)
Net fee and commission income	856	1,979	4,137	1,715	(20)	8,667
Other income	2,695[3]	116	207	1,513	(4,186)	345
Total operating income	6,329	4,228	5,331	3,536	(4,466)	14,958
Operating expenses						
Personnel expenses	2,418	1,046	3,172	1,018	0	7,654
General and administrative expenses	2,229	1,591	1,451	1,392	(2,952)	3,712
Depreciation and impairment of property, equipment and software	348	5	83	37	0	473
Amortization and impairment of intangible assets	6	0	26	5	0	37
Total operating expenses	5,001	2,643	4,731	2,453	(2,952)	11,876
Operating profit / (loss) before tax	1,327	1,586	600	1,083	(1,514)	3,082
Tax expense / (benefit)	45	319	9	309	0	681
Net profit / (loss)	1,283	1,267	591	774	(1,514)	2,401
Net profit / (loss) attributable to preferred noteholders	46	0	0	0	0	46
Net profit / (loss) attributable to non-controlling interests	0	0	0	1	0	1
Net profit / (loss) attributable to shareholders	1,237	1,267	591	773	(1,514)	2,354

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the "UBS AG standalone financial information" section of this report for UBS AG standalone financial information prepared in accordance with Swiss GAAP. Refer to "Holding company and significant regulated subsidiaries and sub-groups" at www.ubs.com/investors for UBS Switzerland AG standalone interim financial statements prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS. 3 UBS AG received dividends from UBS Switzerland AG of CHF 191 million in the second quarter of 2017.

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of comprehensive income

CHF million For the six months ended 30 June 2017	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Comprehensive income attributable to shareholders						
Net profit / (loss)	1,237	1,267	591	773	(1,514)	2,354
Other comprehensive income						
Other comprehensive income that may be reclassified to the income statement						
Foreign currency translation, net of tax	(198)	0	(1,011)	(339)	212	(1,337)
Financial assets measured at fair value through other comprehensive income, net of tax	(21)	(1)	21	(2)	(68)	(72)
Cash flow hedges, net of tax	(134)	(99)	0	0	1	(233)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(354)	(100)	(990)	(342)	144	(1,641)
Other comprehensive income that will not be reclassified to the income statement						
Defined benefit plans, net of tax	120	(16)	31	13	18	166
Own credit on financial liabilities designated at fair value, net of tax	(254)					(254)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(133)	(16)	31	13	18	(87)
Total other comprehensive income	(487)	(115)	(960)	(329)	162	(1,729)
Total comprehensive income attributable to shareholders	749	1,151	(369)	444	(1,352)	625
Total comprehensive income attributable to preferred noteholders	60					60
Total comprehensive income attributable to non-controlling interests				1		1
Total comprehensive income	810	1,151	(369)	445	(1,352)	686

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the "UBS AG standalone financial information" section of this report for UBS AG standalone financial information prepared in accordance with Swiss GAAP. Refer to "Holding company and significant regulated subsidiaries and sub-groups" at www.ubs.com/investors for UBS Switzerland AG standalone interim financial statements prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated balance sheet

CHF million As of 31 Dec 2017	UBS AG (standalone)[1]	UBS Switzerland AG (standalone)[1]	UBS Americas Inc.[2]	Other subsidiaries[2]	Elimination entries	UBS AG (consolidated)
Assets						
Cash and balances at central banks	36,552	38,467	3,100	9,656	0	87,775
Loans and advances to banks	30,467	3,977	4,712	66,649	(92,112)	13,693
Receivables from securities financing transactions	61,200	34,830	31,451	25,556	(63,404)	89,633
Cash collateral receivables on derivative instruments	22,346	696	2,129	10,828	(12,565)	23,434
Loans and advances to customers	106,443	183,298	51,743	24,078	(44,903)	320,659
Other financial assets measured at amortized cost	17,020	10,342	10,844	2,021	(3,291)	36,935
Total financial assets measured at amortized cost	274,028	271,610	103,979	138,787	(216,275)	572,129
Financial assets at fair value held for trading	101,182	91	6,720	25,974	(7,723)	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties	*58,524*	*0*	*2,303*	*7,411*	*(32,877)*	*35,363*
Derivative financial instruments	114,044	4,123	12,948	21,118	(34,004)	118,229
Financial assets at fair value not held for trading	34,100	12,768	3,363	10,805	(2,481)	58,556
Total financial assets measured at fair value through profit or loss	249,327	16,982	23,031	57,897	(44,209)	303,028
Financial assets measured at fair value through other comprehensive income	3,604	790	6,483	933	(3,145)	8,665
Investments in subsidiaries and associates	49,632	15	1	27	(48,657)	1,018
Property, equipment and software	6,384	92	979	529	0	7,985
Goodwill and intangible assets	294	0	4,880	1,281	(58)	6,398
Deferred tax assets	1,252	421	5,999	2,110	0	9,783
Other non-financial assets	5,049	1,714	256	437	(98)	7,358
Total assets	589,570	291,624	145,611	202,001	(312,442)	916,363
Liabilities						
Amounts due to banks	24,361	20,728	3,160	51,915	(92,631)	7,533
Payables from securities financing transactions	48,161	1,644	14,924	15,719	(63,404)	17,044
Cash collateral payables on derivative instruments	27,768	60	2,215	12,768	(12,565)	30,247
Customer deposits	83,935	241,313	79,684	54,438	(46,977)	412,392
Funding from UBS Group AG and its subsidiaries	34,749	0	0	0	0	34,749
Debt issued measured at amortized cost	96,572	8,367	8	514	(711)	104,749
Other financial liabilities measured at amortized cost	28,443	1,416	7,788	2,788	(3,303)	37,133
Total financial liabilities measured at amortized cost	343,989	273,530	107,778	138,142	(219,591)	643,847
Financial liabilities at fair value held for trading	24,358	250	3,877	9,122	(7,145)	30,463
Derivative financial instruments	111,448	3,675	12,932	22,082	(34,004)	116,134
Debt issued designated at fair value	47,514	0	104	2,165	(281)	49,502
Other financial liabilities designated at fair value	6,018	0	0	12,687	(2,481)	16,223
Total financial liabilities measured at fair value through profit or loss	189,338	3,926	16,913	46,056	(43,910)	212,323
Provisions	1,057	145	1,682	200	0	3,084
Other non-financial liabilities	1,988	830	2,329	1,313	(125)	6,335
Total liabilities	536,372	278,430	128,702	185,711	(263,626)	865,588
Equity attributable to shareholders	53,198	13,194	16,909	16,233	(48,816)	50,718
Equity attributable to non-controlling interests				57		57
Total equity	53,198	13,194	16,909	16,290	(48,816)	50,775
Total liabilities and equity	589,570	291,624	145,611	202,001	(312,442)	916,363

1 Amounts presented for UBS AG standalone and UBS Switzerland AG standalone represent IFRS standalone information. Refer to the "UBS AG standalone financial information" section of this report for UBS AG standalone financial information prepared in accordance with Swiss GAAP. Refer to "Holding company and significant regulated subsidiaries and sub-groups" at www.ubs.com/investors for UBS Switzerland AG standalone interim financial statements prepared in accordance with Swiss GAAP. 2 Amounts presented in these columns serve as a basis for preparing UBS AG consolidated financial statements in accordance with IFRS.

Note 18 Supplemental guarantor information required under SEC regulations (continued)

Supplemental guarantor consolidated statement of cash flows

CHF million For the six months ended 30 June 2017	UBS AG[1]	UBS Switzerland AG[1]	UBS Americas Inc.[1]	Other subsidiaries[1]	UBS AG (consolidated)
Net cash flow from / (used in) operating activities	(19,178)	(1,291)	(4,854)	1,854	(23,469)
Cash flow from / (used in) investing activities					
Purchase of subsidiaries, associates and intangible assets	0	0	(5)	0	(5)
Disposal of subsidiaries, associates and intangible assets[2]	95	0	0	0	95
Purchase of property, equipment and software	(466)	(25)	(155)	(41)	(688)
Disposal of property, equipment and software	0	0	22	0	23
Purchase of financial assets measured at fair value through other comprehensive income	(180)	0	(1,807)	(2,743)	(4,729)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	2,607	753	1,164	1,625	6,150
Net (purchase) / redemption of financial assets held to maturity	(288)	456	0	0	168
Net cash flow from / (used in) investing activities	1,768	1,184	(780)	(1,158)	1,014
Cash flow from / (used in) financing activities					
Net short-term debt issued / (repaid)	18,832	9	0	(103)	18,738
Distributions paid on UBS shares	(2,250)	0	0	0	(2,250)
Issuance of long-term debt, including financial liabilities designated at fair value[3]	24,112	573	0	145	24,829
Repayment of long-term debt, including financial liabilities designated at fair value[3]	(22,685)	(506)	(76)	(140)	(23,407)
Dividends paid and repayments of preferred notes	(46)	0	0	0	(46)
Net changes in non-controlling interests	0	0	0	(5)	(5)
Net activity in investments in subsidiaries	663	(191)	296	(768)	0
Net cash flow from / (used in) financing activities	18,626	(115)	221	(871)	17,861
Total cash flow					
Cash and cash equivalents at the beginning of the period	44,269	46,629	11,892	18,317	121,107
Net cash flow from / (used in) operating, investing and financing activities	1,217	(223)	(5,414)	(174)	(4,594)
Effects of exchange rate differences on cash and cash equivalents	(1,076)	(14)	(513)	100	(1,502)
Cash and cash equivalents at the end of the period[4]	44,410	46,392	5,965	18,243	115,010
of which: cash and balances with central banks	*40,122*	*44,036*	*2,801*	*13,046*	*100,006*
of which: due from banks	*2,613*	*2,350*	*3,101*	*4,583*	*12,646*
of which: money market paper[5]	*1,674*	*6*	*63*	*614*	*2,358*

1 Cash flows generally represent a third-party view from a UBS AG consolidated perspective. 2 Includes dividends received from associates. 3 Includes funding from UBS Group AG and its subsidiaries. 4 Comprises balances with an original maturity of three months or less. CHF 2,576 million of cash and cash equivalents were restricted. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading, and Other financial assets measured at amortized cost.

Note 19 Transition to IFRS 9 as of 1 January 2018

19.1 Update to significant accounting policies disclosed in Note 1a) to the Financial Statements 2017 related to IFRS 9

The adoption of IFRS 9, *Financial Instruments* (IFRS 9) resulted in changes to UBS AG's accounting policies applicable from 1 January 2018. Accounting polices set out below replace item 3) b, c, g, h, i, l, o and p in Note 1a) in the UBS AG consolidated annual Financial Statements for the year ended 31 December 2017.

As permitted by the transition provisions of IFRS 9 UBS AG elected not to restate comparative period information, and the accounting policies as set out in Note 1 in the UBS AG consolidated annual Financial Statements for the period ended 31 December 2017 apply to comparative periods.

Update to Note 1a) 3) Financial instruments

b. Classification, measurement and presentation

On initial recognition, financial assets are classified as measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL).

A debt instrument is measured at amortized cost if it meets the following conditions:

- it is held within a business model that has an objective to hold financial assets to collect contractual cash flows; and
- the contractual terms of the financial asset result in cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

A debt instrument is measured at FVOCI if it meets both of the following conditions:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms of the financial asset result in cash flows that are SPPI.

Equity instruments are accounted for at FVTPL. All other financial assets are measured at FVTPL and consist of held for trading assets, assets mandatorily measured on a fair value basis and derivatives, except to the extent that they are designated in a hedging relationship, in which case the IAS 39 hedge accounting requirements continue to apply.

Business model assessment

UBS AG determines the nature of the business model, for example if the objective is to hold the financial asset and collect the contractual cash flows, by considering the way in which the financial assets are managed to achieve a particular business objective as determined by management.

Financial assets that are held for trading or managed on a fair value basis are measured at FVTPL insofar as the associated business model is neither to hold the financial assets to collect contractual cash flows nor to hold to collect contractual cash flows and sell.

UBS AG originates loans to hold to maturity and to sell or sub-participate to other parties, resulting in a transfer of substantially all the risks and rewards, and derecognition of the loan or portions of it. UBS AG considers the activities of lending to hold and lending to sell or sub-participate as two separate business models, with financial assets within the former considered to be within a business model that has an objective to hold the assets to collect contractual cash flows, and those within the latter included in a trading portfolio. In certain cases, it may not be possible on origination to identify whether loans or portions of loans will be sold or sub-participated and certain loans may be managed on a fair value basis through, for instance, using credit derivatives. These financial assets are mandatorily measured at FVTPL.

Critical accounting estimates and judgments

UBS AG exercises judgment to determine the appropriate level at which to assess its business models. In general the assessment is performed at the product level, e.g., retail and commercial mortgages. In other cases the assessment is carried out at a more granular level, e.g., loan portfolios by region, and, if required, further disaggregation is performed by business strategy. In addition, UBS AG exercises judgment in determining the effect of sales of financial instruments on the business model assessment.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Contractual cash flow characteristics

In assessing whether the contractual cash flows are SPPI, UBS AG considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument, which could affect whether the instrument is considered to meet the SPPI criteria.

For example, UBS AG holds portfolios of private mortgage contracts and corporate loans in Personal & Corporate Banking that commonly contain clauses that provide for two-way compensation if prepayment occurs. The amount of compensation paid by or to UBS AG reflects the effect of changes in market interest rates. UBS AG has determined that the inclusion of the change in market interest rates in the compensation amount is reasonable for the early termination of the contract, and therefore results in contractual cash flows that are SPPI.

Critical accounting estimates and judgments

UBS AG applies judgment when considering whether certain contractual features, such as interest rate reset frequency or non-recourse features, significantly affect future cash flows. Furthermore, judgment is required when assessing whether compensation paid or received on early termination of lending arrangements results in cash flows that are not SPPI.

All financial instruments are initially measured at fair value. In the case of financial instruments subsequently measured at amortized cost or FVOCI, the initial fair value is adjusted for directly attributable transaction costs.

After initial recognition, UBS AG classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9 as described in the table on the following pages.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		A debt financial asset is measured at amortized cost if: – it is held in a business model that has an objective to hold assets to collect contractual cash flows, and – the contractual terms give rise to cash flows that are SPPI. This classification includes: – cash and balances at central banks – loans and advances to banks – cash collateral receivable on securities borrowed – receivables on reverse repurchase agreements – cash collateral receivables on derivative instruments – residential and commercial mortgages – corporate loans – secured loans, including Lombard loans, and unsecured loans – loans to financial advisors – debt securities held as high-quality liquid assets (HQLA) – fee and lease receivables.	Measured at amortized cost using the effective interest rate (EIR) method less allowances for expected credit losses (ECL) (refer to items 3c and 3g in this Note for more information). The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments – when it is probable that UBS AG will enter into a specific lending relationship – are deferred and amortized over the life of the loan using the EIR method. When the financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amounts arising from exchange-traded derivatives (ETD) and certain over-the-counter (OTC) derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral receivables on derivative instruments.*
Measured at FVOCI	Debt instruments measured at FVOCI	A debt financial asset is measured at FVOCI if: – it is held in a business model whose objective is achieved by both holding assets to collect contractual cash flows and selling the assets, and – the contractual terms give rise to cash flows that are SPPI. This classification primarily includes debt securities and certain asset-backed securities held as HQLA for which the contractual cash flows meet the SPPI conditions.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized (when sold, collected or otherwise disposed). Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses. The amounts recognized in the income statement are determined on the same basis as for financial assets measured at amortized cost.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at FVTPL	Held for trading	Financial assets held for trading include: – all derivatives with a positive replacement value, except those that are designated as effective hedging instruments – other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans) and equity instruments.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Other net income from fair value changes on financial instruments*, except interest and dividend income on instruments other than derivatives (refer to item 3c in this Note for more information), interest on derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain long- and short-duration foreign exchange contracts, which are reported in *Net interest income*. Derivative assets are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral receivables on derivative instruments.* The presentation of fair value changes on derivatives that are designated and effective as hedging instruments depends on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information). Financial assets held for trading (other than derivatives) are presented as *Financial assets at fair value held for trading*. Other financial assets mandatorily measured at fair value through profit or loss are presented as *Financial assets at fair value not held for trading*, except for brokerage receivables, which are presented as a separate line item on UBS AG's balance sheet.
	Mandatorily measured at FVTPL – Other	A financial asset is mandatorily measured at FVTPL if: – it is not held in a business model whose objective is to hold assets to collect contractual cash flows or to hold them to collect contractual cash flows and sell, and / or – the contractual terms give rise to cash flows that are not SPPI, and / or – it is not held for trading. The following financial assets are mandatorily measured at FVTPL: – Certain structured loans, certain commercial loans, receivables under reverse repurchase and cash collateral on securities borrowing agreements that are managed on a fair value basis – Loans, managed on a fair value basis and hedged with credit derivatives – Certain debt securities held as HQLA and managed on a fair value basis – Certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets represent holdings in investments funds, whereby the contractual cash flows do not meet the SPPI conditions because the entry and exit price is based on the fair value of the fund's assets – Brokerage receivables, for which contractual cash flows do not meet the SPPI conditions due to the aggregate balance being accounted for as a single unit of account, with interest being calculated on the individual components – Auction rate securities, for which contractual cash flows do not meet the SPPI conditions because interest may be reset at rates that contain leverage – Equity instruments – Assets held under unit-linked investment contracts.	

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial liabilities classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – Demand and time deposits, retail savings / deposits, amounts payable under repurchase agreements, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit and covered bonds and obligations against funding from UBS Group AG and its subsidiaries – Cash collateral payables on derivative instruments.	Measured at amortized cost using the EIR method. Upfront fees and direct costs relating to the issuance or origination of the liability are deferred and amortized over the life of the liability using the EIR method. When the financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amortized cost liabilities are presented on the balance sheet primarily as *Amounts due to banks, Customer deposits, Payables from securities financing transactions* , *Debt issued measured at amortized cost* and *Funding from UBS Group AG and its subsidiaries.* Amounts arising from ETD and certain OTC derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral payables on derivative instruments.*
Measured at fair value through profit or loss	Held for trading	Financial liabilities held for trading include: – All derivatives with a negative replacement value (including certain loan commitments) except those that are designated and effective hedging instruments – Obligations to deliver financial instruments, such as debt and equity instruments, that UBS AG has sold to third parties, but does not own (short positions).	Measurement of financial liabilities classified at FVTPL follows the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of the financial liability that is attributable to changes in UBS AG's own credit risk is presented in OCI. Financial liabilities measured at FVTPL are presented as *Financial liabilities at fair value held for trading* and *Other financial liabilities designated at fair value*, respectively, except for brokerage payables and debt issued, which are presented as separate sub-totals on UBS AG's balance sheet. Derivative liabilities are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral payables on derivative instruments.* Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective as hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information).
	Designated at FVTPL	UBS AG designated at FVTPL the following financial liabilities: – Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes – Issued debt instruments managed on a fair value basis – Certain payables under repurchase agreements and cash collateral on securities lending agreements that are managed in conjunction with associated reverse repurchase agreements and cash collateral on securities borrowed – Loan commitments that are hedged predominantly with credit derivatives and those managed on a fair value basis – Amounts due under unit-linked investment contracts whose cash flows are linked to financial assets measured at FVTPL and eliminate an accounting mismatch – Brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.	

c. Interest income and expense

Interest income and expense are recognized in the income statement applying the EIR method.

In determining interest income and expense, the EIR is applied to the gross carrying amount of the financial asset (unless the asset is credit-impaired) or the amortized cost of a financial liability, based on estimated future cash flows that take into account all contractual cash flows, except those related to ECL. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying EIR to the amortized cost of the instrument. Furthermore, for financial assets that were credit-impaired on initial recognition, interest is determined by applying a credit-adjusted EIR to the amortized cost of the instrument.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS AG also presents interest income and expense on financial instruments (excluding derivatives) measured at FVTPL separately from the rest of the fair value changes in the income statement. Interest income or expense on financial instruments measured at amortized cost and financial assets measured at FVOCI are presented separately within *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* and *Interest expense from financial instruments measured at amortized cost,* with interest on financial instruments at FVTPL presented in *Interest income (or expense) from financial instruments measured at fair value through profit or loss*. All are part of *Net interest income*.

Interest income from financial instruments measured at fair value through profit or loss includes forward points on certain short- and long-duration foreign exchange contracts and dividend income.

Furthermore, interest income and expense on derivatives designated as hedging instruments in effective hedge relationships are presented consistently with the interest income and expense of the respective hedged item.

→ **Refer to "Note 1a) Significant Accounting Policies" in the "UBS AG consolidated financial statements" section of the Annual Report 2017 for more information**

g. Expected credit losses

Expected credit losses (ECL) are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees and loan commitments. ECL are also recognized on the undrawn portion of revolving revocable credit lines, which include UBS AG's credit card limits and master credit facilities, which are customary in the Swiss market for corporate and commercial clients. UBS AG refers to both as "other credit lines," with clients allowed to draw down on-demand balances (with the Swiss master credit facilities also allowing for term products) and which can be terminated by UBS AG at any time. Though these other credit lines are revocable, UBS AG is exposed to credit risk because the client has the ability to draw down funds before UBS AG can take credit risk mitigation actions.

Recognition of expected credit losses

ECL represent the difference between contractual cash flows and those UBS AG expects to receive, discounted at the EIR. For loan commitments and other credit facilities in scope of ECL, expected cash shortfalls are determined by considering expected future draw downs.

ECL are recognized on the following basis:

- Maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 1. For instruments with a remaining maturity of less than 12 months, ECL are determined for this shorter period.
- Lifetime ECL are recognized if a significant increase in credit risk (SICR) is detected subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 2. Where an SICR is no longer observed, the instrument will move back to stage 1.
- Lifetime ECL are always recognized for credit-impaired financial instruments, referred to as instruments in stage 3. The IFRS 9 determination of whether an instrument is credit-impaired is based on the occurrence of one or more loss events, with lifetime ECL generally derived by estimating expected cash flows based on a chosen recovery strategy with additional consideration given to forward-looking economic scenarios. Credit-impaired exposures may include positions for which no loss has occurred or no allowance has been recognized, for example, because they are expected to be fully recoverable through the collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired financial assets (POCI). POCI are initially recognized at fair value with interest income subsequently being recognized based on a credit-adjusted EIR. POCI include financial instruments that are newly recognized following a substantial restructuring and remain a separate category until maturity.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS AG does not apply the low-credit-risk practical expedient that allows a lifetime ECL for lease or fee receivables to be recognized irrespective of whether a significant increase in credit risk has occurred. Instead, UBS AG has incorporated lease and fee receivables into the standard ECL calculation.

A write-off is made when all or part of a financial asset is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / recovery*. Write-offs and partial write-offs represent derecognition / partial derecognition events.

ECL are recognized in profit or loss with a corresponding ECL allowance reported as a decrease in the carrying value of financial assets measured at amortized cost on the balance sheet. For financial assets measured at fair value through OCI, the carrying value is not reduced, but an accumulated amount is recognized in OCI. For off-balance sheet financial instruments and other credit lines, provisions for ECL are reported in *Provisions*. ECL are recognized within the income statement in *Credit loss expense / recovery.*

Default and credit impairment

The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for the Personal & Corporate Banking and Swiss wealth management portfolios. Counterparties are also classified as defaulted when bankruptcy, insolvency proceedings or enforced liquidation have commenced, obligations have been restructured on preferential terms or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If a counterparty is defaulted, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is POCI. An instrument is POCI if it has been purchased with a material discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCIs), it remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit-restructured, and there is general evidence of credit recovery. A minimum period of three months is applied whereby most instruments remain in stage 3 for a longer period.

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on either loss expectations resulting from default events over a maximum 12-month period from the reporting date or over the remaining life of a financial instrument. The method used to calculate individual probability-weighted unbiased ECL is based on a combination of the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). PDs and LGDs used in the ECL calculation are point in time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For each instrument or group of instruments, parameter time series are generated consisting of the instruments' PD, LGD and EAD profiles considering the respective period of exposure to credit risk.

For the purpose of determining the ECL-relevant parameters, UBS AG leverages its Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and new IFRS 9-related models have been developed, which consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III through the cycle (TTC) parameters. The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III are not affected by the IFRS 9 ECL calculation.

Probability of default (PD): The PD represents the likelihood of a default over a specified time period. A 12-month PD represents the likelihood of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. The lifetime PD calculation is based on a series of 12-month PIT PDs that are derived from TTC PDs and scenario forecasts. This modeling is region-, industry- and client segment-specific and considers both scenario-systematic and client-idiosyncratic information. To derive the cumulative lifetime PD per scenario, the series of 12-month PIT PDs are transformed into marginal PIT PDs taking any assumed default events from previous periods into account.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Exposure at default (EAD): The EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring during the life of a financial instrument. It represents the cash flows outstanding at the time of default, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios. IFRS 9-specific CCFs have been modeled to capture client segment- and product-specific patterns after removing Basel standard-specific limitations, i.e., conservativism and focus on a 12-month period prior to default.

Loss given default (LGD): The LGD represents an estimate of the loss at the time of a potential default occurring during the life of a financial instrument. The determination of the LGD takes into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. The LGD is commonly expressed as a percentage of the EAD.

PD and LGD are determined for four different scenarios whereas EAD projections are treated as scenario independent.

Parameters are generally determined on an individual financial asset level. For credit card exposures in Switzerland, personal account overdrafts and certain loans to financial advisors, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio.

Scenarios and scenario weights

The determination of the probability-weighted ECL requires evaluating a range of diverse and relevant future economic conditions.

To accommodate this requirement, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. Those variables range from above-trend economic growth to severe recession. A weight is computed for each scenario by using a probabilistic econometric model that considers recent information as well as several decades of historical data. The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur. The scenarios, including the narratives, the macroeconomic and financial variables and the scenario weights, are further discussed, challenged and potentially refined by a team of UBS-AG internal experts. The baseline scenario is aligned to the economic and market assumptions used for UBS AG business planning purposes.

Macroeconomic and other factors

The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS AG projects the relevant economic factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Certain variables may only be relevant for specific types of exposures, such as house price indices for mortgage loans, while other variables have key relevance in the ECL calculation for all exposures. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS AG's key ECL-relevant portfolios.

For UBS AG, the following forward-looking macroeconomic variables represent the most relevant factors in the ECL calculation:

- GDP growth rates
- House price indices
- Unemployment rates
- Interest rates, specifically LIBOR and government bond yields
- Equity indices
- Consumer price indices

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

The forward-looking macroeconomic assumptions used in the ECL calculation are developed by UBS AG economists, risk methodology personnel and credit risk officers. Assumptions and scenarios are validated and approved through a scenario committee and an operating committee, which also aim to ensure a consistent use of forward-looking information throughout UBS AG, including in the business planning process. ECL inputs are tested and reassessed for appropriateness at least each quarter and appropriate adjustments are made when needed.

ECL measurement period

The period for which lifetime ECL are determined is based on the maximum contractual period that UBS AG is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS AG has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment where the contractual cancellation right does not limit UBS AG's exposure to credit risk to the contractual notice period as the client has the ability to draw down funds before UBS AG can take risk mitigating actions. In such cases, UBS AG is required to estimate the period over which it is exposed to credit risk. This applies to UBS AG's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one unit. The exposure arising from UBS AG's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS AG is exposed to credit risk. Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a Risk Officer, allowing for informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS AG has assessed these credit risk management practices and considers both the RbM approach and formal credit review as a substantive credit review providing for a re-origination of the facility. Following this, a 12-month measurement period is used for both types of facilities as an appropriate proxy of the period over which UBS AG is exposed to credit risk, with 12 months also used as a look back period for assessing SICR.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a 12-month ECL continues to be appropriate, it is assessed whether an SICR has occurred since initial recognition of the financial instrument. The assessment criteria include both quantitative and qualitative factors.

Primarily, UBS AG assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:

– at the reporting date and
– at inception of the instrument.

In both cases, the respective PDs are determined for the residual lifetime of the instrument, i.e., the period between the reporting date and maturity. If, based on UBS AG's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL being recognized.

The threshold applied varies depending on the original credit quality of the borrower. For instruments with lower default probabilities at inception due to good credit quality of the counterparty, the SICR threshold is set at a higher level than for instruments with higher default probabilities at inception. This implies that for instruments with initially lower default probabilities a relatively higher deterioration in credit quality is needed to trigger an SICR than for those instruments with originally higher PDs. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, expressed in rating downgrades, together with the corresponding ratings at origination of an instrument is provided in the "SICR thresholds" table below. This simplified view is aligned to internal ratings as disclosed in the internal ratings table presented in "Credit risk" in the "Risk management and control" section of the Annual Report 2017. The actual SICR thresholds applied are defined on a more granular level interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the borrower becomes more than 30 days past due on his contractual payments. This presumption is rebutted only where reasonable and supportable information is available that demonstrates that UBS AG is not exposed to an SICR even if contractual payments become more than 30 days past due.

For certain less material portfolios, specifically the Swiss credit card portfolio and the recruitment and retention loans to financial advisors within Global Wealth Management, the 30 days past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30 days past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking that are between 90 and 180 days past due, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR and hence for a transfer to stage 2. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected. Instruments for which an SICR since initial recognition is determined based on criteria other than changed default probabilities remain in stage 2 for at least six months post resolution of the stage 2 trigger event.

The overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions due to the risk management practices adopted, including daily monitoring processes with strict remargining requirements. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. ECL on these positions are not material.

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that involve significant uncertainty at the time they are made. Changes to these estimates and assumptions can result in significant changes to the timing and amount of ECL to be recognized.

Determination of a significant increase of credit risk
IFRS 9 does not include a definition of what constitutes an SICR. UBS AG assesses whether an SICR has occurred since initial recognition based on qualitative and quantitative reasonable and supportable forward-looking information that includes significant management judgment. More stringent criteria could significantly increase the number of instruments migrating to stage 2. An IFRS 9 Operating Committee has been established to review and challenge the SICR approach and any potential changes and determinations made in the quarter.

Scenarios, scenario weights and macroeconomic factors
ECL reflect an unbiased and probability-weighted amount, which UBS AG determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios and judges the suitability of respective weights to be applied. Each of the scenarios is based on management's assumptions around future economic conditions in the form of macroeconomic, market and other factors. Changes in the scenarios and weights, the corresponding set of macroeconomic variables and the assumptions made around those variables for the forecast horizon would have a significant effect on the ECL. An IFRS 9 Scenario Committee, in addition to the Operating Committee, has been established to derive, review and challenge the selection and weights.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. The ECL calculation is therefore sensitive to any extension of contractual maturities triggered by business decisions, consumer behaviors and an increased number of stage 2 positions. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS AG must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period has been applied for master credit facilities.

Modeling and management adjustments
A number of complex models have been developed or modified to calculate ECL, with additional management adjustments required. Internal counterparty rating changes, new or revised models and data may significantly affect ECL. The models are governed by UBS AG's model validation controls, which aim to ensure independent verification, and are approved by the Group Model Governance Board (GMGB). The management adjustments are approved by the IFRS 9 Operating Committee and endorsed by the GMGB.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

h. Restructured and modified financial assets

When a counterparty is in financial difficulties or where default has already occurred, UBS AG may restructure financial assets by providing concessions that would otherwise not be considered and that are outside of UBS AG's normal risk appetite, such as preferential interest rates, extension of maturity and subordination. When a credit restructuring takes place, each case is considered individually and the counterparty is generally classified as defaulted until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions, or until the counterparty has recovered and the preferential conditions no longer exceed UBS AG's risk appetite.

Concessions granted when there is no evidence of financial difficulties, or where changes to terms and conditions are within UBS AG's usual risk appetite, are not considered to be a credit restructuring.

Modifications represent contract amendments that result in an alteration of future contractual cash flows and that can occur within UBS AG's normal risk appetite or as part of a credit restructuring where a counterparty is in financial difficulties.

A restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying value of a financial asset is recognized in profit or loss as a modification gain or loss. Further, the subsequent SICR assessment is made by comparing the risk of default at the reporting date based on the modified contractual terms of the financial asset with the risk of default at initial recognition based on the original, unmodified contractual terms of the financial asset.

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS AG at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS AG once the commitments are communicated to the beneficiary or that are revocable only due to automatic cancellation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) derivative loan commitments measured at fair value through profit or loss, (ii) loan commitments designated at fair value through profit or loss or (iii) other loan commitments.

UBS AG recognizes ECL on non-cancelable other loan commitments. In addition, UBS AG also recognizes ECL on loan commitments that can be canceled at any time if UBS AG is exposed to credit risk (refer to item g in this Note). Corresponding ECL are presented within *Provisions* on the UBS AG's balance sheet. ECL relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is presented within (i) *Financial assets at fair value held for trading*, consistent with the associated derivative loan commitment, (ii) *Financial assets at fair value not held for trading*, following loan commitments designated at fair value through profit or loss or (iii) *Loans and advances to customers*, when the associated loan commitment is not fair valued through profit or loss.

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS AG issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss. Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of:

- the amount of ECL (refer to item g in this Note) and
- the amount initially recognized less the cumulative amount of income recognized as of the reporting date.

ECL resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

q. Other net income from fair value changes of financial instruments

The line item *Other net income from fair value changes of financial instruments* substantially includes fair value gains and losses on financial instruments at fair value through profit or loss, as well as the effects at derecognition, trading gains and losses and intermediation income arising from certain client-driven Global Wealth Management and Personal & Corporate Banking financial transactions. In addition, foreign currency translation effects and income and expenses from precious metals are presented under this income statement line item.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

19.2 Adoption of IFRS 9

19.2.1 Governance

The implementation of IFRS 9 has been a key strategic initiative for UBS implemented under the joint sponsorship of the Group Chief Financial Officer and the Group Chief Risk Officer. The incorporation of forward-looking information into the ECL calculation and the definition and assessment of what constitutes a significant increase in credit risk (SICR) are inherently subjective and involve the use of significant expert judgment. Therefore, UBS AG has developed a front-to-back governance framework over the ECL calculation process jointly owned by the Group Chief Financial Officer and the Group Chief Risk Officer and has designed controls to be in compliance with the requirements of the Sarbanes-Oxley Act. UBS AG has efficient credit risk management processes in place that continue to be applicable and aim to ensure the effects of economic developments are appropriately considered, mitigation actions are taken where required and risk appetite is reassessed and adjusted as needed.

→ **Refer to the "Risk management and control" section of the Annual Report 2017 for more information**

19.2.2 Retrospective amendments to UBS AG balance sheet presentation

Although the effect of IFRS 9 classification and measurement changes has been applied prospectively, UBS AG has made a series of changes to the presentation of its IFRS balance sheet to facilitate comparability and prior-period information is presented for periods ending before 1 January 2018 in this revised structure. The primary changes include:

- IAS 39-specific asset categories, such as "Financial assets held to maturity" and "Financial assets available for sale," have been superseded by the new categories "Financial assets measured at amortized cost" and "Financial assets measured at fair value through other comprehensive income."
- A new line, *Financial assets at fair value not held for trading*, has been created to accommodate in particular financial assets previously designated at fair value, all of which are mandatorily classified at fair value through profit or loss under IFRS 9.
- *Other assets* and *Other liabilities* have been split between measured at amortized cost, measured at fair value through profit or loss and other non-financial assets and liabilities.
- *Cash collateral on securities borrowed* and *Reverse repurchase agreements* have been combined into a single line, *Receivables from securities financing transactions.* Similarly, *Cash collateral on securities lent* and *Repurchase agreements* have been combined into a single line, *Payables from securities financing transactions.*
- Finance lease receivables, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
- Precious metal positions previously presented in *Trading portfolio assets* are now presented within the new line *Other non-financial assets.*
- *Financial liabilities designated at fair value* have been split into two lines: *Debt issued designated at fair value* and *Other financial liabilities designated at fair value.*
- Obligations of UBS AG from funding received from UBS Group AG or its subsidiaries, previously included within *Due to customers*, are now presented separately within *Funding from UBS Group AG and its subsidiaries.*

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

The table below illustrates the new balance sheet presentation of assets and liabilities as of 31 December 2017 in comparison with the presentation in the Annual Report 2017. The presentation of the components of equity has not changed, and therefore, for illustration purposes, total liabilities and equity are presented in a single line in the table. The table does not reflect any of the effects of adopting the classification and measurement requirements of IFRS 9, which are presented in section 19.2.3 under *Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9.*

Retrospective amendments to UBS AG's balance sheet presentation as of 31 December 2017

CHF million		31.12.17	31.12.17
Assets	References	Former presentation	Revised presentation
Cash and balances at central banks		87,775	87,775
Loans and advances to banks (formerly: Due from banks)		13,693	13,693
Receivables from securities financing transactions (new line)	1		89,633
Cash collateral on securities borrowed (newly included in Receivables from securities financing transactions)	1	12,393	
Reverse repurchase agreements (newly included in Receivables from securities financing transactions)	1	77,240	
Cash collateral receivables on derivative instruments		23,434	23,434
Loans and advances to customers (formerly: Loans)	2	321,718	320,659
Financial assets held to maturity (superseded)	3	9,166	
Other financial assets measured at amortized cost (new line)	2,3,7		36,935
Total financial assets measured at amortized cost			572,129
Financial assets at fair value held for trading (formerly: Trading portfolio assets)	4	130,807	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties		*35,363*	*35,363*
Derivative financial instruments (formerly: Positive replacement values)		118,229	118,229
Brokerage receivables (new line, formerly included within Other assets)		n/a	n/a
Financial assets at fair value not held for trading (new line)	5		58,556
Financial assets designated at fair value	5	58,556	
Total financial assets measured at fair value through profit or loss			303,028
Financial assets available for sale (superseded)	6	8,665	
Financial assets measured at fair value through other comprehensive income (new line)	**6**		8,665
Investments in associates		1,018	1,018
Property, equipment and software		7,985	7,985
Goodwill and intangible assets		6,398	6,398
Deferred tax assets		9,783	9,783
Other non-financial assets (new line)	4,7		7,358
Other assets (superseded)	7	29,505	
Total assets		916,363	916,363
Liabilities			
Amounts due to banks		7,533	7,533
Payables from securities financing transactions (new line)	8		17,044
Cash collateral on securities lent (newly included in Payables from securities financing transactions)	8	1,789	
Repurchase agreements (newly included in Payables from securities financing transactions)	8	15,255	
Cash collateral payables on derivative instruments		30,247	30,247
Customer deposits (formerly: Due to customers)	9	447,141	412,392
Funding from UBS Group AG and its subsidiaries (new line, formerly included within Due to customers)	9		34,749
Debt issued measured at amortized cost		104,749	104,749
Other financial liabilities measured at amortized cost (new line)	11		37,133
Total financial liabilities measured at amortized cost			643,847
Financial liabilities at fair value held for trading (formerly: Trading portfolio liabilities)		30,463	30,463
Derivative financial instruments (formerly: Negative replacement values)		116,134	116,134
Brokerage payables designated at fair value (new line, formerly included within Other liabilities)		n/a	n/a
Financial liabilities designated at fair value (superseded)	10	54,202	
Debt issued designated at fair value (new line)	10		49,502
Other financial liabilities designated at fair value (new line)	10,11		16,223
Total financial liabilities measured at fair value through profit or loss			212,323
Provisions		3,084	3,084
Other non-financial liabilities (new line)	11		6,335
Other liabilities (superseded)	11	54,990	
Total liabilities		865,588	865,588
Total liabilities and equity		916,363	916,363

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Retrospective amendments to UBS AG balance sheet presentation"

Table ref.	Description of presentation changes applied retrospectively to the balance sheet as of 31 December 2017
Balance sheet assets	
1	Cash collateral on securities borrowed of CHF 12,393 million and reverse repurchase agreements of CHF 77,240 million as of 31 December 2017 are now presented as a total of CHF 89,633 within a single line, *Receivables from securities financing transactions*.
2	Finance lease receivables of CHF 1,059 million as of 31 December 2017, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
3	*Financial assets held to maturity* measured at amortized cost of CHF 9,166 million as of 31 December 2017 are now presented within *Other financial assets measured at amortized cost*.
4	Precious metal positions of CHF 4,563 million as of 31 December 2017, previously presented in *Trading portfolio assets*, are now presented within *Other non-financial assets*.
5	Financial assets designated at fair value through profit or loss of CHF 58,556 million as of 31 December 2017, previously presented in a separate line, are now presented within *Financial assets at fair value not held for trading*.
6	Debt and equity instruments of CHF 8,665 million as of 31 December 2017, previously presented in *Financial assets available for sale,* are now presented within *Financial assets measured at fair value through other comprehensive income*.
7	The reporting line *Other assets* has been split into two new reporting lines, *Other financial assets measured at amortized cost* and *Other non-financial assets*. – Assets of CHF 29,505 million as of 31 December 2017, previously presented within *Other assets*, are now presented within *Other assets measured at amortized cost* (CHF 26,710 million) and *Other non-financial assets* (CHF 2,795 million). – Financial assets now presented within *Other financial assets measured at amortized cost* include brokerage receivables of CHF 19,080 million, debt securities of CHF 9,166 million, loans to financial advisors of CHF 3,118 million and other assets amounting to CHF 5,571 million. Refer to Note 11 a) for more information. – Refer to Note 11 b) for more information on assets now presented within *Other non-financial assets*.
Balance sheet liabilities	
8	Cash collateral on securities lent of CHF 1,789 million and repurchase agreements of CHF 15,255 million as of 31 December 2017 are now presented within a single line, *Payables from securities financing transactions*.
9	Obligations of UBS AG from funding received from UBS Group AG or its subsidiaries of CHF 34,749 million as of 31 December 2017, which were previously included within *Due to customers*, are now presented separately within *Funding from UBS Group AG and its subsidiaries*.
10	Financial liabilities designated at fair value through profit or loss of CHF 54,202 million as of 31 December 2017 are now presented within *Debt issued designated at fair value* (CHF 49,502 million) and *Other financial liabilities designated at fair value* (CHF 4,700 million).
11	The reporting line *Other liabilities* has been split into three new reporting lines, *Other financial liabilities measured at amortized cost*, *Other financial liabilities designated at fair value* and *Other non-financial liabilities*. – Liabilities amounting to CHF 54,990 million as of 31 December 2017, previously presented within *Other liabilities,* are now presented within *Other financial liabilities measured at amortized cost* (CHF 37,133 million, thereof CHF 29,646 million brokerage payables), within *Other financial liabilities designated at fair value* (amounts due under unit-linked investment contracts of CHF 11,523 million) and within *Other non-financial liabilities* (CHF 6,335 million). – Refer to note 11 c) for more information on financial liabilities now presented within *Other financial liabilities measured at amortized cost.* – Refer to note 11 d) for more information on financial liabilities now presented within *Other financial liabilities designated at fair value*. – Refer to note 11 e) for more information on liabilities now presented within *Other non-financial liabilities*.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

19.2.3 Transition to IFRS 9 as of 1 January 2018

Transition to Classification and measurement requirements

As set out in the amended accounting policies in section 19.1, IFRS 9 requires all financial assets, except equity instruments and derivatives, to be classified at amortized cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL), based on the business model for managing the respective assets and their contractual cash flow characteristics.

Changes resulting from the application of IFRS 9 classification and measurement requirements as of 1 January 2018 have been applied as follows:

- Determination of the business model was made based on facts and circumstances as of the 1 January 2018 transition date;
- De-designations and new designations of financial instruments at FVTPL, pursuant to transition requirements of IFRS 9, have been carried out as of 1 January 2018. These reassessments resulted in:
  i. the de-designation of certain financial assets designated at FVTPL, as they are managed on a fair value basis, and therefore are mandatorily measured at fair value, or no longer managed on a fair value basis but held to collect the contractual cash flows and therefore are measured at amortized cost;
  ii. newly designated financial liabilities at FVTPL (e.g., brokerage payables) in order to achieve measurement consistency with associated financial assets that are mandatorily measured at FVTPL (e.g., brokerage receivables).

For UBS AG, the most significant IFRS 9 classification and measurement changes on transition to IFRS 9 are as follows:

- financial assets that no longer qualify for amortized cost accounting under IFRS 9 have been classified at FVTPL because their cash flow characteristics do not satisfy the solely payments of principal and interest criteria (e.g., auction rate securities and certain brokerage receivables);
- lending arrangements that no longer qualify for amortized cost accounting under IFRS 9 are classified at FVTPL because the business model within which they are managed does not have an objective to hold financial assets in order to collect the contractual cash flows or to collect contractual cash flows and sell (e.g., certain Investment Bank lending arrangements);
- equity instruments classified as available for sale under IAS 39 are classified at FVTPL under IFRS 9; and
- financial liabilities are newly designated under IFRS 9 at FVTPL, from amortized cost accounting, to align with conclusions reached for associated financial assets that will be measured at FVTPL (e.g., brokerage payables).

Effect on UBS AG income statement presentation

Upon adoption of IFRS 9, the reclassification of auction rate securities, certain loans in the Investment Bank, certain repurchase agreements and brokerage balances from amortized cost to FVTPL has resulted in the interest income from these instruments moving from Interest income (expense) from financial instruments measured at amortized cost to interest income (expense) from financial instruments measured at fair value through profit or loss. These changes have been applied prospectively from 1 January 2018.

Effect on UBS AG Statement of cash flows

Following the adoption of IFRS 9, changes have been made to the Statement of cash flows to reflect the changes arising from financial instruments that have been reclassified on the balance sheet. In particular, cash flows from certain financial assets previously measured as available-for-sale assets at fair value through other comprehensive income have been reclassified from investing activities to operating activities as the assets are fair valued through profit or loss effective 1 January 2018.

Transition to expected credit loss requirements

As set out in UBS AG's amended accounting policies in section 19.1, IFRS 9 introduces a forward-looking ECL approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39 and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*.

The majority of ECL calculated as of the transition date relates to the private and commercial mortgage portfolio and corporate lending in Switzerland within Personal & Corporate Banking.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Models at transition
For the purpose of implementing ECL under IFRS 9, UBS AG has leveraged existing Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models.

Existing models have been adapted and 29 new models have been developed for the ECL calculation that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III TTC parameters. Management adjustments have also been made. UBS AG has leveraged its existing model risk framework, including the key model validation control executed by Model Risk Management & Control. New and revised models have been approved by UBS's GMGB.

The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III remain unchanged.

→ **Refer to "Credit risk models" in the "Risk, treasury and capital management" section of our Annual Report 2017 for more information**
→ **Refer to "Significant accounting and financial reporting changes in 2018" in the "Operating environment and strategy" section of our Annual Report 2017 for more information**

Scenarios and scenario weights at transition
As outlined in section 19.1, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL calculated on transition have been determined for each of the scenarios and subsequently weighted based on the probabilities in the table "Economic scenarios and weights applied."

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (1.1.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

UBS AG has established IFRS 9 ECL Scenario and Operating Committees to propose and approve the selection of the scenarios and weights to be applied and to monitor whether appropriate governance exists.

Macroeconomic and other factors: For each of the economic scenarios, UBS AG forecasts a wide range of forward-looking macroeconomic, market and other factors. Historical information was used to support the identification of the key factors and to project their development under the different scenarios. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS AG projected those factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS AG's key ECL-relevant portfolios.

The following represent the most significant macroeconomic factors for UBS AG and could substantially change the estimated ECL:

- GDP growth rates, given their significant effect on borrowers' performance
- House price indices, given their significant effect on mortgage collateral valuations
- Unemployment rates, given their significant effect on private clients' ability to meet contractual obligations
- Interest rates, given their significant effect on the counterparties' abilities to service their debt
- Equity indices, given their relevance for equity collateral valuation
- Consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability.

Macroeconomic and other factors at transition
Assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of the economic scenarios to determine ECL at the date of transition can be summarized as follows:

In the upside scenario, which assumes GDP growth rising above trend in most countries with only a moderate rise in inflation and ongoing accommodative monetary policies, GDP growth in Switzerland peaks at around 5% annually. Strong growth leads to a decline in unemployment to very low levels (below 1%) by 2020. Asset prices grow at robust pace, with equity prices increasing by approximately 10% annually and house prices (single-family homes) rising by approximately 4% annually. Policy and short-term interest rates remain low over the entire scenario, while government bond yields experience a sustained increase.

In the US and the rest of the world, the scenario shows broadly similar features, with growth accelerating in Year 1 before steadily returning toward trend by Year 3. Specifically in the US, GDP growth accelerates at a slightly faster pace than in Switzerland, although the US experiences a slightly less substantial improvement in the unemployment rate by Year 3. The degree of policy tightening is marginally greater over the scenario horizon and, as in Switzerland, long-term government bond yields rise more significantly than short-term rates, and to a greater degree.

For the baseline scenario, which is modeled along our business plan assumptions of a continuation of overall important global growth, Swiss GDP growth remains between 1% and 2% annually over the three years of the scenario. Moderate growth results in a very mild increase of unemployment, which stabilizes at around 3.5%. Asset price growth is also moderate, with the Swiss equity price index rising by approximately 8% annually, while house prices grow by less than 1% annually. Policy rates, short-term interest rates and government bond yields increase very gradually over the three years of the scenario by approximately 50 basis points.

GDP growth in the US remains relatively stable, and faster than in Switzerland. Monetary policy tightens at a similar pace to Switzerland and, combined with a modest decline in the unemployment rate, helps to keep inflation in check. US equity prices slightly underperform their Swiss counterparts, while house prices outperform relatively stagnant Swiss house price growth. In the rest of the world, growth remains buoyant, with moderating growth in both Europe and China contrasting with accelerating growth in other emerging markets.

The mild downside scenario is based on a monetary policy tightening assumption, implemented to deflate a potential asset price bubble, causing Swiss GDP to decline by almost 1% in the first year of the scenario. The unemployment rate rises to roughly 5%. Equity prices fall by more than 20% over three years, while house prices decline by 15% over the same period. The fall of the nominal asking rent index is cushioned by higher interest rates, which register a more moderate decline than house prices. Short-term interest rates rise significantly due to monetary tightening, as well as government bond yields.

In this scenario, inflation in the US accelerates rapidly, leading to a sharp rise in short-term interest rates, similar to Switzerland. GDP growth averages a similar pace to Switzerland over three years, while equity and house prices also fall by a broadly similar degree to their Swiss equivalents. In the rest of the world, growth is also weighed down, particularly in more vulnerable emerging markets such as Russia, Turkey and Brazil, as interest rates and credit spreads rise sharply.

The severe downside scenario is modeled to mimic a severe recession caused by an event affecting Switzerland's competitiveness in key export markets, with Swiss GDP shrinking almost 7% in the first year of the scenario. The severe recession results in a substantial increase in unemployment, which peaks at around 9%. Asset prices plummet, with the Swiss equity index falling more than 55% over three years, and house prices declining 27% over the same period. Policy and short-term interest rates remain low over the entire scenario horizon.

US GDP and unemployment deteriorate by a lesser degree than in Switzerland, and while house and equity prices decline sharply, the effects are also less severe than in Switzerland. With more scope to cut rates than the Swiss National Bank, short-term rates fall in the US. In the rest of the world, growth also slows sharply, particularly in the eurozone and neighboring emerging markets such as Turkey and Russia.

ECL measurement period at transition

As set out in section 19.1, for the majority of ECL-relevant instruments, the contractual maturity is used to calculate the measurement period, with this capped at 12 months when stage 1 ECL are required. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS AG must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit cards and 12 months for master credit facilities. UBS AG's ECL-relevant financial instruments have relatively short average maturities, which significantly contribute to the level of ECL on transition.

SICR determination at transition

The identification of instruments for which an SICR has been determined since initial recognition and the corresponding allocation to stage 2 at transition generally follow the principles described in the relevant accounting policy provided in section 19.1. Furthermore, the following principles have been applied:

General: In estimating the retrospective lifetime PDs, we have considered the economic conditions over the relevant prior periods and the general significant uncertainty inherent in such approximation to determine the allocation of instruments to stage 2 at transition.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Real estate financing: The Basel III rating methodology applied to the majority of income-producing real estate financings within Personal & Corporate Banking, which is leveraged for IFRS 9 ECL calculations, was significantly changed in 2017. As a consequence, there is no comparable rating on origination to determine whether an SICR has arisen over time. As permitted by the IFRS 9 transition requirements, a lifetime ECL allowance has therefore been recognized for certain real estate financing positions and will continue to be recognized until the positions are derecognized.

Other portfolios, including private mortgages and commercial SME clients: The Basel III rating models for other key portfolios in Personal & Corporate Banking, in particular for private client mortgages and commercial clients in the small and medium-sized enterprise (SME) segment, have recently been subject to a major redesign. While the methodology remained essentially the same and the calibration to the portfolios' average TTC PD value unchanged, the effect on the stage allocation is significant. This is due to the fact that the introduction of new models has led to a broader and different distribution of borrowers across the rating spectrum; while there was no material effect on those counterparties with an uplift in their rating, some of those that had a downward shift in their rating triggered the SICR threshold and a reclassification into stage 2 at transition.

The table on the following pages provides a detailed overview of the IFRS 9 transition effects as of 1 January 2018. This includes:
– reclassification of IAS 39 carrying amounts to the new categories applicable under IFRS 9;
– remeasurement of carrying amounts due to reclassification (any remeasurement to fair value and / or reversal of IAS 39 allowances or IAS 37 provisions for assets moving from amortized cost to fair value); and
– recognition of IFRS 9 ECL for in-scope assets, off-balance sheet positions and other credit lines.

The following table also includes the effects recognized for deferred tax assets and therefore the total impact provided in *Retained earnings* in the table is net of tax effects. Explanatory footnotes provided after the table provide additional details on these changes.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Assets						
Cash and balances at central banks	Loans and receivables	87,775			0	87,775
Loans and advances to banks	Loans and receivables	13,693	(17)		(3)[12]	13,673
to: Brokerage receivables	*Loans and receivables*		*(17)*[1]			
Receivables from securities financing transactions	Loans and receivables	89,633	(4,957)		(2)[12]	84,674
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(4,957)*[2]			
Cash collateral receivables on derivative instruments	Loans and receivables	23,434			0	23,434
Loans and advances to customers	Loans and receivables	320,659	(7,822)	0	(235)[12]	312,602
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(2,678)*[3]			
to: Brokerage receivables	*Loans and receivables*		*(4,691)*[1]			
to: Financial assets at fair value held for trading	*Loans and receivables*		*(468)*[4]			
from: Financial assets at fair value not held for trading	*FVTPL (designated)*		*8*[5]	*0*		
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*6*[5]			
Other financial assets measured at amortized cost	Loans and receivables, held to maturity	36,935	(18,525)	0	(35)[12]	18,375
to: Brokerage receivables	*Loans and receivables*		*(19,080)*[1]			
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*555*[6]	*0*		
Total financial assets measured at amortized cost		572,129	(31,321)	0	(275)	540,533
Financial assets at fair value held for trading	FVTPL (held for trading)	126,244	(10,854)	(15)		115,375
to: Loans and advances to customers	*FVTPL (held for trading)*		*(6)*[5]			
to: Financial assets at fair value not held for trading	*FVTPL (held for trading)*		*(11,316)*[7]			
from: Loans and advances to customers	*Loans and receivables*		*468*[4]	*(15)*[4]		
of which: assets pledged as collateral that may be sold or repledged by counterparties	*FVTPL (held for trading)*	*35,363*				*35,363*
Derivative financial instruments	FVTPL (derivatives)	118,229				118,229
Brokerage receivables	Loans and receivables		23,787			23,787
from: Loans and advances to banks	*Loans and receivables*		*17*[1]			
from: Loans and advances to customers	*Loans and receivables*		*4,691*[1]			
from: Other financial assets measured at amortized cost	*Loans and receivables*		*19,080*[1]			
Financial assets at fair value not held for trading	FVTPL (designated)	58,556[9]	20,297	(287)		78,566
to: Loans and advances to customers	*FVTPL (designated)*		*(8)*[5]			
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*11,316*[7]			
from: Receivables from securities financing transactions	*Loans and receivables*		*4,957*[2]	*(1)*		
from: Loans and advances to customers	*Loans and receivables*		*2,678*[3]	*(286)*[3]		
from: Financial assets measured at fair value through other comprehensive income	*Available-for-sale*		*1,356*[8]			
Total financial assets measured at fair value through profit or loss		303,028	33,231	(303)		335,957
Financial assets measured at fair value through other comprehensive income	**Available-for-sale**	8,665	(1,911)			6,755[10]
to: Other financial assets measured at amortized cost	*Available-for-sale*		*(555)*[6]			
to: Financial assets at fair value not held for trading	*Available-for-sale*		*(1,356)*[8]			
Investments in associates		1,018				1,018
Property, equipment and software		7,985				7,985
Goodwill and intangible assets		6,398				6,398
Deferred tax assets		9,783		58[11]	64[11]	9,905
Other non-financial assets		7,358				7,358
Total assets		916,363		(245)	(211)	915,908

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9 (continued)

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Liabilities						
Amounts due to banks	Amortized cost	7,533				7,533
Payables from securities financing transactions	Amortized cost	17,044	(5,081)			11,963
to: Other financial liabilities designated at fair value	*Amortized cost*		*(5,081)*[13]			
Cash collateral payables on derivative instruments	Amortized cost	30,247				30,247
Customer deposits	Amortized cost	412,392	(5,268)			407,124
to: Brokerage payables designated at fair value	*Amortized cost*		*(5,268)*[14]			
Funding from UBS Group AG and its subsidiaries	Amortized cost	34,749				34,749
Debt issued measured at amortized cost	Amortized cost	104,749				104,749
Other financial liabilities measured at amortized cost	Amortized cost	37,133	(29,646)	(4)		7,482
to: Brokerage payables designated at fair value	*Amortized cost*		*(29,646)*[14]			
Derecognition: deferred fees on other loan commitments	*Amortized cost*			*(4)*[4]		
Total financial liabilities measured at amortized cost		643,847	(39,996)	(4)		603,848
Financial liabilities at fair value held for trading	FVTPL (held for trading)	30,463				30,463
Derivative financial instruments	FVTPL (derivatives)	116,134		57		116,192
Recognition: Loan commitments	*Amortized cost – off-balance sheet*			*60*[4]		
Derecognition: Loan commitments	*FVTPL (derivatives)*			*(2)*[5]		
Brokerage payables designated at fair value	Amortized cost		34,915			34,915
from: Customer deposits	*Amortized cost*		*5,268*[14]			
from: Other financial liabilities measured at amortized cost	*Amortized cost*		*29,646*[14]			
Debt issued designated at fair value	FVTPL (designated)	49,502				49,502
Other financial liabilities designated at fair value	FVTPL (designated)	16,223	5,081	(5)		21,300
from: Payables from securities financing transactions	*Amortized cost*		*5,081*[13]	*(5)*[13]		
Total financial liabilities measured at fair value through profit or loss		212,323	39,996	53		252,371
Provisions		3,084			74[12]	3,158
Other non-financial liabilities		6,335				6,335
Total liabilities		865,588		49	74	865,711
Equity						
Share capital		386				386
Share premium		26,966				26,966
Retained earnings		29,102	72[8,15]	(293)	(284)	28,597
Other comprehensive income recognized directly in equity, net of tax		(5,736)	(72)[8,15]			(5,808)
Equity attributable to shareholders		50,718	0	(293)[15]	(284)[15]	50,141
Equity attributable to non-controlling interests		57				57
Total equity		50,775	0	(293)	(284)	50,198
Total liabilities and equity		916,363	0	(245)	(211)	915,908

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9"

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018
1	Certain customer and prime brokerage receivable balances, in the Investment Bank and Global Wealth Management, fail the solely payments of principal and interest (SPPI) criteria for measurement at amortized cost. These include CHF 4,691 million previously included within *Loans and advances to customers*, CHF 17 million from *Loans and advances to banks* and CHF 19,080 million previously included within *Other financial assets measured at amortized cost*. The receivables are managed under a business model whose objective is to hold the assets to collect contractual cash flows. However, the reported receivables represent an aggregation of cash receivable and payable balances that form a single unit of account at the client level and generate a return that does not constitute consideration for the time value of money, credit risk and other basic lending risks. The SPPI criterion is therefore not met and under IFRS 9 the receivables are mandatorily measured at FVTPL and separately presented as *Brokerage receivables*. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
2	Based on the business model assessment under IFRS 9, certain reverse repurchase agreements with a carrying amount of CHF 4,957 million as of 31 December 2017 were determined to be managed on a fair value basis and were therefore reclassified from amortized cost to FVTPL measurement under IFRS 9. The carrying value has been reclassified from *Receivables from securities financing transactions* to *Financial assets at fair value not held for trading* as of 1 January 2018. A remeasurement loss of CHF 1 million has been recorded in *Retained earnings*. CHF 11,490 million of forward starting reverse repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
3	Certain positions previously included within *Loans and advances to customers* with a carrying amount of CHF 2,678 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* upon adoption of IFRS 9. This includes: – auction rate securities (CHF 2,114 million) that are held in Corporate Center and that contain an embedded leverage feature triggering the failure of the SPPI criteria, and – certain loans in the Investment Bank (CHF 552 million) and in Corporate Center (CHF 12 million), which either fail the SPPI criteria or are held within a business model with an intent to sell or substantially hedge the primary risks. These assets are mandatorily measured at FVTPL under IFRS 9. A corresponding net remeasurement loss of CHF 286 million was recognized in *Retained earnings* related to these reclassifications. This remeasurement loss also included reversal of specific credit loss allowances (CHF 11 million).
4	Due to a change in the underlying business model, loans and advances to customers with a carrying amount of CHF 468 million as of 31 December 2017 have been reclassified to *Financial assets at fair value held for trading* as of 1 January 2018. A corresponding net remeasurement loss of CHF 15 million, which includes the reversal of specific IAS 39 credit loss allowances, was recognized in *Retained earnings* related to this reclassification. Irrevocable loan commitments that are contractually linked with these financial assets are now recognized as *Derivative financial instruments* (derivative liabilities) and are measured at FVTPL as of 1 January 2018. This reclassification resulted in a CHF 60 million loss with a corresponding entry to *Retained earnings*. Liabilities related to deferred fees of CHF 4 million related to these loan commitments recorded as *Other financial liabilities measured at amortized cost* at 31 December 2017 were derecognized with a corresponding entry to *Retained earnings*.
5	Financial assets with a carrying amount of CHF 14 million as of 31 December 2017 were reclassified to *Loans and advances to customers* from *Financial assets at fair value not held for trading* (CHF 8 million) and from *Financial assets at fair value held for trading* (CHF 6 million) given management's intent to hold these financial assets to collect contractual cash flows. Loan commitments related to these financial assets, which were recognized as derivative liabilities with a carrying value of CHF 2 million as of 31 December 2017, were accordingly derecognized on 1 January 2018 with a corresponding entry to *Retained earnings*.
6	Certain debt instruments with a carrying amount of CHF 555 million as of 31 December 2017 were formerly classified as available for sale and measured at FVOCI under IAS 39 but are measured at amortized cost under IFRS 9. Those positions, which are held to collect cash flows solely representing payment of principal and interest, are presented within *Other financial assets measured at amortized cost* as of 1 January 2018. The fair value of these assets was consistent with the amortized cost value as of 1 January 2018 and no remeasurement gain or loss has been recognized.
7	Upon adopting IFRS 9, UBS AG has elected to refine the assets classified within *Financial assets at fair value held for trading* to carve out those that are segregated from UBS AG's trading activities, where UBS AG's role is primarily to manage the assets on a fair value basis on behalf of others. Instead, such assets will be presented alongside others managed on a fair value basis within *Financial assets at fair value not held for trading*. As a consequence of this refinement, UBS AG has reclassified assets held to hedge unit-linked investment contracts of CHF 11,316 million from *Financial assets at fair value held for trading* to *Financial assets at fair value not held for trading* as of 1 January 2018. No remeasurement gain or loss has been recognized.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018 (continued)
8	UBS AG holds certain global and local liquidity buffers that were determined to be managed on a fair value basis as management utilizes fair value information for reporting and decision making purposes. Therefore, assets previously classified as available for sale under IAS 39 with a carrying amount of CHF 620 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading*. An unrealized gain of CHF 5 million related to these positions was reclassified from *Other comprehensive income* to *Retained earnings*. Additionally, equity instruments and investment fund units previously classified as available for sale under IAS 39 with a carrying amount of CHF 736 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules. A related unrealized gain in OCI of CHF 199 million has been reclassified to *Retained earnings*. Additionally, a net tax expense of CHF 131 million was transferred from OCI to *Retained earnings* related to the positions above which were reclassified out of the IAS 39 available-for-sale category.
9	Assets previously designated at FVTPL with a carrying amount of CHF 58,556 million as of 31 December 2017 are no longer designated as such under IFRS 9, as it was determined that these assets were either held in a business model that is managed on a fair value basis, did not meet the SPPI criteria, or did meet the SPPI criteria and are held in a hold to collect business model. Of the total, assets with a carrying amount of CHF 58,548 million are now mandatorily measured at FVTPL and included within *Financial assets at fair value not held for trading*. The remaining assets with a carrying amount of CHF 8 million have been de-designated and were reclassified to *Loans and advances to customers* given a change in business model to hold to collect (refer to footnote 5).
10	Certain debt instruments with a carrying amount of CHF 6,755 million as of 31 December 2017 were formerly classified as available for sale under IAS 39 and are measured at FVOCI under IFRS 9. These instruments include US government bonds and US government sponsored mortgage-backed securities and other debt that are held in a business model whose objective is achieved by both collecting contractual cash flows and selling, and that meet the SPPI criteria. These positions are now presented within *Financial assets measured at fair value through other comprehensive income*.
11	Deferred tax assets of CHF 122 million have been recognized in connection with the adoption of IFRS 9. Of the total effect, CHF 64 million relates to the recognition of ECL and CHF 58 million relates to classification and measurement changes upon adoption of IFRS 9.
12	Upon adoption of the ECL requirements of IFRS 9, a transition impact of CHF 348 million was recognized, consisting of CHF 144 million of stage 1 allowances, CHF 188 million of stage 2 allowances and an incremental increase in stage 3 allowances of CHF 16 million. The effect was mainly recognized within *Loans and advances to customers* (CHF 235 million), with effects also recognized in *Other financial assets measured at amortized cost* (CHF 35 million), *Loans and advances to banks* (CHF 3 million), *Receivables from securities financing transactions* (CHF 2 million) and *Provisions* (CHF 74 million).
13	Certain repurchase agreements with a carrying amount of CHF 5,081 million as of 31 December 2017 have been designated at FVTPL as they are managed in conjunction with reverse repurchase agreements that are mandatorily measured at FVTPL under IFRS 9. These amounts are included within *Other financial liabilities designated at fair value* as of 1 January 2018. A remeasurement gain of CHF 5 million has been recognized in *Retained earnings* as of 1 January 2018 related to this reclassification. CHF 7,730 million of forward starting repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
14	To achieve measurement consistency with reclassified customer and prime brokerage receivables that are measured at FVTPL following adoption of IFRS 9, certain customer deposits with a carrying amount of CHF 5,268 million and prime brokerage payables with a carrying amount of CHF 29,646 million as of 31 December 2017 have been designated at FVTPL and are presented within *Brokerage payables designated at fair value* as of 1 January 2018. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
15	The adoption of IFRS 9 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of ECL credit loss methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. In addition, CHF 72 million has been reclassified from *Other comprehensive income* recognized directly in equity, net of tax, to *Retained earnings* (refer to footnote 8 above), with no overall impact on equity attributable to shareholders.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reconciliation of allowances and provisions on adoption of IFRS 9 as of 1 January 2018

The table below provides a reconciliation from the IAS 39 allowances / IAS 37 provisions to the IFRS 9 ECL allowances / provisions recognized as of 1 January 2018 upon adoption of IFRS 9.

Reconciliation of allowances and provisions on adoption of IFRS 9

	31.12.2017	1.1.2018		
CHF million	Loss allowances and provisions (IAS 39 / IAS 37)	Reversal of allowances (IAS 39)	Recognition of ECL (IFRS 9)[1]	Allowances for ECL / Provisions for ECL (IFRS 9)
On-balance sheet				
Cash and balances at central banks			0	0
Loans and advances to banks	(3)		(3)	(5)
Receivables from securities financing transactions			(2)	(2)
Cash collateral receivables on derivative instruments			0	0
Loans and advances to customers	(658)	26[2]	(235)[3]	(867)
Other financial assets measured at amortized cost	(101)[4]		(35)	(136)
Total on-balance sheet	(761)	26	(275)	(1,011)
Off-balance sheet financial instruments and other credit lines				
Guarantees	(29)		(8)	(37)
Loan commitments	(4)		(32)	(36)
Other credit lines			(34)	(34)
Total off-balance sheet financial instruments and other credit lines	(33)		(74)	(107)
Total	(794)	26	(348)	(1,117)
of which: Stage 1			*(144)*	*(144)*
of which: Stage 2			*(188)*	*(188)*
of which: Stage 3			*(16)*[5]	*(785)*

1 Includes stage 1 and stage 2 expected credit losses and additional stage 3 expected credit losses. 2 The reversal of CHF 26 million of IAS 39 loss allowances relates to instruments reclassified from amortized cost to fair value through profit or loss on transition to IFRS 9. Refer also to footnotes 3 and 4 to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9." 3 Includes the reversal of collective allowances of CHF 13 million. 4 Includes CHF 82 million related to loans to financial advisors for which an allowance was reported as a direct reduction of the carrying amount as of 31 December 2017. 5 The incremental increase in stage 3 allowances of CHF 16 million arises from additional consideration of forward looking scenarios under IFRS 9.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

IFRS 9 transition impact on other comprehensive income and retained earnings as of 1 January 2018

The table below presents the transition effects recognized in OCI and retained earnings upon adoption of IFRS 9.

IFRS 9 impact on other comprehensive income and retained earnings

CHF million	
Other comprehensive income recognized directly in equity, net of tax	
Reclassification of financial assets (available for sale to fair value through profit or loss) – equity instruments	(199)
Reclassification of financial assets (available for sale to fair value through profit or loss) – debt instruments	(5)
Tax (expense) / benefit	131
Total change in other comprehensive income	(72)
Retained earnings	
Remeasurement of financial assets (reclassified from amortized cost to fair value through profit or loss)	(303)
Reclassification of financial assets (reclassified from available for sale to fair value through profit or loss)	204
Recognition of ECL for on-balance sheet financial assets	(275)
Remeasurement of financial liabilities (reclassified from amortized cost to designated at fair value through profit or loss)	5
Recognition of derivative loan commitments measured at fair value through profit or loss	(60)
Derecognition of liabilities for deferred fees on other loan commitments	4
Derecognition of derivative loan commitments measured at fair value through profit or loss	2
Recognition of ECL for off-balance sheet positions	(74)
Tax (expense) / benefit	(9)
Total change in retained earnings	(505)
Total change in equity due to the adoption of IFRS 9	(577)

Appendix 9 – Excerpts from the UBS Group Third Quarter 2018 Report

It should be noted that the term "pro-forma" as used in this Appendix 9 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

Recent developments

Changes to our functional and presentation currencies

Effective 1 October 2018 and as required by IAS 21, *The Effects of Changes in Foreign Exchange Rates*, the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland has changed from Swiss francs to US dollars and the functional currency of UBS AG's London Branch operations has changed from British pounds to US dollars. In line with these changes, the presentation currency of UBS Group AG's and UBS AG's consolidated financial statements will change from Swiss francs to US dollars. Prior periods will be restated for this presentation currency change, with assets, liabilities and total equity converted to US dollars at historic closing exchange rates prevailing on the respective balance sheet dates, and income and expenses translated at the respective average rates prevailing for the relevant periods. There will be no material changes to prior-period profit and loss or total equity attributable to UBS shareholders. The restated historical financial data time series is available under "Quarterly reporting – Time series & spreadsheets" at *www.ubs.com/investors.*

Beginning with our fourth quarter 2018 report, financial information will be presented in US dollars. In addition, we will continue to provide select financial and regulatory information in Swiss francs as part of our quarterly and annual reporting.

We expect that these functional and presentation currency changes, together with related changes to our risk management framework and certain hedging programs, should increase our reported Group net interest income by approximately USD 0.3 billion annually. Based on our US dollar balance sheet as of mid-October 2018, post implementation of the presentation and functional currency changes and related hedging activities, we estimate that a parallel +100 basis point shift in yield curves would result in a combined increase in annual net interest income of Global Wealth Management and Personal & Corporate Banking of approximately USD 0.6 billion, or USD 0.1 billion higher compared with the sensitivity as of 30 September 2018. The sensitivity of shareholders' equity to such a shift in yield curves continues to be estimated as a decrease of approximately USD 1.9 billion recognized in Other comprehensive income (OCI).

We estimate that, under a US dollar functional and presentation currency, a 10% depreciation of the US dollar against other currencies would reduce our common equity tier 1 (CET1) capital ratio by 7 basis points and our Swiss systemically relevant bank (SRB) going concern leverage ratio by 14 basis points. Conversely, we estimate that a 10% appreciation of the US dollar against other currencies would increase our CET1 capital ratio by 7 basis points and our Swiss SRB going concern leverage ratio by 15 basis points.

The aforementioned estimates are calculated based on our estimated US dollar balance sheet as of mid-October 2018 post implementation of the functional and presentation currency changes and related hedging activities.

Regulatory and legal developments

Adoption of Swiss corporate tax reform

In September 2018, the Swiss Parliament adopted corporate tax reform measures, previously known as Tax Proposal 17, that abolish preferential corporate tax treatment for holding companies and introduce a series of tax measures that are aligned to Organisation for Economic Co-operation and Development (OECD) standards, aiming to maintain Switzerland's competitiveness as a business location. The measures include an optional relief on capital tax that compensates for the proposed elimination of the current preferential holding company capital tax rate. In addition, the cantonal share of direct federal tax revenue will be increased, giving the cantons leeway to reduce their cantonal corporate income tax rate. If a referendum is not called, most measures will take effect in 2020, with some measures already taking effect in early 2019. The changes would increase our tax liability in Switzerland by a modest amount; the changes in cantonal tax rates, if enacted, would be expected to largely offset such increase.

UK withdrawal from the EU

We have planned our response to the UK withdrawal from the EU assuming that the UK will leave the EU in March 2019 and that any transition arrangements will only become legally binding close to the exit date. Given the continuing uncertainty on transition arrangements and the potential future restrictions on providing financial services into the EU from the UK, we are in the process of obtaining regulatory approvals for the merger of UBS Limited, our UK-headquartered subsidiary, into UBS Europe SE, our German-headquartered European subsidiary. Following completion of the merger, we expect that UBS Europe SE will become subject to direct supervision by the European Central Bank.

As reported in our Annual Report 2017, certain clients and other counterparties of UBS Limited would become clients or counterparties of UBS Europe SE through a business transfer proceeding and the merger of the two entities. We have now commenced the business transfer proceeding in the UK to facilitate the transfer of client business as well as the cross-border merger proceeding. We currently expect the business transfer and merger to become effective in the first quarter of 2019, prior to the UK leaving the EU at the end of March 2019.

We anticipate that clients and other counterparties of UBS Limited who can be serviced by UBS AG, London Branch generally will be migrated to UBS AG, London Branch in the fourth quarter of 2018 and prior to the merger of UBS Limited and UBS Europe SE. In connection with the merger, a small number of roles will be relocated from the UK to other European locations. We also expect to increase the loss-absorbing capacity of UBS Europe SE to reflect the additional activities it would acquire. The timing and extent of any actions we take may vary considerably from our current plan depending on regulatory requirements and the nature of any transition or successor agreements between the UK and the EU.

Developments related to the transition away from IBOR

Efforts to transition from the interbank offered rate (IBOR) benchmarks to alternative benchmark rates are continuing. The following key developments took place in the third quarter of 2018.

- The working group on euro risk-free rates recommended ESTER (euro short-term rate) as the replacement for EONIA (Euro OverNight Index Average), which will be prohibited by the EU Benchmark Regulation after 1 January 2020.
- Futures contracts referenced to the Secured Overnight Financing Rate (SOFR), the recommended successor to US dollar LIBOR (London Interbank Offered Rate), began trading on the Chicago Mercantile Exchange.
- The Bank of England consulted on the development of Term SONIA (Sterling Overnight Index Average) Reference Rates, which are expected to become available in the second half of 2019.
- The International Swaps and Derivatives Association, as part of a Financial Conduct Authority (FCA) mandate, consulted on preferred options for LIBOR transition fallbacks for derivatives.

The FCA and the Prudential Regulation Authority have written to the CEOs of banks and insurance companies in the UK, including UBS, seeking assurance that senior managers and boards understand the risks associated with the transition away from IBOR and are taking appropriate preparatory action to transition to alternative rates before the end of 2021.

We have a substantial number of contracts linked to IBOR and have established a cross-divisional, cross-regional governance structure and change program to address the scale and complexity of the transition from 2018 to 2021.

Other developments

Increase in stake in UBS Securities China

As disclosed in our second quarter 2018 report, we submitted a preliminary application in May 2018 to increase our shareholding in our China affiliate, UBS Securities Co. Limited (UBSS), from 24.99% to 51%. The transaction is subject to completion of a share purchase from existing shareholders and regulatory approval. If we acquire majority ownership, we expect to consolidate UBSS under International Financial Reporting Standards (IFRS) and remeasure our current 24.99% holding at fair value, resulting in an estimated loss of CHF 0.3 billion in Corporate Center – Services if the disclosed offer prices are accepted. The loss will be treated as an adjusting item. CET1 capital should not be materially affected as the loss is expected to be largely offset by the release of a capital deduction for goodwill included with the initial stake.

Worldline to acquire SIX Payment Services

On 15 May 2018, SIX and Worldline signed a binding agreement to enter into a strategic partnership in the cards business. Under the agreement, SIX will transfer its existing cards business to Worldline and receive a 27% stake in Worldline. The transaction is currently expected to close in the fourth quarter of 2018. When the transaction closes, we expect to recognize in the income statement a share of the gain recognized by SIX proportional to our 17.31% equity ownership in SIX, estimated at CHF 0.4 billion subject to Worldline's share price upon closing. The gain, of which approximately 80% will be reflected in Personal & Corporate Banking and approximately 20% in Global Wealth Management, will be treated as an adjusting item. For CET1 capital, the gain may be offset by related capital deductions.

Key financial reporting and accounting changes in 2019

IFRS 16, *Leases*

We will adopt IFRS 16, *Leases* on 1 January 2019, fundamentally changing how we account for operating leases when acting as a lessee. We expect assets and liabilities to increase by approximately CHF 4 billion upon adoption with a corresponding increase in RWA and LRD, with associated modest effects on capital and leverage ratios.

→ **Refer to "Note 1 Basis of accounting" in the "Consolidated financial statements" section of this report for further information**

UBS Group AG interim consolidated financial statements (unaudited)

Income statement

		For the quarter ended			Year-to-date	
CHF million, except per share data	Note	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income		2,486	2,469	2,575	7,205	7,504
Interest expense from financial instruments measured at amortized cost		(1,613)	(1,559)	(1,362)	(4,482)	(3,828)
Interest income from financial instruments measured at fair value through profit or loss		1,777	1,712	1,032	5,081	3,082
Interest expense from financial instruments measured at fair value through profit or loss		(979)	(1,637)	(503)	(3,405)	(1,902)
Net interest income		1,670	985	1,743	4,399	4,855
Other net income from fair value changes on financial instruments		1,143	2,187	1,089	4,797	3,985
Credit loss (expense) / recovery	9	(9)	(28)	7	(63)	(39)
Fee and commission income		4,779	4,793	4,686	14,454	14,219
Fee and commission expense		(401)	(417)	(442)	(1,227)	(1,327)
Net fee and commission income	3	4,378	4,377	4,244	13,228	12,892
Other income	4	97	34	62	171	252
Total operating income		7,279	7,554	7,145	22,531	21,946
Personnel expenses	5	3,858	4,059	3,893	11,931	11,967
General and administrative expenses	6	1,433	1,516	1,760	4,374	4,754
Depreciation and impairment of property, equipment and software		304	284	256	860	761
Amortization and impairment of intangible assets		15	16	16	47	53
Total operating expenses		5,611	5,875	5,924	17,212	17,534
Operating profit / (loss) before tax		1,668	1,679	1,221	5,320	4,412
Tax expense / (benefit)	7	419	394	272	1,270	974
Net profit / (loss)		1,249	1,285	948	4,050	3,438
Net profit / (loss) attributable to non-controlling interests		3	1	2	6	49
Net profit / (loss) attributable to shareholders		1,246	1,284	946	4,044	3,389

Earnings per share (CHF)						
Basic	8	0.33	0.34	0.25	1.08	0.91
Diluted	8	0.32	0.33	0.25	1.05	0.88

Statement of comprehensive income

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Comprehensive income attributable to shareholders					
Net profit / (loss)	1,246	1,284	946	4,044	3,389
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation					
Foreign currency translation movements related to net assets of foreign operations, before tax	(467)	785	533	(164)	(1,033)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax	105	(53)	(157)	149	44
Foreign currency translation differences on foreign operations reclassified to the income statement	6	15	2	21	27
Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to the income statement	0	0	0	0	0
Income tax relating to foreign currency translations, including the impact of net investment hedges	(34)	(1)	226	(34)	229
Subtotal foreign currency translation, net of tax	(390)	747	603	(28)	(733)
Financial assets measured at fair value through other comprehensive income					
Net unrealized gains / (losses), before tax	(22)	(24)	57	(117)	110
Impairment charges reclassified to the income statement from equity	0	0	0	0	13
Realized gains reclassified to the income statement from equity	0	0	(13)	0	(156)
Realized losses reclassified to the income statement from equity	0	0	2	0	9
Income tax relating to net unrealized gains / (losses)	6	6	(22)	31	(24)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax	(16)	(18)	24	(86)	(47)
Cash flow hedges of interest rate risk					
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	(253)	(127)	60	(822)	195
Net (gains) / losses reclassified to the income statement from equity	(45)	(70)	(209)	(242)	(640)
Income tax relating to cash flow hedges	64	37	30	215	93
Subtotal cash flow hedges, net of tax	(234)	(161)	(118)	(849)	(351)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(641)	568	509	(962)	(1,132)
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans					
Gains / (losses) on defined benefit plans, before tax	(54)	240	129	42	285
Income tax relating to defined benefit plans	4	4	(5)	52	(1)
Subtotal defined benefit plans, net of tax	(50)	244	123	94	283
Own credit on financial liabilities designated at fair value					
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	(284)	248	(36)	135	(288)
Income tax relating to own credit on financial liabilities designated at fair value	2	0	0	0	(1)
Subtotal own credit on financial liabilities designated at fair value, net of tax	(283)	248	(36)	135	(290)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(333)	492	87	229	(7)
Total other comprehensive income	(973)	1,060	596	(733)	(1,138)
Total comprehensive income attributable to shareholders	273	2,343	1,543	3,311	2,251

Statement of comprehensive income (continued)

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Comprehensive income attributable to non-controlling interests					
Net profit / (loss)	3	1	2	6	49
Other comprehensive income that will not be reclassified to the income statement					
Foreign currency translation movements, before tax	0	(2)	29	(2)	43
Income tax relating to foreign currency translation movements	0	0	0	0	0
Subtotal foreign currency translation, net of tax	0	(2)	29	(2)	43
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	(2)	29	(2)	43
Total comprehensive income attributable to non-controlling interests	3	(1)	31	4	92
Total comprehensive income					
Net profit / (loss)	1,249	1,285	948	4,050	3,438
Other comprehensive income	(973)	1,057	626	(735)	(1,095)
of which: other comprehensive income that may be reclassified to the income statement	*(641)*	*568*	*509*	*(962)*	*(1,132)*
of which: other comprehensive income that will not be reclassified to the income statement	*(333)*	*490*	*116*	*227*	*36*
Total comprehensive income	276	2,342	1,574	3,314	2,343

Balance sheet

CHF million	Note	30.9.18	30.6.18	31.12.17
Assets				
Cash and balances at central banks		92,632	102,262	87,775
Loans and advances to banks		15,339	15,577	13,739
Receivables from securities financing transactions		81,951	76,450	89,633
Cash collateral receivables on derivative instruments	11	21,414	24,937	23,434
Loans and advances to customers	9	318,127	318,278	318,509
Other financial assets measured at amortized cost	12	20,623	20,996	36,861
Total financial assets measured at amortized cost		550,086	558,500	569,950
Financial assets at fair value held for trading	10	120,843	112,121	126,144
of which: assets pledged as collateral that may be sold or repledged by counterparties		*37,019*	*36,580*	*35,363*
Derivative financial instruments	10, 11	114,246	121,604	118,227
Brokerage receivables	10	20,235	18,415	
Financial assets at fair value not held for trading	10	87,196	93,217	58,933
Total financial assets measured at fair value through profit or loss		342,520	345,357	303,304
Financial assets measured at fair value through other comprehensive income	10	6,618	6,941	8,665
Investments in associates		982	1,026	1,018
Property, equipment and software		9,042	9,083	8,829
Goodwill and intangible assets		6,316	6,391	6,398
Deferred tax assets		9,635	9,859	9,844
Other non-financial assets	12	7,272	7,324	7,633
Total assets		932,471	944,482	915,642

Balance sheet (continued)

CHF million	Note	30.9.18	30.6.18	31.12.17
Liabilities				
Amounts due to banks		10,109	10,242	7,533
Payables from securities financing transactions		10,816	10,130	17,044
Cash collateral payables on derivative instruments	11	27,635	31,843	30,247
Customer deposits		401,298	403,430	408,999
Debt issued measured at amortized cost	14	133,990	137,530	139,551
Other financial liabilities measured at amortized cost	12	6,330	6,909	36,337
Total financial liabilities measured at amortized cost		590,179	600,084	639,711
Financial liabilities at fair value held for trading	10	32,030	31,416	30,463
Derivative financial instruments	10, 11	113,553	119,223	116,133
Brokerage payables designated at fair value	10	38,268	37,904	
Debt issued designated at fair value	10, 13	61,631	56,849	49,502
Other financial liabilities designated at fair value	10, 12	34,605	37,342	16,223
Total financial liabilities measured at fair value through profit or loss		280,087	282,734	212,322
Provisions	15	2,963	3,123	3,133
Other non-financial liabilities	12	8,083	7,708	9,205
Total liabilities		881,311	893,649	864,371
Equity				
Share capital		385	385	385
Share premium		23,087	22,961	25,942
Treasury shares		(2,082)	(2,032)	(2,133)
Retained earnings		36,497	35,584	32,752
Other comprehensive income recognized directly in equity, net of tax		(6,765)	(6,124)	(5,732)
Equity attributable to shareholders		51,122	50,774	51,214
Equity attributable to non-controlling interests		38	60	57
Total equity		51,160	50,834	51,271
Total liabilities and equity		932,471	944,482	915,642

Statement of changes in equity

CHF million	Share capital	Share premium	Treasury shares	Retained earnings
Balance as of 1 January 2017	**385**	**28,254**	**(2,249)**	**31,725**
Issuance of share capital	0			
Acquisition of treasury shares			(883)	
Delivery of treasury shares under share-based compensation plans		(823)	920	
Other disposal of treasury shares			57	
Premium on shares issued and warrants exercised		13		
Share-based compensation expensed in the income statement		543		
Tax (expense) / benefit		24		
Dividends		(2,229)[2]		
New consolidations / (deconsolidations) and other increases / (decreases)		(1)		
Total comprehensive income for the period				3,382
of which: net profit / (loss)				*3,389*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*283*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*(290)*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 September 2017	**385**	**25,782**	**(2,155)**	**35,107**
Balance as of 1 January 2018 before the adoption of IFRS 9 and IFRS 15	385	25,942	(2,133)	32,752
Effect of adoption of IFRS 9				(505)
Effect of adoption of IFRS 15				(24)
Balance as of 1 January 2018 after the adoption of IFRS 9 and IFRS 15	385	25,942	(2,133)	32,223
Issuance of share capital	0			
Acquisition of treasury shares			(1,025)	
Delivery of treasury shares under share-based compensation plans		(939)	1,042	
Other disposal of treasury shares			34	
Premium on shares issued and warrants exercised		17		
Share-based compensation expensed in the income statement		519		
Tax (expense) / benefit		15		
Dividends		(2,444)[2]		
Equity classified as obligation to purchase own shares		(15)		
New consolidations / (deconsolidations) and other increases / (decreases)		(8)		
Total comprehensive income for the period				4,273
of which: net profit / (loss)				*4,044*
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans				*94*
of which: OCI that will not be reclassified to the income statement, net of tax – own credit				*135*
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 September 2018	385	23,087	(2,082)	36,497

1 Excludes defined benefit plans and own credit that are recorded directly in Retained earnings. 2 Reflects the payment of an ordinary cash dividend of CHF 0.65 (2017: CHF 0.60) per dividend-bearing share out of the capital contribution reserve.

Other comprehensive income recognized directly in equity, net of tax[1]	*of which: foreign currency translation*	*of which: financial assets measured at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Non-controlling interests	Total equity
(4,494)	*(5,564)*	*98*	*972*	**53,621**	**682**	**54,302**
				0		0
				(883)		(883)
				97		97
				57		57
				13		13
				543		543
				24		24
				(2,229)	(50)	(2,280)
				(1)	19	18
(1,132)	*(733)*	*(47)*	*(351)*	2,251	92	2,343
				3,389	*49*	*3,438*
(1,132)	*(733)*	*(47)*	*(351)*	*(1,132)*		*(1,132)*
				283		*283*
				(290)		*(290)*
				0	*43*	*43*
(5,626)	*(6,298)*	*51*	*621*	**53,493**	**743**	**54,236**
(5,732)	*(6,095)*	*12*	*351*	51,214	57	51,271
(72)		*(72)*		(577)		(577)
				(24)		(24)
(5,804)	*(6,095)*	*(60)*	*351*	50,612	57	50,670
				0		0
				(1,025)		(1,025)
				103		103
				34		34
				17		17
				519		519
				15		15
				(2,444)	(7)	(2,450)
				(15)		(15)
				(8)	(16)	(24)
(962)	*(28)*	*(86)*	*(849)*	3,311	4	3,314
				4,044	*6*	*4,050*
(962)	*(28)*	*(86)*	*(849)*	*(962)*		*(962)*
				94		*94*
				135		*135*
				0	*(2)*	*(2)*
(6,765)	*(6,122)*	*(144)*	*(498)*	51,122	38	51,160

Statement of cash flows[1]

	Year-to-date	
CHF million	30.9.18	30.9.17
Cash flow from / (used in) operating activities		
Net profit / (loss)	4,050	3,438
Non-cash items included in net profit and other adjustments:		
Depreciation and impairment of property, equipment and software	860	761
Amortization and impairment of intangible assets	47	53
Credit loss expense / (recovery)	63	39
Share of net profits of associates / joint ventures and impairment of associates	(46)	(49)
Deferred tax expense / (benefit)	643	306
Net loss / (gain) from investing activities	(16)	85
Net loss / (gain) from financing activities	2,636	583
Other net adjustments	(362)	(334)
Net change in operating assets and liabilities:		
Loans and advances to banks / amounts due to banks	2,359	27
Securities financing transactions	887	(12,944)
Cash collateral on derivative instruments	(339)	(2,199)
Loans and advances to customers	(8,399)	(10,378)
Customer deposits	(1,669)	(18,465)
Financial assets and liabilities at FV held for trading and derivative financial instruments	(6,981)	(7,037)
Brokerage receivables and payables	7,385	
Financial assets at fair value not held for trading, other financial assets and liabilities	7,066	9,960
Provisions, other non-financial assets and liabilities	(72)	(579)
Income taxes paid, net of refunds	(722)	(875)
Net cash flow from / (used in) operating activities	7,387	(37,607)
Cash flow from / (used in) investing activities		
Purchase of subsidiaries, associates and intangible assets	(16)	(100)
Disposal of subsidiaries, associates and intangible assets[2]	126	148
Purchase of property, equipment and software	(1,177)	(1,138)
Disposal of property, equipment and software	103	28
Purchase of financial assets measured at fair value through other comprehensive income	(1,038)	(7,829)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	1,049	10,559
Net (purchase) / redemption of debt securities measured at amortized cost	(2,084)	
Net (purchase) / redemption of financial assets held to maturity		11
Net cash flow from / (used in) investing activities	(3,037)	1,679

Table continues on the next page.

Statement of cash flows (continued)[1]

Table continued from previous page.

	Year-to-date	
CHF million	30.9.18	30.9.17
Cash flow from / (used in) financing activities		
Net short-term debt issued / (repaid)	(7,302)	21,855
Net movements in treasury shares and own equity derivative activity	(896)	(737)
Distributions paid on UBS shares	(2,444)	(2,229)
Issuance of long-term debt, including debt issued designated at fair value	48,932	40,066
Repayment of long-term debt, including debt issued designated at fair value	(35,163)	(32,346)
Net changes in non-controlling interests and preferred notes	14	(50)
Net cash flow from / (used in) financing activities	3,141	26,558
Total cash flow		
Cash and cash equivalents at the beginning of the period	102,200	121,138
Net cash flow from / (used in) operating, investing and financing activities	7,491	(9,371)
Effects of exchange rate differences on cash and cash equivalents	(938)	(324)
Cash and cash equivalents at the end of the period[3]	108,753	111,444
of which: cash and balances at central banks	*92,518*	*94,563*
of which: loans and advances to banks	*13,846*	*13,783*
of which: money market paper[4]	*2,389*	*3,097*
Additional information		
Net cash flow from / (used in) operating activities includes:		
Interest received in cash	10,254	9,126
Interest paid in cash	6,665	5,046
Dividends on equity investments, investment funds and associates received in cash[5]	1,884	1,465

1 Upon adoption of IFRS 9 on 1 January 2018, cash flows from certain financial instruments have been reclassified from investing to operating activities. Refer to Note 19 for more information. 2 Includes dividends received from associates. 3 CHF 3,054 million and CHF 2,559 million of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 30 September 2018 and 30 September 2017, respectively. Refer to "Note 23 Restricted and transferred financial assets" in the "Consolidated financial statements" section in the Annual Report 2017 for more information. 4 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading, and Other financial assets measured at amortized cost. 5 Includes dividends received from associates reported within Cash flow from / (used in) investing activities.

Notes to the UBS Group AG interim consolidated financial statements (unaudited)

Note 1 Basis of accounting

1.1 Basis of preparation

The consolidated financial statements (the Financial Statements) of UBS Group AG and its subsidiaries (together "UBS" or "the Group") are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), which is also the functional currency of UBS Group AG and UBS AG's Head Office and its Swiss-based operations.[1] These interim Financial Statements are prepared in accordance with IAS 34, *Interim Financial Reporting*.

In preparing these interim Financial Statements, the same accounting policies and methods of computation have been applied as in the UBS Group AG consolidated annual Financial Statements for the period ended 31 December 2017, except for the changes described in this note, in Note 19 of this report and in "Note 1 Basis of accounting" in the "Consolidated financial statements" section of the first and second quarter 2018 reports. These interim Financial Statements are unaudited and should be read in conjunction with UBS Group AG's audited consolidated Financial Statements included in the Annual Report 2017. In the opinion of management, all necessary adjustments were made for a fair presentation of the Group's financial position, results of operations and cash flows.

Preparation of these interim Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities. These estimates and assumptions are based on the best available information. Actual results in the future could differ from such estimates and such differences may be material to the Financial Statements. Revisions to estimates, based on regular reviews, are recognized in the period in which they occur. For more information on areas of estimation uncertainty considered to require critical judgment, refer to "Note 1a Significant accounting policies" in the "Consolidated financial statements" section of the Annual Report 2017 and in Note 19.1 of this report.

1.2 Adoption of IFRS 9 and IFRS 15 in the first quarter of 2018

IFRS 9, *Financial Instruments*

As disclosed in the UBS Group first and second quarter 2018 reports, effective 1 January 2018, UBS adopted IFRS 9, *Financial Instruments*, which replaces IAS 39*, Financial Instruments: Recognition and Measurement* and substantially changes accounting and financial reporting in three key areas: classification and measurement of financial assets, impairment and hedge accounting. In addition, UBS early adopted the Amendment to IFRS 9*, Prepayment Features with Negative Compensation*, issued in October 2017, which allows the Group to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs. The Group continues to apply hedge accounting under IAS 39 as permitted by IFRS 9 and early adopted the own credit requirements of IFRS 9 during the first quarter of 2016.

As permitted by the transitional provisions of IFRS 9, UBS elected not to restate comparative period information. Any effect on the carrying amounts of financial assets and liabilities at the date of transition to IFRS 9 was recognized as an adjustment to opening retained earnings. The adoption of IFRS 9 effective 1 January 2018 resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of impairment requirements based on an expected credit loss (ECL) methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax.

1 Following expectations set out in UBS's Annual Report 2017, the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland has changed from Swiss francs to US dollars (USD), and the functional currency of UBS AG's London Branch operations has changed from British pounds to USD effective 1 October 2018 on a prospective basis, in light of cumulative changes in UBS's legal structure, business activities and evolving changes to its structural currency management strategy. In line with these changes, the presentation currency of UBS Group AG's consolidated and UBS AG's consolidated financial statements has changed from Swiss francs to USD. Refer to Note 17 for more information on events after the reporting period.

Note 1 Basis of accounting (continued)

The calculation of ECL requires management to apply judgment and make estimates and assumptions that involve significant uncertainty at the time they are made and can have a material effect on the timing and amount of ECL to be recognized. These judgments, estimates and assumptions are an inherent part of the ECL calculation, which includes probability of default (PD), loss given default (LGD) and exposure at default (EAD) models, the determination of a significant increase in credit risk, the selection of appropriate scenarios and macroeconomic factors and the ECL measurement period. These inputs are based on the best available information and are subject to frequent re-assessment.

The updated accounting policies for classification and measurement of financial instruments and impairment of financial assets as applied from 1 January 2018 are presented in Note 19.1 of this report, alongside further detail on areas of critical accounting estimates and judgments. The detailed effects of the adoption of IFRS 9 on 1 January 2018 are presented in Note 19.2.

→ **Refer to the 31 March 2018 Pillar 3 report – UBS Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the effect of the IFRS 9 transition on UBS's capital adequacy**

IFRS 15, *Revenue from Contracts with Customers*

As disclosed in the UBS Group first quarter and second quarter 2018 reports, effective from 1 January 2018, UBS adopted IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue* and establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied.

The adoption of IFRS 15 resulted in changes to UBS's accounting policies applicable from 1 January 2018. Accounting policies set out in Note 1.3.2 in the "Consolidated financial statements" section of the first quarter 2018 report replace item 4 of Note 1a in the UBS Group AG consolidated annual Financial Statements for the year ended 31 December 2017. The primary changes stem from IFRS 15 requirements that fee and commission income is measured based on consideration specified in a legally enforceable contract and variable consideration that is contingent on an uncertain event can only be recognized to the extent that it is highly probable that a significant reversal will not occur. UBS does not generally consider the highly probable criteria to be met where the contingency is beyond the control of UBS. As permitted by the transitional provisions of IFRS 15, UBS elected not to restate comparative figures. Instead, the cumulative effect of initially applying the standard was recognized as an adjustment to the opening balance of retained earnings. A transition adjustment of CHF 27 million on a pre-tax basis and CHF 24 million net of tax was posted to retained earnings to reverse income recognized prior to 1 January 2018 under IAS 18 that must be deferred under IFRS 15 either due to the variable consideration constraint (asset management performance fees of CHF 16 million) or because UBS does not have an enforceable right to a specified amount of consideration (commission-sharing agreements for research services of CHF 11 million).

IFRS 15 also resulted in changes to presentation. Fee and commission income and expenses are presented gross rather than net on the face of the income statement when UBS is considered principal to the contract with a customer. In turn, fees and expenses can only be presented net when UBS is considered to be an agent.

→ **Refer to Note 3 for more information**

1.3 New accounting standards to be adopted in 2019

IFRS 16, *Leases*

UBS will adopt IFRS 16, *Leases,* on 1 January 2019. IFRS 16 will fundamentally change how UBS accounts for operating leases when UBS is acting as a lessee, with a requirement to record a lease obligation and a right-of-use asset on the balance sheet. Upon adoption of IFRS 16, assets and liabilities are expected to increase by approximately CHF 4 billion with no material impact to the Group's equity. The Group has made significant progress during 2018 in developing the core technology build, reporting impacts and governance frameworks, which it intends to finalize in the fourth quarter of 2018.

Note 2 Segment reporting

UBS's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which are supported by Corporate Center. The four business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center and its units, reflect the management structure of the Group. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Refer to "Note 1a Significant accounting policies" item 2 and "Note 2 Segment reporting" in the "Consolidated financial statements" section of the Annual Report 2017 for more information on the Group's reporting segments.

Effective 1 February 2018, UBS integrated its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division. Refer to "Note 1.2 Changes to segment reporting effective first quarter 2018" in the "Consolidated financial statements" section of the first quarter 2018 report for more information.

	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS
CHF million					Services	Group ALM	Non-core and Legacy Portfolio	
For the nine months ended 30 September 2018[1]								
Net interest income	3,042	1,504	(22)	758	(280)	(622)	21	4,399
Non-interest income	9,269	1,346	1,360	5,971	93	(90)	246	18,195
Allocations from CC – Group ALM	89	35	10	(304)	32	217	(78)	0
Income	12,399	2,885	1,348	6,425	(156)	(495)	189	22,594
Credit loss (expense) / recovery	(4)	(38)	0	(20)	0	0	(2)	(63)
Total operating income	12,395	2,847	1,348	6,405	(155)	(496)	187	22,531
Personnel expenses	5,631	601	522	2,327	2,793	29	28	11,931
General and administrative expenses	882	170	141	387	2,685	29	80	4,374
Services (to) / from CC and other BDs	2,748	867	356	2,045	(6,150)	2	132	0
of which: services from CC – Services	*2,671*	*922*	*386*	*1,988*	*(6,204)*	*124*	*114*	*0*
Depreciation and impairment of property, equipment and software	3	10	1	6	840	0	0	860
Amortization and impairment of intangible assets	35	0	1	10	1	0	0	47
Total operating expenses	9,298	1,647	1,021	4,775	170	59	241	17,212
Operating profit / (loss) before tax	**3,097**	**1,200**	**327**	**1,630**	**(325)**	**(555)**	**(54)**	**5,320**
Tax expense / (benefit)								1,270
Net profit / (loss)								**4,050**
As of 30 September 2018								
Total assets	**195,996**	**136,071**	**26,116**	**269,597**	**20,712**	**249,825**	**34,155**	**932,471**
For the nine months ended 30 September 2017[1]								
Net interest income	2,693	1,427	(23)	855	(260)	142	22	4,855
Non-interest income	8,940	1,320	1,432	5,344	64	(21)	52	17,129
Allocations from CC – Group ALM	275	139	14	(264)	89	(199)	(54)	0
Income	11,908	2,886	1,422	5,935	(107)	(79)	19	21,985
Credit loss (expense) / recovery	(3)	(23)	0	(10)	0	0	(3)	(39)
Total operating income	11,905	2,864	1,422	5,924	(107)	(79)	16	21,946
Personnel expenses	5,628	648	542	2,300	2,788	25	34	11,967
General and administrative expenses	878	203	161	398	3,119	14	(19)	4,754
Services (to) / from CC and other BDs	2,641	819	375	2,009	(6,002)	(10)	167	0
of which: services from CC – Services	*2,567*	*887*	*403*	*1,942*	*(6,043)*	*100*	*144*	*0*
Depreciation and impairment of property, equipment and software	3	9	1	7	740	0	0	761
Amortization and impairment of intangible assets	34	0	3	9	6	0	0	53
Total operating expenses	9,184	1,678	1,082	4,724	652	29	183	17,534
Operating profit / (loss) before tax	**2,721**	**1,185**	**340**	**1,200**	**(759)**	**(108)**	**(167)**	**4,412**
Tax expense / (benefit)								974
Net profit / (loss)								**3,438**
As of 31 December 2017								
Total assets	**190,074**	**135,556**	**14,269**	**262,931**	**20,875**	**245,737**	**46,200**	**915,642**

1 Prior period information may not be comparable as a result of the adoption of IFRS 9 and IFRS 15, both effective 1 January 2018. Refer to Note 1 for more information on these changes.

Note 3 Net fee and commission income[1]

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Underwriting fees	206	183	236	613	788
of which: equity underwriting fees	*96*	*88*	*149*	*302*	*459*
of which: debt underwriting fees	*111*	*95*	*87*	*312*	*329*
M&A and corporate finance fees	256	178	174	627	521
Brokerage fees	770	877	871	2,615	2,838
Investment fund fees	1,198	1,213	1,052	3,618	3,159
Portfolio management and related services	1,911	1,902	1,890	5,649	5,536
Other	439	440	461	1,332	1,377
Total fee and commission income[2]	4,779	4,793	4,686	14,454	14,219
of which: recurring	*3,176*	*3,161*		*9,408*	
of which: transaction-based	*1,585*	*1,611*		*4,988*	
of which: performance-based	*18*	*22*		*58*	
Brokerage fees paid	62	75	162	221	506
Other	340	342	280	1,005	821
Total fee and commission expense	401	417	442	1,227	1,327
Net fee and commission income	4,378	4,377	4,244	13,228	12,892
of which: net brokerage fees	*709*	*802*	*709*	*2,394*	*2,332*

1 Upon adoption of IFRS 15, certain brokerage fees paid in an agency capacity have been reclassified from Fee and commission expense to Fee and commission income on a prospective basis from 1 January 2018, primarily relating to third-party execution costs for exchange-traded derivative transactions and fees payable to third-party research providers on behalf of clients. In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, have been reclassified between reporting lines to better reflect the nature of the revenues, with prior period information restated accordingly. This resulted in the following impacts: For the quarter ended 30 September 2017, CHF 68 million was reclassified from Underwriting fees to Brokerage fees and CHF 265 million was reclassified from Portfolio management and related services to Investment fund fees. For the first nine months of 2017, CHF 232 million was reclassified from total Underwriting fees to Brokerage fees and CHF 764 million was reclassified from Portfolio management and related services to Investment fund fees. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from General and administrative expenses to Fee and commission expense to improve the alignment of transaction-based costs with the associated revenue stream, primarily impacting clearing costs, client loyalty costs, fund and custody expenses. As the impact of this reclassification was not material, prior period information was not restated. 2 Reflects third-party fee and commission income for the third quarter of 2018 of CHF 2,783 million for Global Wealth Management (second quarter of 2018: CHF 2,832 million), CHF 306 million for Personal & Corporate Banking (second quarter of 2018: CHF 301 million), CHF 792 million for Asset Management (second quarter of 2018: CHF 801 million), CHF 891 million for the Investment Bank (second quarter of 2018: CHF 857 million) and CHF 8 million for Corporate Center (second quarter of 2018: CHF 3 million).

Note 4 Other income

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Associates, joint ventures and subsidiaries					
Net gains / (losses) from disposals of subsidiaries[1]	19	(10)	3	8	(19)
Share of net profits of associates and joint ventures	16	15	20	46	56
Impairments related to associates			(7)		(7)
Total	35	5	17	54	30
Financial assets measured at fair value through other comprehensive income					
Net gains / (losses) from disposals	0	0	11	0	147
Impairments	0	0	0	0	(13)
Total	0	0	10	0	133
Net gains / (losses) from disposals of financial assets measured at amortized cost	0	(1)	2	0	17
Net income from properties (excluding net gains / (losses) from disposals)[2]	6	6	6	18	18
Net gains / (losses) from disposals of properties held for sale	30	0	0	30	(1)
Other	26	23	27	68	54
Total other income	97	34	62	171	252

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to disposed foreign subsidiaries and branches. 2 Includes net rent received from third parties and net operating expenses.

Note 5 Personnel expenses

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Salaries and variable compensation	2,260	2,430	2,291	7,274	7,161
Financial advisor variable compensation[1]	996	996	976	2,966	2,956
Contractors	117	127	116	360	316
Social security	186	195	205	609	594
Pension and other post-employment benefit plans	146	169	170	285[2]	539
Other personnel expenses	154	142	134	438	400
Total personnel expenses	3,858	4,059	3,893	11,931	11,967

1 Financial advisor variable compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated on the basis of financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 2 Changes to the Pension Fund of UBS in Switzerland in the first quarter of 2018 resulted in a reduction in the pension obligation recognized by UBS. As a consequence, a pre-tax gain of CHF 225 million was recognized in the income statement in the first quarter of 2018, with no overall effect on total equity. Refer to "Note 5 Personnel expenses" in the "Consolidated financial statements" section of the first quarter 2018 report for more information.

Note 6 General and administrative expenses

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Occupancy	226	221	216	667	654
Rent and maintenance of IT and other equipment	155	148	132	453	411
Communication and market data services	155	154	152	461	455
Administration	115	71	145	322	345
of which: UK bank levy[1]	*0*	*(45)*	*0*	*(45)*	*(71)*
Marketing and public relations	81	84	88	245	273
Travel and entertainment	100	112	98	304	296
Professional fees	232	237	304	701	836
Outsourcing of IT and other services	341	347	392	1,028	1,138
Litigation, regulatory and similar matters[2]	3	131	197	123	239
Other	27	10	37	70	106
Total general and administrative expenses	1,433	1,516	1,760	4,374	4,754

1 The credits presented for the periods shown are related to prior years. 2 Reflects the net increase / (release) in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 15 for more information. Also includes recoveries from third parties (third quarter of 2018: CHF 0 million; second quarter of 2018: CHF 10 million; third quarter of 2017: CHF 50 million).

Note 7 Income taxes

The Group recognized an income tax expense of CHF 419 million for the third quarter of 2018 compared with an income tax expense of CHF 272 million for the third quarter of 2017.

The current tax expense was CHF 231 million compared with CHF 230 million in the third quarter of 2017 and related to taxable profits of UBS Switzerland AG and other legal entities in the UBS Group.

Deferred tax expenses were CHF 188 million in the third quarter of 2018 compared with CHF 42 million in the third quarter of 2017 and mainly related to the amortization of deferred tax assets previously recognized in relation to tax losses carried forward and deductible temporary differences to reflect their offset against profits for the quarter.

Note 8 Earnings per share (EPS) and shares outstanding

	As of or for the quarter ended			As of or year-to-date	
	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Basic earnings (CHF million)					
Net profit / (loss) attributable to shareholders	1,246	1,284	946	4,044	3,389
Diluted earnings (CHF million)					
Net profit / (loss) attributable to shareholders	1,246	1,284	946	4,044	3,389
Less: (profit) / loss on own equity derivative contracts	0	(1)	0	(1)	0
Net profit / (loss) attributable to shareholders for diluted EPS	1,246	1,283	946	4,043	3,389
Weighted average shares outstanding					
Weighted average shares outstanding for basic EPS[1]	3,729,382,991	3,750,246,679	3,717,418,510	3,736,110,404	3,715,168,026
Effect of dilutive potential shares resulting from notional shares, in-the-money options and warrants outstanding	107,610,429	99,757,026	120,524,131	112,014,854	118,377,580
Weighted average shares outstanding for diluted EPS	3,836,993,420	3,850,003,705	3,837,942,641	3,848,125,258	3,833,545,606
Earnings per share (CHF)					
Basic	0.33	0.34	0.25	1.08	0.91
Diluted	0.32	0.33	0.25	1.05	0.88
Shares outstanding					
Shares issued	3,855,121,120	3,854,589,552	3,852,361,272		
Treasury shares	128,747,979	125,469,362	133,704,681		
Shares outstanding	3,726,373,141	3,729,120,190	3,718,656,591		

1 The weighted average shares outstanding for basic EPS are calculated by taking the number of shares at the beginning of the period, adjusted by the number of shares acquired or issued during the period, multiplied by a time-weighted factor for the period outstanding. As a result, balances are affected by the timing of acquisitions and issuances during the period.

The table below outlines the potential shares that could dilute basic earnings per share in the future, but were not dilutive for the periods presented.

Number of shares	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Potentially dilutive instruments					
Employee share-based compensation awards	2,690,180	6,592,571	26,430,448	2,690,180	26,430,448
Other equity derivative contracts	13,427,788	11,499,172	13,334,222	11,737,221	14,552,127
Total	16,117,968	18,091,743	39,764,670	14,427,401	40,982,575

Note 9 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses amounted to CHF 9 million in the third quarter of 2018, reflecting an CHF 11 million decrease in expected credit losses (ECL) from stage 1 and 2 positions and a CHF 20 million increase in losses from credit-impaired (stage 3) positions.

An CHF 11 million decrease in stage 1 and 2 ECL was recognized in the period, primarily arising from a canceled facility in the Investment Bank, as well as improvements in market data, macroeconomic data and other risk parameters, predominantly impacting Personal & Corporate Banking and Global Wealth Management portfolios, partly offset by the effect of updated scenario weights, as well as new transactions.

Stage 3 losses of CHF 20 million were recognized across a number of defaulted positions, predominantly in Personal & Corporate Banking and Global Wealth Management.

There have not been any material changes to the models used to calculate ECL and to determine stage allocation since 1 January 2018, the date of transition to IFRS 9.

As outlined in Note 19, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. A quantitative estimation of the scenario weights was re-performed in the third quarter of 2018 and the model-based quantitative results indicated a shift from the upside scenario to the mild downside scenario. Consequently, UBS decided to update the scenario weights applied to calculate ECL as of 30 September 2018, resulting in a shift of 2.5% from the upside to the mild downside scenario when compared with the weights applied as of 30 June 2018.

Economic scenarios and weights applied

	Assigned weights in %	
ECL scenario	30.9.18	30.6.18
Upside	17.5	20.0
Baseline	42.5	42.5
Mild downside	32.5	30.0
Severe downside	7.5	7.5

Market data, such as house prices, equity indices and foreign exchange rates, and macroeconomic factors, such as unemployment rates and gross domestic product (GDP), have been updated to reflect the most recently observed economic trends and future outlooks. The updates reflect favorable developments in the last quarter and offset the effect of the aforementioned change in scenario weights.

b) ECL-relevant balance sheet and off-balance sheet positions including ECL allowances and provisions

The tables on the following pages provide information on financial instruments and certain non-financial instruments that are subject to ECL. For amortized cost instruments, the net carrying value represents the maximum exposure to credit risk, taking into account the allowance for credit losses. Financial assets measured at fair value through other comprehensive income (FVOCI) are also subject to ECL; however, unlike amortized cost instruments, the allowance does not reduce the carrying value of these financial assets. The carrying value of financial assets measured at FVOCI represents the maximum exposure to credit risk. Tables provided for 30 September 2018 and 30 June 2018 include additional detail on certain segments that have not been provided for balances as of 1 January 2018.

In addition to on-balance sheet financial assets, certain off-balance sheet and other credit lines are also subject to ECL. The maximum exposure to credit risk for off-balance sheet financial instruments is calculated based on notional amounts.

Note 9 Expected credit loss measurement (continued)

UBS has established ECL disclosure segments or "ECL segments" to disaggregate portfolios based on shared risk characteristics and on the same or similar rating methods applied. The key segments are presented in the table below.

Segment	Segment description	Description of credit risk sensitivity	Business division / Corporate Center
Private clients with mortgages	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Sensitive to the interest rate environment, employment status and influence from regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Real estate financing	Rental or income-producing real estate financing to private and corporate clients secured by real estate	Sensitive to GDP development, the interest rate environment and regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Large corporate clients	Lending to large corporate and multinational clients	Sensitive to GDP development, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking – Investment Bank
SME clients	Lending to small and medium-sized corporate clients	Sensitive to GDP development, the interest rate environment and, to some extent, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking
Financial intermediaries and hedge funds	Financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Sensitive to GDP development, the interest rate environment, regulatory changes and political risk	– Personal & Corporate Banking – Investment Bank – Corporate Center
Lombard	Loans secured by pledges of marketable securities, guarantees and other forms of collateral	Sensitive to the market (e.g., changes in collateral as well as in invested assets)	– Personal & Corporate Banking – Global Wealth Management
Credit cards	Credit card solutions in Switzerland and the US	Sensitive to the interest rate environment and employment status	– Personal & Corporate Banking – Global Wealth Management
Commodity trade finance	Working capital financing of commodity traders, generally extended on a self-liquidating transactional basis	Sensitive primarily to the strength of individual transaction structures and collateral values (price volatility of commodities) as the primary source for debt service is directly linked to the shipments financed	– Personal & Corporate Banking
Leasing (finance lease receivables)	Financing of private aircraft Financing of investment goods	Sensitive to changes in collateral values Sensitive to GDP development, the interest rate environment, seasonality and business cycles and collateral values	– Personal & Corporate Banking

Note 9 Expected credit loss measurement (continued)

CHF million	30.9.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	92,632	92,632	0	0	0	0	0	0
Loans and advances to banks	15,339	15,333	5	2	(5)	(2)	0	(3)
Receivables from securities financing transactions	81,951	81,951	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	21,414	21,414	0	0	0	0	0	0
Loans and advances to customers	318,127	295,587	20,939	1,601	(832)	(50)	(170)	(612)
of which: Private clients with mortgage	*123,568*	*112,299*	*10,505*	*765*	*(117)*	*(10)*	*(74)*	*(33)*
of which: Real estate financing	*35,964*	*27,332*	*8,592*	*39*	*(62)*	*(4)*	*(48)*	*(10)*
of which: Large corporate clients	*10,710*	*10,095*	*543*	*72*	*(84)*	*(5)*	*(10)*	*(68)*
of which: SME clients	*9,710*	*8,351*	*812*	*546*	*(291)*	*(6)*	*(25)*	*(261)*
of which: Lombard	*114,093*	*114,070*	*0*	*23*	*(97)*	*(4)*	*0*	*(93)*
of which: Credit cards	*1,427*	*1,126*	*288*	*13*	*(36)*	*(6)*	*(12)*	*(18)*
of which: Commodity trade finance	*3,534*	*3,505*	*12*	*17*	*(84)*	*(5)*	*0*	*(80)*
Other financial assets measured at amortized cost	20,623	19,698	274	651	(168)	(37)	(5)	(125)
of which: Loans to financial advisors	*3,294*	*2,889*	*103*	*302*	*(121)*	*(30)*	*(3)*	*(89)*
Total financial assets measured at amortized cost[1]	550,086	526,615	21,217	2,254	(1,007)	(92)	(176)	(740)
Financial assets measured at fair value through other comprehensive income	6,618	6,618	0	0	0	0	0	0
Total on-balance sheet financial assets in scope of ECL requirements	556,704	533,233	21,217	2,254	(1,007)	(92)	(176)	(740)

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,133	16,616	336	182	(39)	(7)	(1)	(31)
of which: Large corporate clients	*3,798*	*3,481*	*203*	*115*	*(7)*	*(1)*	*0*	*(5)*
of which: SME clients	*1,246*	*1,075*	*115*	*56*	*(23)*	*0*	*0*	*(22)*
of which: Financial intermediaries and hedge funds	*6,972*	*6,967*	*5*	*0*	*(4)*	*(4)*	*0*	*0*
of which: Lombard	*2,317*	*2,317*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*1,861*	*1,840*	*10*	*11*	*(1)*	*(1)*	*0*	*0*
Irrevocable loan commitments	29,659	29,042	550	66	(39)	(31)	(8)	0
of which: Large corporate clients	*21,286*	*20,697*	*537*	*52*	*(31)*	*(23)*	*(8)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	3,833	3,833	0	0	0	0	0	0
Committed unconditionally revocable credit lines	34,966	33,850	1,026	90	(35)	(17)	(18)	0
of which: Real estate financing	*2,797*	*2,351*	*446*	*0*	*(18)*	*(4)*	*(14)*	*0*
of which: Large corporate clients	*4,200*	*4,121*	*62*	*17*	*(1)*	*(1)*	*0*	*0*
of which: SME clients	*4,440*	*4,191*	*179*	*70*	*(7)*	*(6)*	*(2)*	*0*
of which: Lombard	*6,063*	*6,063*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*7,032*	*6,745*	*287*	*0*	*(5)*	*(3)*	*(2)*	*0*
of which: Commodity trade finance	*3,061*	*3,048*	*12*	*1*	*(1)*	*(1)*	*0*	*0*
Irrevocable committed prolongation of existing loans	2,454	2,369	85	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	88,046	85,710	1,998	338	(115)	(56)	(27)	(31)
Total allowances and provisions					(1,122)	(148)	(203)	(771)

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 9 Expected credit loss measurement (continued)

CHF million	30.6.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	102,262	102,262	0	0	0	0	0	0
Loans and advances to banks	15,577	15,569	8	0	(4)	(2)	0	(2)
Receivables from securities financing transactions	76,450	76,450	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,937	24,937	0	0	0	0	0	0
Loans and advances to customers	318,278	293,041	23,612	1,625	(847)	(53)	(174)	(620)
of which: Private clients with mortgage	*121,858*	*108,533*	*12,498*	*826*	*(122)*	*(9)*	*(79)*	*(34)*
of which: Real estate financing	*35,659*	*26,826*	*8,795*	*39*	*(60)*	*(3)*	*(49)*	*(8)*
of which: Large corporate clients	*10,486*	*9,841*	*555*	*91*	*(82)*	*(5)*	*(9)*	*(68)*
of which: SME clients	*9,920*	*8,055*	*1,284*	*581*	*(292)*	*(8)*	*(25)*	*(258)*
of which: Lombard	*116,795*	*116,779*	*0*	*16*	*(90)*	*(4)*	*0*	*(86)*
of which: Credit cards	*1,406*	*1,123*	*268*	*14*	*(37)*	*(6)*	*(11)*	*(20)*
of which: Commodity trade finance	*3,075*	*3,049*	*13*	*13*	*(88)*	*(4)*	*0*	*(84)*
Other financial assets measured at amortized cost	20,996	20,188	292	516	(168)	(39)	(6)	(123)
of which: Loans to financial advisors	*3,394*	*3,139*	*85*	*171*	*(124)*	*(32)*	*(2)*	*(90)*
Total financial assets measured at amortized cost[1]	**558,500**	**532,447**	**23,912**	**2,141**	**(1,022)**	**(97)**	**(179)**	**(746)**
Financial assets measured at fair value through other comprehensive income	**6,941**	**6,941**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**565,441**	**539,388**	**23,912**	**2,141**	**(1,022)**	**(97)**	**(179)**	**(746)**

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	18,529	17,826	506	197	(34)	(7)	(1)	(26)
of which: Large corporate clients	*3,818*	*3,462*	*218*	*138*	*(7)*	*(1)*	*0*	*(5)*
of which: SME clients	*1,262*	*996*	*221*	*45*	*(16)*	*0*	*(1)*	*(15)*
of which: Financial intermediaries and hedge funds	*7,473*	*7,464*	*9*	*0*	*(4)*	*(4)*	*0*	*0*
of which: Lombard	*2,493*	*2,493*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*2,398*	*2,342*	*43*	*13*	*(4)*	*(1)*	*0*	*(3)*
Irrevocable loan commitments	31,009	30,407	563	38	(42)	(34)	(8)	0
of which: Large corporate clients	*21,914*	*21,342*	*550*	*22*	*(34)*	*(27)*	*(7)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	1,545	1,545	0	0	0	0	0	0
Committed unconditionally revocable credit lines	34,129	33,011	1,053	65	(33)	(21)	(13)	0
of which: Real estate financing	*2,676*	*2,404*	*272*	*0*	*(16)*	*(8)*	*(8)*	*0*
of which: Large corporate clients	*4,065*	*4,000*	*65*	*0*	*(1)*	*(1)*	*0*	*0*
of which: SME clients	*4,407*	*3,961*	*390*	*57*	*(8)*	*(5)*	*(2)*	*0*
of which: Lombard	*6,231*	*6,231*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*6,980*	*6,712*	*267*	*0*	*(5)*	*(3)*	*(1)*	*0*
of which: Commodity trade finance	*2,707*	*2,703*	*0*	*5*	*(1)*	*(1)*	*0*	*0*
Irrevocable committed prolongation of existing loans	2,760	2,741	19	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	**87,972**	**85,531**	**2,142**	**300**	**(111)**	**(62)**	**(23)**	**(26)**
Total allowances and provisions					**(1,133)**	**(159)**	**(202)**	**(772)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 9 Expected credit loss measurement (continued)

CHF million	1.1.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	87,775	87,775	0	0	0	0	0	0
Loans and advances to banks	13,719	13,701	18	0	(5)	(2)	0	(3)
Receivables from securities financing transactions	84,674	84,674	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	23,434	23,434	0	0	0	0	0	0
Loans and advances to customers	310,451	281,149	27,812	1,491	(867)	(61)	(163)	(644)
of which: Private clients with mortgage	*119,560*	*103,867*	*15,006*	*686*	*(124)*	*(12)*	*(69)*	*(44)*
of which: Real estate financing	*35,896*	*26,210*	*9,657*	*29*	*(62)*	*(3)*	*(53)*	*(6)*
of which: Large corporate clients	*11,004*	*10,358*	*557*	*88*	*(69)*	*(6)*	*0*	*(63)*
of which: SME clients	*10,322*	*8,218*	*1,518*	*585*	*(287)*	*(8)*	*(23)*	*(256)*
of which: Lombard	*111,748*	*111,731*	*0*	*17*	*(84)*	*(5)*	*0*	*(79)*
Other financial assets measured at amortized cost	18,302	17,805	32	465	(136)	(29)	(1)	(106)
of which: Loans to financial advisors	*3,086*	*2,874*	*32*	*179*	*(115)*	*(28)*	*(1)*	*(87)*
Total financial assets measured at amortized cost[1]	**538,354**	**508,538**	**27,862**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
Financial assets measured at fair value through other comprehensive income	**6,755**	**6,755**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**545,110**	**515,293**	**27,862**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,152	16,331	633	189	(37)	(6)	(2)	(29)
Irrevocable loan commitments	30,852	30,153	662	37	(36)	(24)	(8)	(4)
of which: Large corporate clients	*21,999*	*21,344*	*629*	*26*	*(27)*	*(19)*	*(4)*	*(4)*
Forward starting reverse repurchase and securities borrowing agreements	1,216	1,216	0	0	0	0	0	0
Committed unconditionally revocable credit lines	36,690	34,471	2,157	62	(34)	(19)	(15)	0
of which: Real estate financing	*3,103*	*2,097*	*1,007*	*0*	*(9)*	*(2)*	*(7)*	*0*
of which: SME clients	*4,770*	*4,311*	*406*	*53*	*(7)*	*(5)*	*(2)*	*0*
Irrevocable committed prolongation of existing loans	1,635	1,634	0	1	0	0	0	0
Total off-balance sheet financial instruments and other credit lines	**87,545**	**83,805**	**3,452**	**288**	**(107)**	**(49)**	**(24)**	**(33)**
Total allowances and provisions					**(1,117)**	**(144)**	**(188)**	**(785)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances. 2 Upon adoption of IFRS 9 as of 1 January 2018, an instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is purchased or originated credit-impaired and includes credit-impaired exposures for which no loss has occurred or no allowance has been recognized (e.g., because they are expected to be fully recoverable through the collateral held). Refer to Note 19 for more information on the adoption of IFRS 9.

Note 10 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and should be read in conjunction with "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017, which provides more information on valuation principles, valuation governance, fair value hierarchy classification, valuation adjustments, valuation techniques and inputs, sensitivity of fair value measurements and methods applied to calculate fair values for financial instruments not measured at fair value.

Adoption of IFRS 9

Upon adoption of IFRS 9 on 1 January 2018, certain classification and measurement changes were made, primarily resulting in a reclassification of certain financial assets and liabilities from amortized cost to fair value through profit or loss. This included:

- brokerage receivables and payables held in the Investment Bank and Global Wealth Management;
- auction rate securities held in Corporate Center; and
- certain loans held in the Investment Bank.

Certain financial assets and liabilities that have been newly classified at fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018 are designated as Level 3 in the fair value hierarchy. Refer to the tables and text within this Note for more information.

An immaterial amount of financial assets were reclassified from *Financial assets at fair value held for trading* and *Financial assets at fair value not held for trading* to *Loans and advances to customers* upon adoption of IFRS 9. An immaterial amount of associated loan commitments, which were recognized as derivative liabilities as of 31 December 2017, were also derecognized from the balance sheet. No material fair value gains and losses would have been recognized in the income statement in the third quarter of 2018 had these instruments not been reclassified. Similarly, no material fair value gains or losses would have been recognized in Other comprehensive income related to debt instruments that were reclassified from *Financial assets available for sale* to *Other financial assets measured at amortized cost* upon adoption of IFRS 9.

→ **Refer to Note 19 for more information on the adoption of IFRS 9**

Note 10 Fair value measurement (continued)

a) Fair value hierarchy

The fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value is summarized in the table below.

Determination of fair values from quoted market prices or valuation techniques[1]

	30.9.18				30.6.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis												
Financial assets at fair value held for trading	104,341	14,016	2,487	120,843	96,129	12,729	3,263	112,121	108,962	15,211	1,972	126,144
of which:												
Government bills / bonds	9,961	1,275	0	11,237	10,650	877	0	11,527	11,935	918	0	12,854
Corporate and municipal bonds	463	7,888	617	8,967	550	7,463	627	8,640	37	7,974	552	8,563
Loans	0	2,872	1,174	4,046	0	2,096	1,733	3,829	0	3,346	501	3,847
Investment fund units	8,534	1,614	441	10,590	8,716	1,974	540	11,230	7,223	1,839	571	9,632
Asset-backed securities	0	159	153	312	0	110	157	266	0	194	174	368
Equity instruments	85,383	208	101	85,692	76,214	210	188	76,612	79,274	186	105	79,565
Financial assets for unit-linked investment contracts[2]									10,492	755	69	11,316
Derivative financial instruments	799	111,898	1,549	114,246	878	119,245	1,481	121,604	458	116,221	1,549	118,227
of which:												
Interest rate contracts	0	34,599	458	35,056	0	38,555	226	38,782	1	43,913	135	44,049
Credit derivative contracts	0	1,700	484	2,184	0	1,674	452	2,127	0	2,266	550	2,816
Foreign exchange contracts	448	49,347	40	49,834	563	52,941	186	53,690	207	46,748	189	47,143
Equity / index contracts	8	24,586	561	25,154	7	24,320	612	24,939	16	21,541	675	22,232
Commodity contracts	0	1,585	0	1,585	0	1,564	0	1,564	0	1,727	0	1,727
Brokerage receivables[3]	0	20,235	0	20,235	0	18,415	0	18,415				
Financial assets at fair value not held for trading	38,107	44,363	4,725	87,196	42,929	45,518	4,769	93,217	23,032	34,481	1,419	58,933
of which:												
Government bills / bonds	18,271	3,635	0	21,906	21,853	3,452	0	25,305	22,062	3,900	0	25,961
Corporate and municipal bonds	914	18,462	0	19,375	958	21,849	0	22,807	765	20,702	0	21,467
Financial assets for unit-linked investment contracts[2]	18,644	4,652	0	23,295	19,824	4,735	8	24,568				
Loans (including structured loans)	0	7,455	1,871	9,326	0	7,394	1,904	9,298	0	9,385	758	10,143
Structured securities financing transactions[4]	0	9,647	53	9,700	0	7,556	65	7,622	0	118	173	291
Auction rate securities[3]	0	0	1,780	1,780	0	0	1,832	1,832				
Investment fund units	188	446	115	749	194	458	118	770	205	377	0	582
Equity instruments[5]	92	19	557	668	101	16	484	602				
Other	0	47	350	397	0	57	357	414	0	0	489	489
Financial assets measured at fair value through other comprehensive income on a recurring basis												
Financial assets measured at fair value through other comprehensive income	2,400	4,218	0	6,618	2,608	4,333	0	6,941	3,000	5,157	507	8,665
of which:												
Government bills / bonds	2,359	82	0	2,441	2,563	111	0	2,675	2,733	133	0	2,866
Corporate and municipal bonds	41	406	0	446	44	390	0	434	121	1,060	9	1,189
Asset-backed securities	0	3,731	0	3,731	0	3,832	0	3,832	0	3,880	0	3,880
Other[5]	0	0	0	0	0	0	0	0	146	85	499	730
Non-financial assets measured at fair value on a recurring basis												
Other non-financial assets												
Precious metals and other physical commodities	4,035	0	0	4,035	3,975	0	0	3,975	4,563	0	0	4,563
Non-financial assets measured at fair value on a non-recurring basis												
Other non-financial assets[6]	0	81	3	84	0	57	9	65	0	54	42	95
Total assets measured at fair value	149,682	194,811	8,764	353,257	146,519	200,297	9,522	356,338	140,015	171,125	5,489	316,629

Note 10 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	30.9.18				30.6.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis												
Financial liabilities at fair value held for trading	26,331	5,579	120	32,030	26,211	5,117	88	31,416	26,037	4,309	117	30,463
of which:												
Government bills / bonds	*3,279*	*308*	*0*	*3,588*	*4,386*	*299*	*0*	*4,685*	*5,153*	*256*	*0*	*5,409*
Corporate and municipal bonds	*7*	*4,680*	*62*	*4,749*	*138*	*4,113*	*34*	*4,285*	*50*	*3,453*	*35*	*3,538*
Investment fund units	*294*	*138*	*0*	*432*	*785*	*214*	*2*	*1,002*	*541*	*263*	*16*	*820*
Equity instruments	*22,750*	*452*	*57*	*23,259*	*20,901*	*488*	*52*	*21,440*	*20,293*	*336*	*66*	*20,695*
Derivative financial instruments	758	110,384	2,411	113,553	875	115,954	2,394	119,223	398	112,928	2,807	116,133
of which:												
Interest rate contracts	*5*	*30,837*	*320*	*31,163*	*6*	*33,738*	*285*	*34,030*	*5*	*38,196*	*186*	*38,387*
Credit derivative contracts	*0*	*2,514*	*576*	*3,090*	*0*	*2,620*	*613*	*3,233*	*0*	*3,196*	*601*	*3,797*
Foreign exchange contracts	*445*	*48,084*	*97*	*48,627*	*585*	*52,921*	*115*	*53,620*	*213*	*45,150*	*122*	*45,485*
Equity / index contracts	*5*	*27,209*	*1,415*	*28,629*	*2*	*25,122*	*1,369*	*26,493*	*42*	*24,803*	*1,896*	*26,741*
Commodity contracts	*0*	*1,671*	*1*	*1,672*	*0*	*1,365*	*1*	*1,366*	*0*	*1,561*	*1*	*1,562*
Financial liabilities designated at fair value on a recurring basis												
Brokerage payables designated at fair value[3]	0	38,268	0	38,268	0	37,904	0	37,904				
Debt issued designated at fair value	0	51,527	10,105	61,631	0	46,683	10,166	56,849	0	38,617	10,885	49,502
Other financial liabilities designated at fair value	0	33,931	673	34,605	2	36,252	1,089	37,342	0	14,282	1,941	16,223
of which:												
Amounts due under unit-linked investment contracts	*0*	*23,499*	*0*	*23,499*	*0*	*24,913*	*0*	*24,913*	*0*	*11,523*	*0*	*11,523*
Structured securities financing transactions[4]	*0*	*8,335*	*71*	*8,406*	*0*	*6,533*	*0*	*6,533*	*0*	*372*	*4*	*376*
Over-the-counter debt instruments	*0*	*2,095*	*599*	*2,694*	*2*	*4,801*	*1,085*	*5,888*	*0*	*2,385*	*1,930*	*4,315*
Non-financial liabilities measured at fair value on a non-recurring basis												
Other non-financial liabilities	0	0	0	0	0	0	0	0	0	1	0	1
Total liabilities measured at fair value	27,089	239,689	13,309	280,087	27,087	241,910	13,737	282,734	26,435	170,138	15,750	212,323

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The fair value of these derivatives was not material for the periods presented. 2 Financial assets for unit-linked investment contracts were reclassified from Financial assets at fair value held for trading to Financial assets at fair value not held for trading as of 1 January 2018. Refer to Note 19 for more information. 3 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 4 The increases in Structured securities financing transactions from 31 December 2017 to 30 June 2018 primarily relate to the reclassification of certain balances from amortized cost to fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 5 Upon adoption of IFRS 9 on 1 January 2018, equity instruments that were formerly classified as available for sale under IAS 39 were reclassified to Financial assets at fair value not held for trading. Refer to Note 19 for more information. 6 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
- Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Product description, valuation and classification in the fair value hierarchy for products newly classified at fair value upon adoption of IFRS 9 on 1 January 2018

Product description, valuation and fair value hierarchy information is provided on the next page for significant products classified at fair value that are not described in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Note 10 Fair value measurement (continued)

Auction rate securities

There are two types of auction rate securities (ARS): auction preferred securities (APS) and auction rate certificates (ARC). ARC are issued by municipalities and are used by investors as tax-exempt alternatives to money market instruments. Interest rates for these instruments are reset through a periodic Dutch auction. APS are similar to ARC with the primary difference being that they are issued from closed-end funds. ARS are valued directly using market prices that reflect recent transactions after applying an adjustment for trade size or quoted dealer prices where available. Suitably deep and liquid pricing information is generally not available for ARS securities. As a result, these securities are classified as Level 3.

Brokerage receivables and payables

Brokerage receivables and payables include callable, on-demand balances, including long cash credits, short cash debits, margin debit balances and short sale proceeds. The business model for these accounts is similar to any current or on-demand account, with account holders using the account to house subscriptions, redemptions and billed amounts. Fair value is determined based on value of the underlying balances. Due to their on-demand nature, these receivables and payables are designated as Level 2.

b) Valuation adjustments

Deferred day-1 profit or loss reserves

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss is generally released into *Other net income from fair value changes on financial instruments* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

In the second quarter of 2018, a deferred day-1 profit or loss reserve release of CHF 192 million was recognized in the income statement related to long-dated UBS-issued structured notes, which are reported within *Debt issued designated at fair value* on the balance sheet. The deferred day-1 profit or loss reserve release was driven by increased observability of the own credit adjustment (OCA) curve used to value these positions following the issuance of a 30-year senior unsecured bond in the second quarter of 2018.

Deferred day-1 profit or loss reserves

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Reserve balance at the beginning of the period	274	457	349	329	371
Profit / (loss) deferred on new transactions	42	53	76	282	192
(Profit) / loss recognized in the income statement	(67)	(248)	(79)	(368)	(199)
Foreign currency translation	(4)	13	5	3	(13)
Reserve balance at the end of the period	245	274	351	245	351

c) Transfers between Level 1 and Level 2

The amounts disclosed below reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets totaling approximately CHF 0.8 billion, which were mainly comprised of financial assets at fair value held for trading, primarily equity instruments and investment fund units, were transferred from Level 2 to Level 1 during the first nine months of 2018, generally due to increased levels of trading activity observed within the market. Liabilities transferred from Level 2 to Level 1 during the first nine months of 2018 were not material. Assets and liabilities transferred from Level 1 to Level 2 during the first nine months of 2018 were also not material.

Note 10 Fair value measurement (continued)

d) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Furthermore, the ranges and weighted averages of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

The significant unobservable inputs disclosed in the table below are generally consistent with those included in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017. A description of the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown, is also provided in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				30.9.18			31.12.17			
CHF billion	30.9.18	31.12.17	30.9.18	31.12.17	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading and Financial assets at fair value not held for trading[3]													
Corporate and municipal bonds	0.6	0.6	0.1	0.0	Relative value to market comparable	Bond price equivalent	0	134	93	0	133	92	points
Traded loans, loans mandatorily at fair value, loan commitments and guarantees	3.3	1.7	0.0	0.0	Relative value to market comparable	Loan price equivalent	0	102	99	50	102	98	points
					Discounted expected cash flows	Credit spread	63	513		23	124		basis points
					Market comparable and securitization model	Discount margin	0	14	1	0	14	2	%
Auction rate securities[4]	1.8		0.0		Relative value to market comparable	Bond price equivalent	77	99	90				points
Investment fund units[5]	0.6	0.7	0.0	0.0	Relative value to market comparable	Net asset value							
Equity instruments[5]	0.7	0.5	0.1	0.1	Relative value to market comparable	Price							
Debt issued designated at fair value[6]			10.1	10.9									
Other financial liabilities designated at fair value[6]			0.6	1.9									
Derivative financial instruments													
Interest rate contracts	0.5	0.1	0.3	0.2	Option model	Volatility of interest rates[7]	46	78		28	70		basis points
Credit derivative contracts	0.5	0.5	0.6	0.6	Discounted expected cash flows	Credit spreads	3	266		6	550		basis points
						Bond price equivalent	0	99		2	102		points
Equity / index contracts	0.6	0.7	1.4	1.9	Option model	Equity dividend yields	0	12		0	13		%
						Volatility of equity stocks, equity and other indices	3	77		0	172		%
						Equity-to-FX correlation	(45)	71		(39)	70		%
						Equity-to-equity correlation	(50)	97		(50)	97		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 Comparative period information includes equity instruments that were formerly classified as available for sale under IAS 39 and have been reclassified to Financial assets at fair value not held for trading upon adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information. 4 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 19 for more information. 5 The range of inputs is not disclosed due to the dispersion of values given the diverse nature of the investments. 6 Valuation techniques, significant unobservable inputs and the respective input ranges for Debt issued designated at fair value and Other financial liabilities designated at fair value, which are primarily comprised of over-the-counter debt instruments, are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table. 7 Effective 31 March 2018, the range of inputs reported for this significant unobservable input is based on normal volatility and the unit has been updated to basis points. Log-normal volatility with the unit as points was reported previously. Prior-period information has been restated to reflect this change in presentation.

Note 10 Fair value measurement (continued)

e) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity of fair value measurements for debt issued designated at fair value and over-the-counter debt instruments designated at fair value is reported with the equivalent derivative or structured financing instrument within the table below.

The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and do not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Furthermore, direct interrelationships between the Level 3 parameters are not a significant element of the valuation uncertainty.

Sensitivity of fair value measurements to changes in unobservable input assumptions

	30.9.18		30.6.18		31.12.17	
CHF million	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	91	(16)	89	(15)	79	(11)
Structured securities financing transactions	17	(12)	20	(15)	34	(34)
Auction rate securities[1]	89	(89)	92	(92)		
Asset-backed securities	30	(25)	31	(26)	19	(15)
Equity instruments	185	(123)	182	(115)	79	(53)
Interest rate derivative contracts, net	12	(49)	12	(37)	13	(26)
Credit derivative contracts, net	31	(35)	40	(35)	64	(99)
Foreign exchange derivative contracts, net	8	(5)	6	(3)	12	(6)
Equity / index derivative contracts, net	184	(198)	212	(228)	190	(193)
Other	19	(19)	21	(21)	13	(13)
Total	666	(572)	704	(586)	502	(450)

1 Comparative period information as of 31 December 2017 is not disclosed for financial assets that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 19 for more information.

f) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Upon adoption of IFRS 9 on 1 January 2018, certain financial assets and liabilities were newly classified at fair value through profit or loss and were designated as Level 3 in the fair value hierarchy. These financial instruments are presented in the table on the following pages, including the associated effect upon adoption. This includes auction rate securities held in Corporate Center and certain loans held in the Investment Bank.

In addition to various financial assets and liabilities being newly classified at fair value through profit or loss, certain equity investments and investment fund units measured at fair value through other comprehensive income were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules, which resulted in an opening balance reclassification between reporting lines in the table on the following pages.

Note 10 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2016	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	Total gains / (losses) included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 September 2017
Financial assets at fair value held for trading	**1.7**	**0.0**	***0.0***	**0.5**	**(2.4)**	**2.2**	**0.0**	**0.3**	**(0.2)**	**0.0**	**2.0**
of which:											
Corporate and municipal bonds	*0.6*	*0.0*	*0.0*	*0.3*	*(0.4)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.5*
Loans	*0.7*	*0.1*	*0.0*	*0.0*	*(1.8)*	*2.2*	*0.0*	*0.0*	*(0.1)*	*0.0*	*1.1*
Investment fund units	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other	*0.4*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.4*
Financial assets at fair value not held for trading	**2.1**	**0.0**	***0.0***	**0.0**	**0.0**	**0.3**	**(0.8)**	**0.1**	**(0.1)**	**0.0**	**1.6**
of which:											
Loans (including structured loans)	*1.2*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*(0.7)*	*0.0*	*(0.1)*	*0.0*	*0.5*
Auction rate securities[3]											
Equity instruments											
Other	*0.9*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.3*	*(0.1)*	*0.1*	*0.0*	*0.0*	*1.1*
Financial assets measured at fair value through other comprehensive income	**0.5**	**0.0**	***0.0***	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.5**
Derivative financial instruments – assets	**2.5**	**(0.2)**	***(0.3)***	**0.0**	**0.0**	**0.7**	**(1.0)**	**0.2**	**(0.7)**	**0.0**	**1.6**
of which:											
Credit derivative contracts	*1.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.0*	*(0.4)*	*0.0*	*(0.3)*	*0.0*	*0.6*
Equity / index contracts	*0.7*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.6*	*(0.4)*	*0.1*	*(0.4)*	*0.0*	*0.6*
Other	*0.5*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*0.0*	*0.3*
Derivative financial instruments – liabilities	**4.0**	**0.1**	***(0.1)***	**0.0**	**0.0**	**0.4**	**(0.9)**	**0.2**	**(1.3)**	**0.0**	**2.5**
of which:											
Credit derivative contracts	*1.5*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.5)*	*0.0*	*(0.8)*	*0.0*	*0.3*
Equity / index contracts	*1.9*	*0.1*	*0.1*	*0.0*	*0.0*	*0.3*	*(0.3)*	*0.1*	*(0.5)*	*0.0*	*1.6*
Other	*0.6*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.1*	*0.0*	*0.0*	*0.5*
Debt issued designated at fair value	**9.7**	**1.0**	***0.8***	**0.0**	**0.0**	**3.8**	**(3.3)**	**0.6**	**(1.2)**	**(0.2)**	**10.4**
Other financial liabilities designated at fair value	**1.3**	**0.1**	***0.0***	**0.0**	**0.0**	**1.3**	**(0.7)**	**0.0**	**(0.1)**	**0.0**	**1.8**

1 Net gains / (losses) included in comprehensive income are comprised of Net interest income, Other net income from fair value changes on financial instruments and Other income. 2 Total Level 3 assets as of 30 September 2018 were CHF 8.8 billion (30 June 2018: CHF 9.5 billion; 31 December 2017: CHF 5.5 billion). Total Level 3 liabilities as of 30 September 2018 were CHF 13.3 billion (30 June 2018: CHF 13.7 billion; 31 December 2017: CHF 15.7 billion). 3 Comparative period information is not disclosed for items that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 19 for more information.

Note 10 Fair value measurement (continued)

Balance as of 31 December 2017	Reclassifications and remeasurements upon adoption of IFRS 9	Balance as of 1 January 2018	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	*of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 September 2018[2]
2.0	0.4	2.4	(0.4)	*(0.4)*	1.6	(5.5)	3.8	0.0	0.8	(0.2)	0.0	2.5
0.6		*0.6*	*(0.1)*	*(0.1)*	*0.5*	*(0.8)*	*0.0*	*0.0*	*0.6*	*0.0*	*0.0*	*0.6*
0.5	*0.4*	*0.9*	*0.0*	*0.0*	*0.6*	*(4.2)*	*3.8*	*0.0*	*0.1*	*0.0*	*0.0*	*1.2*
0.6		*0.6*	*(0.2)*	*(0.1)*	*0.2*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.4*
0.3		*0.3*	*0.0*	*0.0*	*0.3*	*(0.4)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*
1.4	2.9	4.3	0.1	*0.1*	1.5	(1.3)	0.0	0.0	0.1	(0.1)	0.1	4.7
0.8	*0.6*	*1.3*	*(0.2)*	*(0.1)*	*1.2*	*(0.6)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*1.9*
	1.8	*1.8*	*0.1*	*0.1*	*0.0*	*(0.3)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*1.8*
	0.4	*0.4*	*0.1*	*0.1*	*0.2*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
0.7	*0.1*	*0.8*	*0.0*	*0.0*	*0.1*	*(0.3)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
0.5	(0.5)											
1.5		1.5	(0.3)	*(0.3)*	0.0	0.0	0.9	(0.9)	0.6	(0.3)	0.0	1.5
0.5		*0.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.5*
0.7		*0.7*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.7*	*(0.7)*	*0.1*	*(0.1)*	*0.0*	*0.6*
0.3		*0.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.2*	*(0.1)*	*0.4*	*(0.1)*	*0.0*	*0.5*
2.8	0.0	2.8	(0.4)	*(0.4)*	0.0	0.0	1.2	(1.0)	0.3	(0.4)	0.0	2.4
0.6		*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.6*
1.9		*1.9*	*(0.3)*	*(0.2)*	*0.0*	*0.0*	*0.9*	*(0.9)*	*0.2*	*(0.4)*	*0.0*	*1.4*
0.3	*0.0*	*0.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
10.9		10.9	0.7	*0.3*	0.0	0.0	5.0	(3.6)	1.4	(4.2)	0.0	10.1
1.9		1.9	0.0	*0.0*	0.0	0.0	0.9	(2.1)	0.0	0.0	0.0	0.7

Note 10 Fair value measurement (continued)

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into and out of Level 3 totaled CHF 1.5 billion and CHF 0.5 billion, respectively. Transfers into Level 3 were primarily comprised of corporate and municipal bonds reflecting decreased observability of the respective bond price equivalent inputs. Transfers out of Level 3 were primarily comprised of equity / index contracts due to increased observability of the respective equity volatility inputs.

Liabilities transferred into and out of Level 3 totaled CHF 1.7 billion and CHF 4.6 billion, respectively. Transfers into Level 3 were primarily comprised of structured medium-term notes and equity-linked issued debt instruments due to decreased observability of the embedded derivative inputs. Transfers out of Level 3 were primarily comprised of interest rate-linked and equity-linked issued debt instruments resulting from changes in the observability of the respective OCA curve and equity volatility inputs used to determine the fair value of these instruments.

g) Financial instruments not measured at fair value

The table below reflects the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	30.9.18		30.6.18		31.12.17	
CHF billion	Carrying value	Fair value	Carrying value	Fair value	Carrying value	Fair value
Assets						
Cash and balances at central banks	92.6	92.6	102.3	102.3	87.8	87.8
Loans and advances to banks	15.3	15.3	15.6	15.6	13.7	13.7
Receivables from securities financing transactions	82.0	82.0	76.4	76.4	89.6	89.6
Cash collateral receivables on derivative instruments	21.4	21.4	24.9	24.9	23.4	23.4
Loans and advances to customers	318.1	318.2	318.3	318.8	318.5	319.9
Other financial assets measured at amortized cost	20.6	20.3	21.0	20.7	36.9	36.7
Liabilities						
Amounts due to banks	10.1	10.1	10.2	10.2	7.5	7.5
Payables from securities financing transactions	10.8	10.8	10.1	10.1	17.0	17.0
Cash collateral payables on derivative instruments	27.6	27.6	31.8	31.8	30.2	30.2
Customer deposits	401.3	401.3	403.4	403.4	409.0	409.0
Debt issued measured at amortized cost	134.0	136.8	137.5	140.1	139.6	143.5
Other financial liabilities measured at amortized cost	6.3	6.3	6.9	6.9	36.3	36.3

The fair values included in the table above were calculated for disclosure purposes only. The fair value valuation techniques and assumptions relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another.

Note 11 Derivative instruments

a) Derivative instruments

As of 30.9.18, CHF billion	Derivative financial assets	Notional values related to derivative financial assets[3]	Derivative financial liabilities	Notional values related to derivative financial liabilities[3]	Other notional values[4]
Derivative financial instruments[1,2]					
Interest rate contracts	35.1	1,124	31.2	1,099	10,994
Credit derivative contracts	2.2	80	3.1	77	0
Foreign exchange contracts	49.8	2,672	48.6	2,545	1
Equity / index contracts	25.2	440	28.6	560	107
Commodity contracts	1.6	39	1.7	37	9
Unsettled purchases of non-derivative financial instruments[5]	0.2	27	0.2	21	
Unsettled sales of non-derivative financial instruments[5]	0.3	34	0.2	23	
Total derivative financial instruments, based on IFRS netting[6]	114.2	4,416	113.6	4,361	11,111
Further netting potential not recognized on the balance sheet[7]	(101.2)		(97.7)		
of which: netting of recognized financial liabilities / assets	*(83.0)*		*(83.0)*		
of which: netting with collateral received / pledged	*(18.2)*		*(14.7)*		
Total derivative financial instruments, after consideration of further netting potential	13.1		15.9		

As of 30.6.18, CHF billion					
Derivative financial instruments[1,2]					
Interest rate contracts	38.8	1,169	34.0	1,093	11,322
Credit derivative contracts	2.1	81	3.2	83	0
Foreign exchange contracts	53.7	2,736	53.6	2,588	1
Equity / index contracts	24.9	446	26.5	530	101
Commodity contracts	1.6	44	1.4	39	11
Unsettled purchases of non-derivative financial instruments[5]	0.2	26	0.2	18	
Unsettled sales of non-derivative financial instruments[5]	0.3	31	0.3	20	
Total derivative financial instruments, based on IFRS netting[6]	121.6	4,533	119.2	4,371	11,435
Further netting potential not recognized on the balance sheet[7]	(106.6)		(103.1)		
of which: netting of recognized financial liabilities / assets	*(87.4)*		*(87.4)*		
of which: netting with collateral received / pledged	*(19.2)*		*(15.7)*		
Total derivative financial instruments, after consideration of further netting potential	15.1		16.2		

As of 31.12.17, CHF billion					
Derivative financial instruments[1]					
Interest rate contracts	44.0	1,142	38.4	1,044	10,462
Credit derivative contracts	2.8	92	3.8	98	1
Foreign exchange contracts	47.1	2,389	45.5	2,193	0
Equity / index contracts	22.2	380	26.7	487	83
Commodity contracts	1.7	33	1.6	37	8
Unsettled purchases of non-derivative financial instruments[5]	0.1	12	0.1	11	
Unsettled sales of non-derivative financial instruments[5]	0.1	15	0.1	9	
Total derivative financial instruments, based on IFRS netting[6]	118.2	4,063	116.1	3,878	10,555
Further netting potential not recognized on the balance sheet[7]	(104.2)		(98.5)		
of which: netting of recognized financial liabilities / assets	*(83.5)*		*(83.5)*		
of which: netting with collateral received / pledged	*(20.7)*		*(15.0)*		
Total derivative financial instruments, after consideration of further netting potential	14.0		17.7		

1 Derivative financial liabilities as of 30 September 2018 include CHF 0.0 billion related to derivative loan commitments (30 June 2018: CHF 0.0 billion; 31 December 2017: CHF 0.0 billion). No notional amounts related to these commitments are included in this table, but they are disclosed within Note 16 under Loan commitments. 2 Upon adoption of IFRS 9 on 1 January 2018, certain forward starting repurchase and reverse repurchase agreements have been classified as measured at fair value through profit or loss and are recognized within derivative instruments. The fair value of these derivative instruments was not material as of 30 September 2018 or 30 June 2018. No notional amounts related to these instruments are included in this table, but they are disclosed within Note 16 under Forward starting transactions. 3 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional values of the netted derivative financial instruments are still presented on a gross basis. 4 Other notional values relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for all periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 7 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

Note 11 Derivative instruments (continued)

b) Cash collateral on derivative instruments

CHF billion	Receivables 30.9.18	Payables 30.9.18	Receivables 30.6.18	Payables 30.6.18	Receivables 31.12.17	Payables 31.12.17
Cash collateral on derivative instruments, based on IFRS netting[1]	21.4	27.6	24.9	31.8	23.4	30.2
Further netting potential not recognized on the balance sheet[2]	(11.6)	(14.2)	(13.0)	(15.5)	(12.5)	(17.4)
of which: netting of recognized financial liabilities / assets	*(10.8)*	*(13.2)*	*(12.5)*	*(14.5)*	*(11.7)*	*(16.3)*
of which: netting with collateral received / pledged	*(0.8)*	*(1.1)*	*(0.5)*	*(1.0)*	*(0.7)*	*(1.2)*
Cash collateral on derivative instruments, after consideration of further netting potential	9.9	13.4	11.9	16.4	11.0	12.8

1 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS or its counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 2 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

Note 12 Other assets and liabilities

a) Other financial assets measured at amortized cost

CHF million	30.9.18	30.6.18	31.12.17
Prime brokerage receivables[1]			19,080
Debt securities	11,827	12,241	9,166
of which: government bills / bonds	*9,058*	*9,787*	*6,465*
Loans to financial advisors[2]	3,294	3,394	3,118
Fee- and commission-related receivables	1,642	1,751	1,780
Finance lease receivables	1,109	1,076	1,059
Settlement and clearing accounts	793	448	716
Accrued interest income	709	667	577
Other	1,250	1,417	1,365
Total other financial assets measured at amortized cost	20,623	20,996	36,861

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 19 for more information. 2 Related to financial advisors in the US and Canada.

b) Other non-financial assets

CHF million	30.9.18	30.6.18	31.12.17
Precious metals and other physical commodities	4,035	3,975	4,563
Bail deposit[1]	1,302	1,320	1,337
Prepaid expenses	1,031	1,037	1,013
Net defined benefit pension and post-employment assets	32	61	0
VAT and other tax receivables	354	384	359
Properties and other non-current assets held for sale	84	65	95
Other	435	482	266
Total other non-financial assets	7,272	7,324	7,633

1 Refer to item 1 in Note 15b for more information.

Note 12 Other assets and liabilities (continued)

c) Other financial liabilities measured at amortized cost

CHF million	30.9.18	30.6.18	31.12.17
Prime brokerage payables[1]			29,646
Other accrued expenses	2,138	2,178	2,444
Accrued interest expenses	1,207	1,288	1,513
Settlement and clearing accounts	1,235	1,257	1,395
Other	1,751	2,186	1,338
Total other financial liabilities measured at amortized cost	6,330	6,909	36,337

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 19 for more information.

d) Other financial liabilities designated at fair value

CHF million	30.9.18	30.6.18	31.12.17
Amounts due under unit-linked investment contracts	23,499	24,913	11,523
Structured securities financing transactions	8,406	6,533	375
Over-the-counter debt instruments	2,694	5,888	4,317
of which: life-to-date own credit (gain) / loss	*(11)*	*(41)*	*36*
Other	5	8	9
Total other financial liabilities designated at fair value	34,605	37,342	16,223

e) Other non-financial liabilities

CHF million	30.9.18	30.6.18	31.12.17
Compensation-related liabilities	6,499	5,922	7,674
of which: accrued expenses	*2,207*	*1,765*	*2,670*
of which: Deferred Contingent Capital Plan	*1,855*	*1,770*	*1,993*
of which: other deferred compensation plans	*1,870*	*1,762*	*2,086*
of which: net defined benefit pension and post-employment liabilities	*568*	*625*	*925*
Current and deferred tax liabilities	774	907	912
VAT and other tax payables	474	503	415
Deferred income	231	240	150
Other	105	136	53
Total other non-financial liabilities	8,083	7,708	9,205

Note 13 Debt issued designated at fair value

CHF million	30.9.18	30.6.18	31.12.17
Issued debt instruments			
Equity-linked[1]	41,822	39,355	34,162
Rates-linked	9,362	7,505	5,811
Credit-linked	3,232	3,034	2,937
Fixed-rate	4,755	4,293	3,921
Other	2,460	2,661	2,671
Total debt issued designated at fair value	61,631	56,849	49,502
of which: life-to-date own credit (gain) / loss	*68*	*(188)*	*159*

1 Includes investment fund unit-linked instruments issued.

Note 14 Debt issued measured at amortized cost

CHF million	30.9.18	30.6.18	31.12.17
Certificates of deposit	9,198	12,720	23,831
Commercial paper	30,025	28,878	23,532
Other short-term debt	3,973	3,730	3,590
Short-term debt[1]	43,196	45,328	50,953
Senior unsecured debt	33,182	33,699	32,268
Senior unsecured debt that contributes to total loss-absorbing capacity	28,649	29,123	27,233
Covered bonds	3,935	4,029	4,112
Subordinated debt	16,652	16,931	16,555
of which: high-trigger loss-absorbing additional tier 1 capital instruments	*7,015*	*7,119*	*5,187*
of which: low-trigger loss-absorbing additional tier 1 capital instruments	*2,314*	*2,359*	*2,383*
of which: low-trigger loss-absorbing tier 2 capital instruments	*6,627*	*6,748*	*8,286*
of which: non-Basel III-compliant tier 2 capital instruments	*695*	*705*	*700*
Debt issued through the Swiss central mortgage institutions	8,317	8,357	8,345
Other long-term debt	60	63	87
Long-term debt[2]	90,794	92,201	88,599
Total debt issued measured at amortized cost[3]	133,990	137,530	139,551

1 Debt with an original maturity of less than one year. 2 Debt with an original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

Note 15 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions recognized under both IAS 37 and IFRS 9.

CHF million	30.9.18	30.6.18	31.12.17
Provisions recognized under IAS 37	2,848	3,012	3,100
Provisions for off-balance sheet financial instruments[1]	78	76	33
Provisions for other credit lines[1]	36	35	0
Total provisions	2,963	3,123	3,133

1 Provisions recognized in 2018 relate to exposures in the scope of the expected credit loss requirements of IFRS 9. Refer to Notes 9 and 19 for more information. 2017 provisions for off-balance sheet financial instruments relate to loss provisions recognized under IAS 37.

The following table presents additional information for provisions recognized under IAS 37.

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restructuring	Real estate	Employee benefits[5]	Other	Total
Balance as of 31 December 2017	43	2,444	322	134	68	89	3,100
Balance as of 30 June 2018	41	2,442	248	132	66	83	3,012
Increase in provisions recognized in the income statement	5	76	29	1	2	17	130
Release of provisions recognized in the income statement	0	(72)	(16)	(1)	(2)	0	(91)
Provisions used in conformity with designated purpose	(4)	(109)	(44)	(6)	0	(9)	(172)
Capitalized reinstatement costs	0	0	0	(1)	0	0	(1)
Foreign currency translation / unwind of discount	0	(24)	(2)	(2)	(1)	0	(28)
Balance as of 30 September 2018	42	2,312	215[3]	124[4]	65	90	2,848

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Primarily consists of personnel-related restructuring provisions of CHF 47 million as of 30 September 2018 (30 June 2018: CHF 60 million; 31 December 2017: CHF 83 million) and provisions for onerous lease contracts of CHF 164 million as of 30 September 2018 (30 June 2018: CHF 183 million; 31 December 2017: CHF 235 million). 4 Consists of reinstatement costs for leasehold improvements of CHF 85 million as of 30 September 2018 (30 June 2018: CHF 90 million; 31 December 2017: CHF 92 million) and provisions for onerous lease contracts of CHF 39 million as of 30 September 2018 (30 June 2018: CHF 41 million; 31 December 2017: CHF 41 million). 5 Includes provisions for sabbatical and anniversary awards.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 15b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

The Group operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS Group AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where the Group may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which the Group believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. The Group makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against the Group, but are nevertheless expected to be, based on the Group's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

Note 15 Provisions and contingent liabilities (continued)

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 15a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of this report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Global Wealth Manage-ment	Personal & Corporate Banking	Asset Manage-ment	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	UBS
Balance as of 31 December 2017	555	79	1	345	240	0	1,224	2,444
Balance as of 30 June 2018	567	75	0	333	216	0	1,251	2,442
Increase in provisions recognized in the income statement	31	0	0	11	30	0	4	76
Release of provisions recognized in the income statement	(3)	0	0	(68)	(1)	0	0	(72)
Provisions used in conformity with designated purpose	(48)	0	0	0	0	0	(60)	(109)
Foreign currency translation / unwind of discount	(6)	0	0	(3)	0	0	(13)	(24)
Balance as of 30 September 2018	541	75	0	272	244	0	1,180	2,312

1 Provisions, if any, for the matters described in this Note are recorded in Global Wealth Management (item 3 and item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this Note in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio.

Note 15 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that, in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders. On 30 July 2018, the Swiss Federal Administrative Court granted UBS's appeal by holding the French administrative assistance request inadmissible. The FTA filed a final appeal with the Swiss Federal Supreme Court.

Since 2013, UBS (France) S.A., UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory, regarding the laundering of proceeds of tax fraud, and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). In March 2017, the investigating judges issued the trial order ("*ordonnance de renvoi*") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and that transfers the case to court. The trial started on 8 October 2018 and is scheduled to last until 15 November 2018.

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud, of banking and financial solicitation by unauthorized persons, and of serious tax fraud.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 30 September 2018 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Note 15 Provisions and contingent liabilities (continued)

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action (Trustee Suit) in the US District Court for the Southern District of New York (SDNY) seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations issued and underwritten by UBS with an original principal balance of approximately USD 2 billion. In July 2018, UBS and the trustee entered into an agreement under which UBS will pay USD 850 million to resolve this matter. A significant portion of this amount will be borne by other parties that indemnified UBS. The settlement remains subject to approval by the court and proceedings to determine how the settlement funds will be distributed to RMBS holders. After giving effect to this settlement, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS has also responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the US Securities and Exchange Commission (SEC) relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

Our balance sheet at 30 September 2018 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed.

Note 15 Provisions and contingent liabilities (continued)

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.8 billion, of which claims with aggregate claimed damages of USD 1.7 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims have been filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans.

A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied and a request for permission to appeal that ruling was denied by the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In September 2018 the court denied plaintiffs' motion for class certification.

In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA based on plaintiffs' allegation that the loans are not valid. The trial court granted UBS PR's motion for summary judgment and dismissed the action.

In 2014 and 2015, UBS entered into settlements with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI), the SEC and the Financial Industry Regulatory Authority (FINRA) in relation to their examination of UBS's operations. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Beginning in 2015, and continuing through 2017, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. The funds hold significant amounts of those bonds and the defaults on interest payments have had, and are expected to continue to have, an adverse effect on dividends from the funds. Executive orders of the Governor of Puerto Rico that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of creditors' rights. In 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 30 September 2018 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

Note 15 Provisions and contingent liabilities (continued)

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Beginning in 2013 numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority (FCA) and the US Commodity Futures Trading Commission (CFTC) in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System (Federal Reserve Board) and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In 2015, the DOJ's Criminal Division (Criminal Division) terminated the 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation measures. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. UBS has entered into a settlement agreement that would resolve US federal court class actions relating to foreign currency transactions with the defendant banks and persons who transacted in foreign exchange futures contracts and options on such futures. The settlement agreement, which has been approved by the court, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign exchange transactional services or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. In July 2018, the Second Circuit affirmed the dismissal of the case with prejudice.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and alleged co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint.

In 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017. In March 2018, the court dismissed the consolidated complaint. Plaintiffs have filed a motion seeking leave to file an amended complaint.

Putative class actions were also filed against UBS and other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits asserted claims under the antitrust laws and the Commodity Exchange Act (CEA), and other claims. In July 2018, the court in New York granted UBS's motions to dismiss amended complaints in the putative class actions relating to gold and silver. In 2017, the court granted UBS's motion to dismiss the platinum and palladium action. Plaintiffs in the platinum and palladium action subsequently filed an amended complaint that did not allege claims against UBS.

Note 15 Provisions and contingent liabilities (continued)

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office (SFO), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the UK Financial Services Authority (FSA), the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission (WEKO) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation measures with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of other actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

USD LIBOR class and individual actions in the US: In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims. Although the Second Circuit vacated the district court's judgment dismissing antitrust claims, the district court again dismissed antitrust claims against UBS in 2016. Certain plaintiffs have appealed that decision to the Second Circuit. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims. UBS entered into an agreement in 2016 with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs have sought permission to appeal that ruling to the Second Circuit. In July 2018, the Second Circuit denied the petition to appeal of the class of USD lenders.

Other benchmark class actions and ISDAFIX class action in the US: In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including a federal antitrust claim, for lack of standing. In 2015, this court dismissed the plaintiff's federal racketeering claims on the same basis and affirmed its previous dismissal of the plaintiff's antitrust claims against UBS. In 2017, this court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR / SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR / SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2017, UBS agreed to pay USD 14 million to resolve putative class actions filed in federal court in New York and New Jersey against UBS and other financial institutions on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX. The final settlement was approved in June 2018.

Government bonds: Putative class actions have been filed since 2015 in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. A consolidated complaint was filed in 2017 in the SDNY alleging that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction and in the secondary market and asserting claims under the antitrust laws and for unjust enrichment. Defendants' motions to dismiss the consolidated complaint are pending.

Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

Note 15 Provisions and contingent liabilities (continued)

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 30 September 2018 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 30 September 2018 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong-listed initial public offerings for 18 months. UBS has appealed the decision.

Note 16 Guarantees, commitments and forward starting transactions

The table below presents the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

CHF million	30.9.18				30.6.18				31.12.17			
	Gross		Sub-partici-pations	Net	Gross		Sub-partici-pations	Net	Gross		Sub-partici-pations	Net
	Measured at fair value	Not measured at fair value			Measured at fair value	Not measured at fair value			Measured at fair value	Not measured at fair value		
Total guarantees	1,605	17,133	(2,742)	15,996	1,646	18,529	(2,976)	17,199	1,620	17,234	(2,867)	15,987
Loan commitments	4,126	29,659	(624)	33,160	8,558	31,009	(662)	38,905	7,754	31,315	(1,074)	37,995
Forward starting transactions[1]												
Reverse repurchase agreements	19,803	3,814			12,014	1,508				12,683		
Securities borrowing agreements		19				38				23		
Repurchase agreements	16,098	1,000			9,522	1,346				8,187		

1 Cash to be paid in the future by either UBS or the counterparty. Upon adoption of IFRS 9 on 1 January 2018, certain securities financing transactions are presented as measured at fair value through profit or loss. Refer to Note 19 for more information.

Note 17 Events after the reporting period

Changes to functional and presentation currencies

Effective 1 October 2018, and as required by IAS 21, *The Effects of Changes in Foreign Exchange Rates*, the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland has changed from Swiss francs to US dollars, and the functional currency of UBS AG's London Branch operations has changed from British pounds to US dollars. In line with these changes, the presentation currency of UBS Group AG's and UBS AG's consolidated financial statements will change from Swiss francs to US dollars. Prior periods will be restated for this presentation currency change, with assets, liabilities and total equity converted to US dollars at historic closing exchange rates prevailing on the respective balance sheet dates, and income and expenses translated at the respective average rates prevailing for the relevant periods. There will be no material changes to prior-period profit and loss or total equity attributable to UBS shareholders as a result of this change.

→ **Refer to the "Recent developments" section of this report for more information**

Changes in Corporate Center cost allocations to business divisions and Corporate Center segment reporting

Effective 1 January 2019, UBS will no longer separately assess the performance of Corporate Center – Non-core and Legacy Portfolio as a result of its substantially reduced size and resource consumption. Following this change, and in line with IFRS 8, *Operating Segments*, UBS will include the results of Corporate Center – Non-core and Legacy Portfolio with Corporate Center – Services. In addition, in order to align Group and divisional performance, UBS will adjust its methodology for allocating Corporate Center expenses, funding costs and balance sheet to the business divisions. Prior-period information will be restated.

→ **Refer to the "Recent developments" section of this report for more information**

Increase in stake in UBS Securities China

UBS submitted a preliminary application in May 2018 to increase its shareholding in UBS Securities Co. Limited (UBSS) from 24.99% to 51%. The transaction is subject to completion of a share purchase from existing shareholders and regulatory approval. If UBS acquires majority ownership, UBS is expected to consolidate UBSS and remeasure its current 24.99% holding at fair value, resulting in an estimated loss of CHF 0.3 billion if the disclosed offer prices are accepted.

→ **Refer to the "Recent developments" section of this report for more information**

Worldline to acquire SIX Payment Services

On 15 May 2018, SIX and Worldline signed a binding agreement to enter into a strategic partnership in the cards business. Under the agreement, SIX will transfer its existing cards business to Worldline and receive a 27% stake in Worldline. The transaction is currently expected to close in the fourth quarter of 2018. When the transaction closes, UBS expects to recognize in its income statement a share of the gain recognized by SIX, proportional to UBS's 17.31% investment in SIX, which is accounted for as an Investment in associate. The gain is estimated at CHF 0.4 billion subject to Worldline's share price upon closing.

→ **Refer to the "Recent developments" section of this report for more information**

Note 18 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS's foreign operations into Swiss francs.

	Spot rate				Average rate[1]				
	As of				For the quarter ended			Year-to-date	
	30.9.18	30.6.18	31.12.17	30.9.17	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
1 USD	0.98	0.99	0.97	0.97	0.98	0.99	0.97	0.97	0.98
1 EUR	1.14	1.16	1.17	1.14	1.14	1.17	1.14	1.16	1.10
1 GBP	1.28	1.31	1.32	1.30	1.28	1.33	1.27	1.31	1.26
100 JPY	0.86	0.89	0.86	0.86	0.87	0.90	0.87	0.88	0.88

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a quarter represent an average of three month-end rates, weighted according to the income and expense volumes of all foreign operations of the Group with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for the Group.

Note 19 Transition to IFRS 9 as of 1 January 2018

19.1 Update to significant accounting policies disclosed in Note 1a) to the Financial Statements 2017 related to IFRS 9

The adoption of IFRS 9, *Financial Instruments* (IFRS 9) resulted in changes to UBS's accounting policies applicable from 1 January 2018. Accounting polices set out below replace item 3) b, c, g, h, i, l, o and p in Note 1a) in the UBS Group consolidated annual Financial Statements for the year ended 31 December 2017.

As permitted by the transition provisions of IFRS 9 UBS elected not to restate comparative period information, and the accounting policies as set out in Note 1 in the UBS Group AG consolidated annual Financial Statements for the period ended 31 December 2017 apply to comparative periods.

Update to Note 1a) 3) Financial instruments

b. Classification, measurement and presentation

On initial recognition, financial assets are classified as measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL).

A debt instrument is measured at amortized cost if it meets the following conditions:

- it is held within a business model that has an objective to hold financial assets to collect contractual cash flows; and
- the contractual terms of the financial asset result in cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

A debt instrument is measured at FVOCI if it meets both of the following conditions:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms of the financial asset result in cash flows that are SPPI.

Equity instruments are accounted for at FVTPL. All other financial assets are measured at FVTPL and consist of held for trading assets, assets mandatorily measured on a fair value basis and derivatives, except to the extent that they are designated in a hedging relationship, in which case the IAS 39 hedge accounting requirements continue to apply.

Business model assessment

UBS determines the nature of the business model, for example if the objective is to hold the financial asset and collect the contractual cash flows, by considering the way in which the financial assets are managed to achieve a particular business objective as determined by management.

Financial assets that are held for trading or managed on a fair value basis are measured at FVTPL insofar as the associated business model is neither to hold the financial assets to collect contractual cash flows nor to hold to collect contractual cash flows and sell.

The Group originates loans to hold to maturity and to sell or sub-participate to other parties, resulting in a transfer of substantially all the risks and rewards, and derecognition of the loan or portions of it. The Group considers the activities of lending to hold and lending to sell or sub-participate as two separate business models, with financial assets within the former considered to be within a business model that has an objective to hold the assets to collect contractual cash flows, and those within the latter included in a trading portfolio. In certain cases, it may not be possible on origination to identify whether loans or portions of loans will be sold or sub-participated and certain loans may be managed on a fair value basis through, for instance, using credit derivatives. These financial assets are mandatorily measured at FVTPL.

Critical accounting estimates and judgments

UBS exercises judgment to determine the appropriate level at which to assess its business models. In general the assessment is performed at the product level, e.g., retail and commercial mortgages. In other cases the assessment is carried out at a more granular level, e.g., loan portfolios by region, and, if required, further disaggregation is performed by business strategy. In addition, UBS exercises judgment in determining the effect of sales of financial instruments on the business model assessment.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Contractual cash flow characteristics

In assessing whether the contractual cash flows are SPPI, the Group considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument, which could affect whether the instrument is considered to meet the SPPI criteria.

For example, the Group holds portfolios of private mortgage contracts and corporate loans in Personal & Corporate Banking that commonly contain clauses that provide for two-way compensation if prepayment occurs. The amount of compensation paid by or to UBS reflects the effect of changes in market interest rates. The Group has determined that the inclusion of the change in market interest rates in the compensation amount is reasonable for the early termination of the contract, and therefore results in contractual cash flows that are SPPI.

Critical accounting estimates and judgments

UBS applies judgment when considering whether certain contractual features, such as interest rate reset frequency or non-recourse features, significantly affect future cash flows. Furthermore, judgment is required when assessing whether compensation paid or received on early termination of lending arrangements results in cash flows that are not SPPI.

All financial instruments are initially measured at fair value. In the case of financial instruments subsequently measured at amortized cost or FVOCI, the initial fair value is adjusted for directly attributable transaction costs.

After initial recognition, UBS classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9 as described in the table on the following pages.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		A debt financial asset is measured at amortized cost if: – it is held in a business model that has an objective to hold assets to collect contractual cash flows, and – the contractual terms give rise to cash flows that are SPPI. This classification includes: – cash and balances at central banks – loans and advances to banks – cash collateral receivable on securities borrowed – receivables on reverse repurchase agreements – cash collateral receivables on derivative instruments – residential and commercial mortgages – corporate loans – secured loans, including Lombard loans, and unsecured loans – loans to financial advisors – debt securities held as high-quality liquid assets (HQLA) – fee and lease receivables.	Measured at amortized cost using the effective interest rate (EIR) method less allowances for expected credit losses (ECL) (refer to items 3c and 3g in this Note for more information). The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments – when it is probable that UBS will enter into a specific lending relationship – are deferred and amortized over the life of the loan using the EIR method. When the financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amounts arising from exchange-traded derivatives (ETD) and certain over-the-counter (OTC) derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral receivables on derivative instruments.*
Measured at FVOCI	Debt instruments measured at FVOCI	A debt financial asset is measured at FVOCI if: – it is held in a business model whose objective is achieved by both holding assets to collect contractual cash flows and selling the assets, and – the contractual terms give rise to cash flows that are SPPI. This classification primarily includes debt securities and certain asset-backed securities held as HQLA for which the contractual cash flows meet the SPPI conditions.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized (when sold, collected or otherwise disposed). Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses. The amounts recognized in the income statement are determined on the same basis as for financial assets measured at amortized cost.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at FVTPL	Held for trading	Financial assets held for trading include: – all derivatives with a positive replacement value, except those that are designated as effective hedging instruments – other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans) and equity instruments.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Other net income from fair value changes on financial instruments*, except interest and dividend income on instruments other than derivatives (refer to item 3c in this Note for more information), interest on derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain long- and short-duration foreign exchange contracts, which are reported in *Net interest income*. Derivative assets are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral receivables on derivative instruments.* The presentation of fair value changes on derivatives that are designated and effective as hedging instruments depends on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information). Financial assets held for trading (other than derivatives) are presented as *Financial assets at fair value held for trading*. Other financial assets mandatorily measured at fair value through profit or loss are presented as *Financial assets at fair value not held for trading*, except for brokerage receivables, which are presented as a separate line item on the Group's balance sheet.
	Mandatorily measured at FVTPL – Other	A financial asset is mandatorily measured at FVTPL if: – it is not held in a business model whose objective is to hold assets to collect contractual cash flows or to hold them to collect contractual cash flows and sell, and / or – the contractual terms give rise to cash flows that are not SPPI, and / or – it is not held for trading. The following financial assets are mandatorily measured at FVTPL: – Certain structured loans, certain commercial loans, receivables under reverse repurchase and cash collateral on securities borrowing agreements that are managed on a fair value basis – Loans, managed on a fair value basis and hedged with credit derivatives – Certain debt securities held as HQLA and managed on a fair value basis – Certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets represent holdings in investments funds, whereby the contractual cash flows do not meet the SPPI conditions because the entry and exit price is based on the fair value of the fund's assets – Brokerage receivables, for which contractual cash flows do not meet the SPPI conditions due to the aggregate balance being accounted for as a single unit of account, with interest being calculated on the individual components – Auction rate securities, for which contractual cash flows do not meet the SPPI conditions because interest may be reset at rates that contain leverage – Equity instruments – Assets held under unit-linked investment contracts.	

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial liabilities classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – Demand and time deposits, retail savings / deposits, amounts payable under repurchase agreements, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit and covered bonds – Cash collateral payables on derivative instruments.	Measured at amortized cost using the EIR method. Upfront fees and direct costs relating to the issuance or origination of the liability are deferred and amortized over the life of the liability using the EIR method. When the financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amortized cost liabilities are presented on the balance sheet primarily as *Amounts due to banks, Customer deposits, Payables from securities financing transactions* and *Debt issued measured at amortized cost.* Amounts arising from ETD and certain OTC derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral payables on derivative instruments.*
Measured at fair value through profit or loss	Held for trading	Financial liabilities held for trading include: – All derivatives with a negative replacement value (including certain loan commitments) except those that are designated and effective hedging instruments – Obligations to deliver financial instruments, such as debt and equity instruments, that UBS has sold to third parties, but does not own (short positions).	Measurement of financial liabilities classified at FVTPL follows the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of the financial liability that is attributable to changes in UBS's own credit risk is presented in OCI. Financial liabilities measured at FVTPL are presented as *Financial liabilities at fair value held for trading* and *Other financial liabilities designated at fair value*, respectively, except for brokerage payables and debt issued, which are presented as separate sub-totals on the Group's balance sheet. Derivative liabilities are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral payables on derivative instruments.* Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective as hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information).
	Designated at FVTPL	UBS designated at FVTPL the following financial liabilities: – Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes – Issued debt instruments managed on a fair value basis – Certain payables under repurchase agreements and cash collateral on securities lending agreements that are managed in conjunction with associated reverse repurchase agreements and cash collateral on securities borrowed – Loan commitments that are hedged predominantly with credit derivatives and those managed on a fair value basis – Amounts due under unit-linked investment contracts whose cash flows are linked to financial assets measured at FVTPL and eliminate an accounting mismatch – Brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.	

c. Interest income and expense

Interest income and expense are recognized in the income statement applying the EIR method.

In determining interest income and expense, the EIR is applied to the gross carrying amount of the financial asset (unless the asset is credit-impaired) or the amortized cost of a financial liability, based on estimated future cash flows that take into account all contractual cash flows, except those related to ECL. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying EIR to the amortized cost of the instrument. Furthermore, for financial assets that were credit-impaired on initial recognition, interest is determined by applying a credit-adjusted EIR to the amortized cost of the instrument.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS also presents interest income and expense on financial instruments (excluding derivatives) measured at FVTPL separately from the rest of the fair value changes in the income statement. Interest income or expense on financial instruments measured at amortized cost and financial assets measured at FVOCI are presented separately within *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* and *Interest expense from financial instruments measured at amortized cost,* with interest on financial instruments at FVTPL presented in *Interest income (or expense) from financial instruments measured at fair value through profit or loss*. All are part of *Net interest income*.

Interest income from financial instruments measured at fair value through profit or loss includes forward points on certain short- and long-duration foreign exchange contracts and dividend income.

Furthermore, interest income and expense on derivatives designated as hedging instruments in effective hedge relationships are presented consistently with the interest income and expense of the respective hedged item.

→ **Refer to "Note 1a) Significant Accounting Policies" in the "Consolidated financial Statements" section of the Annual Report 2017 for more information**

g. Expected credit losses

Expected credit losses (ECL) are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees and loan commitments. ECL are also recognized on the undrawn portion of revolving revocable credit lines, which include UBS's credit card limits and master credit facilities, which are customary in the Swiss market for corporate and commercial clients. UBS refers to both as "other credit lines," with clients allowed to draw down on-demand balances (with the Swiss master credit facilities also allowing for term products) and which can be terminated by UBS at any time. Though these other credit lines are revocable, UBS is exposed to credit risk because the client has the ability to draw down funds before UBS can take credit risk mitigation actions.

Recognition of expected credit losses

ECL represent the difference between contractual cash flows and those UBS expects to receive, discounted at the EIR. For loan commitments and other credit facilities in scope of ECL, expected cash shortfalls are determined by considering expected future draw downs.

ECL are recognized on the following basis:

- Maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 1. For instruments with a remaining maturity of less than 12 months, ECL are determined for this shorter period.
- Lifetime ECL are recognized if a significant increase in credit risk (SICR) is detected subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 2. Where an SICR is no longer observed, the instrument will move back to stage 1.
- Lifetime ECL are always recognized for credit-impaired financial instruments, referred to as instruments in stage 3. The IFRS 9 determination of whether an instrument is credit-impaired is based on the occurrence of one or more loss events, with lifetime ECL generally derived by estimating expected cash flows based on a chosen recovery strategy with additional consideration given to forward-looking economic scenarios. Credit-impaired exposures may include positions for which no loss has occurred or no allowance has been recognized, for example, because they are expected to be fully recoverable through the collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired financial assets (POCI). POCI are initially recognized at fair value with interest income subsequently being recognized based on a credit-adjusted EIR. POCI include financial instruments that are newly recognized following a substantial restructuring and remain a separate category until maturity.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS does not apply the low-credit-risk practical expedient that allows a lifetime ECL for lease or fee receivables to be recognized irrespective of whether a significant increase in credit risk has occurred. Instead, UBS has incorporated lease and fee receivables into the standard ECL calculation.

A write-off is made when all or part of a financial asset is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / recovery*. Write-offs and partial write-offs represent derecognition / partial derecognition events.

ECL are recognized in profit or loss with a corresponding ECL allowance reported as a decrease in the carrying value of financial assets measured at amortized cost on the balance sheet. For financial assets measured at fair value through OCI, the carrying value is not reduced, but an accumulated amount is recognized in OCI. For off-balance sheet financial instruments and other credit lines, provisions for ECL are reported in *Provisions*. ECL are recognized within the income statement in *Credit loss expense / recovery.*

Default and credit impairment

The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for the Personal & Corporate Banking and Swiss wealth management portfolios. Counterparties are also classified as defaulted when bankruptcy, insolvency proceedings or enforced liquidation have commenced, obligations have been restructured on preferential terms or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If a counterparty is defaulted, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is POCI. An instrument is POCI if it has been purchased with a material discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCIs), it remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit-restructured, and there is general evidence of credit recovery. A minimum period of three months is applied whereby most instruments remain in stage 3 for a longer period.

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on either loss expectations resulting from default events over a maximum 12-month period from the reporting date or over the remaining life of a financial instrument. The method used to calculate individual probability-weighted unbiased ECL is based on a combination of the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). PDs and LGDs used in the ECL calculation are point in time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For each instrument or group of instruments, parameter time series are generated consisting of the instruments' PD, LGD and EAD profiles considering the respective period of exposure to credit risk.

For the purpose of determining the ECL-relevant parameters, UBS leverages its Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and new IFRS 9-related models have been developed, which consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III through the cycle (TTC) parameters. The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III are not affected by the IFRS 9 ECL calculation.

Probability of default (PD): The PD represents the likelihood of a default over a specified time period. A 12-month PD represents the likelihood of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. The lifetime PD calculation is based on a series of 12-month PIT PDs that are derived from TTC PDs and scenario forecasts. This modeling is region-, industry- and client segment-specific and considers both scenario-systematic and client-idiosyncratic information. To derive the cumulative lifetime PD per scenario, the series of 12-month PIT PDs are transformed into marginal PIT PDs taking any assumed default events from previous periods into account.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Exposure at default (EAD): The EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring during the life of a financial instrument. It represents the cash flows outstanding at the time of default, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios. IFRS 9-specific CCFs have been modeled to capture client segment- and product-specific patterns after removing Basel standard-specific limitations, i.e., conservativism and focus on a 12-month period prior to default.

Loss given default (LGD): The LGD represents an estimate of the loss at the time of a potential default occurring during the life of a financial instrument. The determination of the LGD takes into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. The LGD is commonly expressed as a percentage of the EAD.

PD and LGD are determined for four different scenarios whereas EAD projections are treated as scenario independent.

Parameters are generally determined on an individual financial asset level. For credit card exposures in Switzerland, personal account overdrafts and certain loans to financial advisors, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio.

Scenarios and scenario weights

The determination of the probability-weighted ECL requires evaluating a range of diverse and relevant future economic conditions.

To accommodate this requirement, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. Those variables range from above-trend economic growth to severe recession. A weight is computed for each scenario by using a probabilistic econometric model that considers recent information as well as several decades of historical data. The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur. The scenarios, including the narratives, the macroeconomic and financial variables and the scenario weights, are further discussed, challenged and potentially refined by a team of UBS-internal experts. The baseline scenario is aligned to the economic and market assumptions used for UBS business planning purposes.

Macroeconomic and other factors

The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS projects the relevant economic factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Certain variables may only be relevant for specific types of exposures, such as house price indices for mortgage loans, while other variables have key relevance in the ECL calculation for all exposures. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS's key ECL-relevant portfolios.

For UBS, the following forward-looking macroeconomic variables represent the most relevant factors in the ECL calculation:

- GDP growth rates
- House price indices
- Unemployment rates
- Interest rates, specifically LIBOR and government bond yields
- Equity indices
- Consumer price indices

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

The forward-looking macroeconomic assumptions used in the ECL calculation are developed by UBS economists, risk methodology personnel and credit risk officers. Assumptions and scenarios are validated and approved through a scenario committee and an operating committee, which also aim to ensure a consistent use of forward-looking information throughout UBS, including in the business planning process. ECL inputs are tested and reassessed for appropriateness at least each quarter and appropriate adjustments are made when needed.

ECL measurement period

The period for which lifetime ECL are determined is based on the maximum contractual period that UBS is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment where the contractual cancelation right does not limit UBS's exposure to credit risk to the contractual notice period as the client has the ability to draw down funds before UBS can take risk mitigating actions. In such cases, UBS is required to estimate the period over which it is exposed to credit risk. This applies to UBS's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one unit. The exposure arising from UBS's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS is exposed to credit risk. Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a Risk Officer, allowing for informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS has assessed these credit risk management practices and considers both the RbM approach and formal credit review as a substantive credit review providing for a re-origination of the facility. Following this, a 12-month measurement period is used for both types of facilities as an appropriate proxy of the period over which UBS is exposed to credit risk, with 12 months also used as a look back period for assessing SICR.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a 12-month ECL continues to be appropriate, it is assessed whether an SICR has occurred since initial recognition of the financial instrument. The assessment criteria include both quantitative and qualitative factors.

Primarily, UBS assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:

– at the reporting date and
– at inception of the instrument.

In both cases, the respective PDs are determined for the residual lifetime of the instrument, i.e., the period between the reporting date and maturity. If, based on UBS's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL being recognized.

The threshold applied varies depending on the original credit quality of the borrower. For instruments with lower default probabilities at inception due to good credit quality of the counterparty, the SICR threshold is set at a higher level than for instruments with higher default probabilities at inception. This implies that for instruments with initially lower default probabilities a relatively higher deterioration in credit quality is needed to trigger an SICR than for those instruments with originally higher PDs. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, expressed in rating downgrades, together with the corresponding ratings at origination of an instrument is provided in the "SICR thresholds" table below. This simplified view is aligned to internal ratings as disclosed in the internal ratings table presented in "Credit risk" in the "Risk management and control" section of the Annual Report 2017. The actual SICR thresholds applied are defined on a more granular level interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the borrower becomes more than 30 days past due on his contractual payments. This presumption is rebutted only where reasonable and supportable information is available that demonstrates that UBS is not exposed to an SICR even if contractual payments become more than 30 days past due.

For certain less material portfolios, specifically the Swiss credit card portfolio and the recruitment and retention loans to financial advisors within Global Wealth Management, the 30 days past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30 days past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking that are between 90 and 180 days past due, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR and hence for a transfer to stage 2. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected. Instruments for which an SICR since initial recognition is determined based on criteria other than changed default probabilities remain in stage 2 for at least six months post resolution of the stage 2 trigger event.

The overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions due to the risk management practices adopted, including daily monitoring processes with strict remargining requirements. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. ECL on these positions are not material.

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that involve significant uncertainty at the time they are made. Changes to these estimates and assumptions can result in significant changes to the timing and amount of ECL to be recognized.

Determination of a significant increase of credit risk
IFRS 9 does not include a definition of what constitutes an SICR. UBS assesses whether an SICR has occurred since initial recognition based on qualitative and quantitative reasonable and supportable forward-looking information that includes significant management judgment. More stringent criteria could significantly increase the number of instruments migrating to stage 2. An IFRS 9 Operating Committee has been established to review and challenge the SICR approach and any potential changes and determinations made in the quarter.

Scenarios, scenario weights and macroeconomic factors
ECL reflect an unbiased and probability-weighted amount, which UBS determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios and judges the suitability of respective weights to be applied. Each of the scenarios is based on management's assumptions around future economic conditions in the form of macroeconomic, market and other factors. Changes in the scenarios and weights, the corresponding set of macroeconomic variables and the assumptions made around those variables for the forecast horizon would have a significant effect on the ECL. An IFRS 9 Scenario Committee, in addition to the Operating Committee, has been established to derive, review and challenge the selection and weights.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. The ECL calculation is therefore sensitive to any extension of contractual maturities triggered by business decisions, consumer behaviors and an increased number of stage 2 positions. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period has been applied for master credit facilities.

Modeling and management adjustments
A number of complex models have been developed or modified to calculate ECL, with additional management adjustments required. Internal counterparty rating changes, new or revised models and data may significantly affect ECL. The models are governed by UBS's model validation controls, which aim to ensure independent verification, and are approved by the Group Model Governance Board (GMGB). The management adjustments are approved by the IFRS 9 Operating Committee and endorsed by the GMGB.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

h. Restructured and modified financial assets

When a counterparty is in financial difficulties or where default has already occurred, UBS may restructure financial assets by providing concessions that would otherwise not be considered and that are outside of UBS's normal risk appetite, such as preferential interest rates, extension of maturity and subordination. When a credit restructuring takes place, each case is considered individually and the counterparty is generally classified as defaulted until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions, or until the counterparty has recovered and the preferential conditions no longer exceed UBS's risk appetite.

Concessions granted when there is no evidence of financial difficulties, or where changes to terms and conditions are within UBS's usual risk appetite, are not considered to be a credit restructuring.

Modifications represent contract amendments that result in an alteration of future contractual cash flows and that can occur within UBS's normal risk appetite or as part of a credit restructuring where a counterparty is in financial difficulties.

A restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying value of a financial asset is recognized in profit or loss as a modification gain or loss. Further, the subsequent SICR assessment is made by comparing the risk of default at the reporting date based on the modified contractual terms of the financial asset with the risk of default at initial recognition based on the original, unmodified contractual terms of the financial asset.

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS once the commitments are communicated to the beneficiary or that are revocable only due to automatic cancelation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) derivative loan commitments measured at fair value through profit or loss, (ii) loan commitments designated at fair value through profit or loss or (iii) other loan commitments.

The Group recognizes ECL on non-cancelable other loan commitments. In addition, UBS also recognizes ECL on loan commitments that can be canceled at any time if UBS is exposed to credit risk (refer to item g in this Note). Corresponding ECL are presented within *Provisions* on the Group's balance sheet. ECL relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is presented within *Financial assets at fair value held for trading* or within *Financial assets at fair value not held for trading* when the associated loan commitments are measured at fair value through profit or loss, or within *Loans and advances to customers*, when the associated loan commitments are not measured at fair value through profit or loss.

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss. Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of:

- the amount of ECL (refer to item g in this Note) and
- the amount initially recognized less the cumulative amount of income recognized as of the reporting date.

ECL resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

q. Other net income from fair value changes of financial instruments

The line item *Other net income from fair value changes of financial instruments* substantially includes fair value gains and losses on financial instruments at fair value through profit or loss, as well as the effects at derecognition, trading gains and losses and intermediation income arising from certain client-driven Global Wealth Management and Personal & Corporate Banking financial transactions. In addition, foreign currency translation effects and income and expenses from precious metals are presented under this income statement line item.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

19.2 Adoption of IFRS 9

19.2.1 Governance

The implementation of IFRS 9 has been a key strategic initiative for UBS implemented under the joint sponsorship of the Group Chief Financial Officer and the Group Chief Risk Officer. The incorporation of forward-looking information into the ECL calculation and the definition and assessment of what constitutes a significant increase in credit risk (SICR) are inherently subjective and involve the use of significant expert judgment. Therefore, UBS has developed a front-to-back governance framework over the ECL calculation process jointly owned by the Group Chief Financial Officer and the Group Chief Risk Officer and has designed controls to be in compliance with the requirements of the Sarbanes-Oxley Act. UBS has efficient credit risk management processes in place that continue to be applicable and aim to ensure the effects of economic developments are appropriately considered, mitigation actions are taken where required and risk appetite is reassessed and adjusted as needed.

→ **Refer to the "Risk management and control" section of the Annual Report 2017 for more information**

19.2.2 Retrospective amendments to UBS Group balance sheet presentation

Although the effect of IFRS 9 classification and measurement changes has been applied prospectively, UBS has made a series of changes to the presentation of its IFRS balance sheet to facilitate comparability and prior-period information is presented for periods ending before 1 January 2018 in this revised structure. The primary changes include:

- IAS 39-specific asset categories, such as "Financial assets held to maturity" and "Financial assets available for sale," have been superseded by the new categories "Financial assets measured at amortized cost" and "Financial assets measured at fair value through other comprehensive income."
- A new line, *Financial assets at fair value not held for trading*, has been created to accommodate in particular financial assets previously designated at fair value, all of which are mandatorily classified at fair value through profit or loss under IFRS 9.
- *Other assets* and *Other liabilities* have been split between measured at amortized cost, measured at fair value through profit or loss and other non-financial assets and liabilities.
- *Cash collateral on securities borrowed* and *Reverse repurchase agreements* have been combined into a single line, *Receivables from securities financing transactions.* Similarly, *Cash collateral on securities lent* and *Repurchase agreements* have been combined into a single line, *Payables from securities financing transactions.*
- Finance lease receivables, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
- Precious metal positions previously presented in *Trading portfolio assets* are now presented within the new line *Other non-financial assets.*
- *Financial liabilities designated at fair value* have been split into two lines: *Debt issued designated at fair value* and *Other financial liabilities designated at fair value.*

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

The table below illustrates the new balance sheet presentation of assets and liabilities as of 31 December 2017 in comparison with the presentation in the Annual Report 2017. The presentation of the components of equity has not changed, and therefore, for illustration purposes, total liabilities and equity are presented in a single line in the table. The table does not reflect any of the effects of adopting the classification and measurement requirements of IFRS 9, which are presented in section 19.2.3 under *Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9.*

Retrospective amendments to UBS Group balance sheet presentation as of 31 December 2017

CHF million		31.12.17	31.12.17
Assets	References	Former presentation	Revised presentation
Cash and balances at central banks		87,775	87,775
Loans and advances to banks (formerly: Due from banks)		13,739	13,739
Receivables from securities financing transactions (new line)	1		89,633
Cash collateral on securities borrowed (newly included in Receivables from securities financing transactions)	1	12,393	
Reverse repurchase agreements (newly included in Receivables from securities financing transactions)	1	77,240	
Cash collateral receivables on derivative instruments		23,434	23,434
Loans and advances to customers (formerly: Loans)	2	319,568	318,509
Financial assets held to maturity (superseded)	3	9,166	
Other financial assets measured at amortized cost (new line)	2, 3, 7		36,861
Total financial assets measured at amortized cost			569,950
Financial assets at fair value held for trading (formerly: Trading portfolio assets)	4	130,707	126,144
of which: assets pledged as collateral that may be sold or repledged by counterparties		*35,363*	*35,363*
Derivative financial instruments (formerly: Positive replacement values)		118,227	118,227
Brokerage receivables (new line, formerly included within Other assets)		n/a	n/a
Financial assets at fair value not held for trading (new line)	5		58,933
Financial assets designated at fair value	5	58,933	
Total financial assets measured at fair value through profit or loss			303,304
Financial assets available for sale (superseded)	6	8,665	
Financial assets measured at fair value through other comprehensive income (new line)	**6**		8,665
Investments in associates		1,018	1,018
Property, equipment and software		8,829	8,829
Goodwill and intangible assets		6,398	6,398
Deferred tax assets		9,844	9,844
Other non-financial assets (new line)	4, 7		7,633
Other assets (superseded)	7	29,706	
Total assets		915,642	915,642
Liabilities			
Amounts due to banks		7,533	7,533
Payables from securities financing transactions (new line)	8		17,044
Cash collateral on securities lent (newly included in Payables from securities financing transactions)	8	1,789	
Repurchase agreements (newly included in Payables from securities financing transactions)	8	15,255	
Cash collateral payables on derivative instruments		30,247	30,247
Customer deposits (formerly: Due to customers)		408,999	408,999
Debt issued measured at amortized cost		139,551	139,551
Other financial liabilities measured at amortized cost (new line)	10		36,337
Total financial liabilities measured at amortized cost			639,711
Financial liabilities at fair value held for trading (formerly: Trading portfolio liabilities)		30,463	30,463
Derivative financial instruments (formerly: Negative replacement values)		116,133	116,133
Brokerage payables designated at fair value (new line, formerly included within Other liabilities)		n/a	n/a
Financial liabilities designated at fair value (superseded)	9	54,202	
Debt issued designated at fair value (new line)	9		49,502
Other financial liabilities designated at fair value (new line)	9, 10		16,223
Total financial liabilities measured at fair value through profit or loss			212,322
Provisions		3,133	3,133
Other non-financial liabilities (new line)	10		9,205
Other liabilities (superseded)	10	57,064	
Total liabilities		864,371	864,371
Total liabilities and equity		915,642	915,642

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Retrospective amendments to UBS Group balance sheet presentation"

Table ref.	Description of presentation changes applied retrospectively to the balance sheet as of 31 December 2017
Balance sheet assets	
1	Cash collateral on securities borrowed of CHF 12,393 million and reverse repurchase agreements of CHF 77,240 million as of 31 December 2017 are now presented as a total of CHF 89,633 within a single line, *Receivables from securities financing transactions*.
2	Finance lease receivables of CHF 1,059 million as of 31 December 2017, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
3	*Financial assets held to maturity* measured at amortized cost of CHF 9,166 million as of 31 December 2017 are now presented within *Other financial assets measured at amortized cost*.
4	Precious metal positions of CHF 4,563 million as of 31 December 2017, previously presented in *Trading portfolio assets*, are now presented within *Other non-financial assets*.
5	Financial assets designated at fair value through profit or loss of CHF 58,933 million as of 31 December 2017, previously presented in a separate line, are now presented within *Financial assets at fair value not held for trading*.
6	Debt and equity instruments of CHF 8,665 million as of 31 December 2017, previously presented in *Financial assets available for sale,* are now presented within *Financial assets measured at fair value through other comprehensive income*.
7	The reporting line *Other assets* has been split into two new reporting lines, *Other financial assets measured at amortized cost* and *Other non-financial assets*. – Assets of CHF 29,706 million as of 31 December 2017, previously presented within *Other assets*, are now presented within *Other assets measured at amortized cost* (CHF 26,636 million) and *Other non-financial assets* (CHF 3,070 million). – Financial assets now presented within *Other financial assets measured at amortized cost* include brokerage receivables of CHF 19,080 million, debt securities of CHF 9,166 million, loans to financial advisors of CHF 3,118 million and other assets amounting to CHF 5,497 million. Refer to Note 12 a) for more information. – Refer to Note 12 b) for more information on assets now presented within *Other non-financial assets*.
Balance sheet liabilities	
8	Cash collateral on securities lent of CHF 1,789 million and repurchase agreements of CHF 15,255 million as of 31 December 2017 are now presented within a single line, *Payables from securities financing transactions*.
9	Financial liabilities designated at fair value through profit or loss of CHF 54,202 million as of 31 December 2017 are now presented within *Debt issued designated at fair value* (CHF 49,502 million) and *Other financial liabilities designated at fair value* (CHF 4,700 million).
10	The reporting line *Other liabilities* has been split into three new reporting lines, *Other financial liabilities measured at amortized cost*, *Other financial liabilities designated at fair value* and *Other non-financial liabilities*. – Liabilities amounting to CHF 57,064 million as of 31 December 2017, previously presented within *Other liabilities,* are now presented within *Other financial liabilities measured at amortized cost* (CHF 36,337 million, thereof CHF 29,646 million brokerage payables), within *Other financial liabilities designated at fair value* (amounts due under unit-linked investment contracts of CHF 11,523 million) and within *Other non-financial liabilities* (CHF 9,205 million). – Refer to note 12 c) for more information on financial liabilities now presented within *Other financial liabilities measured at amortized cost.* – Refer to note 12 d) for more information on financial liabilities now presented within *Other financial liabilities designated at fair value*. – Refer to note 12 e) for more information on liabilities now presented within *Other non-financial liabilities*.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

19.2.3 Transition to IFRS 9 as of 1 January 2018

Transition to Classification and measurement requirements

As set out in the amended accounting policies in section 19.1, IFRS 9 requires all financial assets, except equity instruments and derivatives, to be classified at amortized cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL), based on the business model for managing the respective assets and their contractual cash flow characteristics.

Changes resulting from the application of IFRS 9 classification and measurement requirements as of 1 January 2018 have been applied as follows:

- Determination of the business model was made based on facts and circumstances as of the 1 January 2018 transition date;
- De-designations and new designations of financial instruments at FVTPL, pursuant to transition requirements of IFRS 9, have been carried out as of 1 January 2018. These reassessments resulted in:
  i. the de-designation of certain financial assets designated at FVTPL, as they are managed on a fair value basis, and therefore are mandatorily measured at fair value, or no longer managed on a fair value basis but held to collect the contractual cash flows and therefore are measured at amortized cost;
  ii. newly designated financial liabilities at FVTPL (e.g., brokerage payables) in order to achieve measurement consistency with associated financial assets that are mandatorily measured at FVTPL (e.g., brokerage receivables).

For UBS, the most significant IFRS 9 classification and measurement changes on transition to IFRS 9 are as follows:

- financial assets that no longer qualify for amortized cost accounting under IFRS 9 have been classified at FVTPL because their cash flow characteristics do not satisfy the solely payments of principal and interest criteria (e.g., auction rate securities and certain brokerage receivables);
- lending arrangements that no longer qualify for amortized cost accounting under IFRS 9 are classified at FVTPL because the business model within which they are managed does not have an objective to hold financial assets in order to collect the contractual cash flows or to collect contractual cash flows and sell (e.g., certain Investment Bank lending arrangements);
- equity instruments classified as available for sale under IAS 39 are classified at FVTPL under IFRS 9; and
- financial liabilities are newly designated under IFRS 9 at FVTPL, from amortized cost accounting, to align with conclusions reached for associated financial assets that will be measured at FVTPL (e.g., brokerage payables).

Effect on UBS Group income statement presentation

Upon adoption of IFRS 9, the reclassification of auction rate securities, certain loans in the Investment Bank, certain repurchase agreements and brokerage balances from amortized cost to FVTPL has resulted in the interest income from these instruments moving from Interest income (expense) from financial instruments measured at amortized cost to interest income (expense) from financial instruments measured at fair value through profit or loss. These changes have been applied prospectively from 1 January 2018.

Effect on UBS Group Statement of cash flows

Following the adoption of IFRS 9, changes have been made to the Statement of cash flows to reflect the changes arising from financial instruments that have been reclassified on the balance sheet. In particular, cash flows from certain financial assets previously measured as available-for-sale assets at fair value through other comprehensive income have been reclassified from investing activities to operating activities as the assets are fair valued through profit or loss effective 1 January 2018.

Transition to expected credit loss requirements

As set out in the Group's amended accounting policies in section 19.1, IFRS 9 introduces a forward-looking ECL approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39 and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*.

The majority of ECL calculated as of the transition date relates to the private and commercial mortgage portfolio and corporate lending in Switzerland within Personal & Corporate Banking.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Models at transition
For the purpose of implementing ECL under IFRS 9, UBS has leveraged existing Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models.

Existing models have been adapted and 29 new models have been developed for the ECL calculation that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III TTC parameters. Management adjustments have also been made. UBS has leveraged its existing model risk framework, including the key model validation control executed by Model Risk Management & Control. New and revised models have been approved by UBS's GMGB.

The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III remain unchanged.

→ **Refer to "Credit risk models" in the "Risk, treasury and capital management" section of our Annual Report 2017 for more information**
→ **Refer to "Significant accounting and financial reporting changes in 2018" in the "Operating environment and strategy" section of our Annual Report 2017 for more information**

Scenarios and scenario weights at transition
As outlined in section 19.1, UBS uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL calculated on transition have been determined for each of the scenarios and subsequently weighted based on the probabilities in the table "Economic scenarios and weights applied."

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (1.1.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

UBS has established IFRS 9 ECL Scenario and Operating Committees to propose and approve the selection of the scenarios and weights to be applied and to monitor whether appropriate governance exists.

Macroeconomic and other factors: For each of the economic scenarios, UBS forecasts a wide range of forward-looking macroeconomic, market and other factors. Historical information was used to support the identification of the key factors and to project their development under the different scenarios. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS projected those factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS's key ECL-relevant portfolios.

The following represent the most significant macroeconomic factors for UBS and could substantially change the estimated ECL:

- GDP growth rates, given their significant effect on borrowers' performance
- House price indices, given their significant effect on mortgage collateral valuations
- Unemployment rates, given their significant effect on private clients' ability to meet contractual obligations
- Interest rates, given their significant effect on the counterparties' abilities to service their debt
- Equity indices, given their relevance for equity collateral valuation
- Consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability.

Macroeconomic and other factors at transition
Assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of the economic scenarios to determine ECL at the date of transition can be summarized as follows:

In the upside scenario, which assumes GDP growth rising above trend in most countries with only a moderate rise in inflation and ongoing accommodative monetary policies, GDP growth in Switzerland peaks at around 5% annually. Strong growth leads to a decline in unemployment to very low levels (below 1%) by 2020. Asset prices grow at robust pace, with equity prices increasing by approximately 10% annually and house prices (single-family homes) rising by approximately 4% annually. Policy and short-term interest rates remain low over the entire scenario, while government bond yields experience a sustained increase.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

In the US and the rest of the world, the scenario shows broadly similar features, with growth accelerating in Year 1 before steadily returning toward trend by Year 3. Specifically in the US, GDP growth accelerates at a slightly faster pace than in Switzerland, although the US experiences a slightly less substantial improvement in the unemployment rate by Year 3. The degree of policy tightening is marginally greater over the scenario horizon and, as in Switzerland, long-term government bond yields rise more significantly than short-term rates, and to a greater degree.

For the baseline scenario, which is modeled along our business plan assumptions of a continuation of overall important global growth, Swiss GDP growth remains between 1% and 2% annually over the three years of the scenario. Moderate growth results in a very mild decrease of unemployment, which stabilizes at around 3.5%. Asset price growth is also moderate, with the Swiss equity price index rising by approximately 8% annually, while house prices grow by less than 1% annually. Policy rates, short-term interest rates and government bond yields increase very gradually over the three years of the scenario by approximately 50 basis points.

GDP growth in the US remains relatively stable, and faster than in Switzerland. Monetary policy tightens at a similar pace to Switzerland and, combined with a modest decline in the unemployment rate, helps to keep inflation in check. US equity prices slightly underperform their Swiss counterparts, while house prices outperform relatively stagnant Swiss house price growth. In the rest of the world, growth remains buoyant, with moderating growth in both Europe and China contrasting with accelerating growth in other emerging markets.

The mild downside scenario is based on a monetary policy tightening assumption, implemented to deflate a potential asset price bubble, causing Swiss GDP to decline by almost 1% in the first year of the scenario. The unemployment rate rises to roughly 5%. Equity prices fall by more than 20% over three years, while house prices decline by 15% over the same period. The fall of the nominal asking rent index, which is cushioned by higher interest rates, is more moderate than the decline in house prices. Short-term interest rates rise significantly due to monetary tightening, as well as government bond yields.

In this scenario, inflation in the US accelerates rapidly, leading to a sharp rise in short-term interest rates, similar to Switzerland. GDP growth and house prices decline at a similar rate in the US and Switzerland. In the rest of the world, growth is also weighed down, particularly in more vulnerable emerging markets such as Russia, Turkey and Brazil, as interest rates and credit spreads rise sharply.

The severe downside scenario is modeled to mimic a severe recession caused by an event affecting Switzerland's competitiveness in key export markets, with Swiss GDP shrinking almost 7% in the first year of the scenario. The severe recession results in a substantial increase in unemployment, which peaks at around 9%. Asset prices plummet, with the Swiss equity index falling more than 55% over three years, and house prices declining 27% over the same period. Policy and short-term interest rates remain low over the entire scenario horizon.

US GDP and unemployment deteriorate by a lesser degree than in Switzerland, and while house and equity prices decline sharply, the effects are also less severe than in Switzerland. With more scope to cut rates than the Swiss National Bank, short-term rates fall in the US. In the rest of the world, growth also slows sharply, particularly in the eurozone and neighboring emerging markets such as Turkey and Russia.

ECL measurement period at transition

As set out in section 19.1, for the majority of ECL-relevant instruments, the contractual maturity is used to calculate the measurement period, with this capped at 12 months when stage 1 ECL are required. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit cards and 12 months for master credit facilities. UBS's ECL-relevant financial instruments have relatively short average maturities, which significantly contribute to the level of ECL on transition.

SICR determination at transition

The identification of instruments for which an SICR has been determined since initial recognition and the corresponding allocation to stage 2 at transition generally follow the principles described in the relevant accounting policy provided in section 19.1. Furthermore, the following principles have been applied:

General: In estimating the retrospective lifetime PDs, we have considered the economic conditions over the relevant prior periods and the general significant uncertainty inherent in such approximation to determine the allocation of instruments to stage 2 at transition.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Real estate financing: The Basel III rating methodology applied to the majority of income-producing real estate financings within Personal & Corporate Banking, which is leveraged for IFRS 9 ECL calculations, was significantly changed in 2017. As a consequence, there is no comparable rating on origination to determine whether an SICR has arisen over time. As permitted by the IFRS 9 transition requirements, a lifetime ECL allowance has therefore been recognized for certain real estate financing positions and will continue to be recognized until the positions are derecognized.

Other portfolios, including private mortgages and commercial SME clients: The Basel III rating models for other key portfolios in Personal & Corporate Banking, in particular for private client mortgages and commercial clients in the small and medium-sized enterprise (SME) segment, have recently been subject to a major redesign. While the methodology remained essentially the same and the calibration to the portfolios' average TTC PD value unchanged, the effect on the stage allocation is significant. This is due to the fact that the introduction of new models has led to a broader and different distribution of borrowers across the rating spectrum; while there was no material effect on those counterparties with an uplift in their rating, some of those that had a downward shift in their rating triggered the SICR threshold and a reclassification into stage 2 at transition.

The table on the following pages provides a detailed overview of the IFRS 9 transition effects as of 1 January 2018. This includes:
– reclassification of IAS 39 carrying amounts to the new categories applicable under IFRS 9;
– remeasurement of carrying amounts due to reclassification (any remeasurement to fair value and / or reversal of IAS 39 allowances or IAS 37 provisions for assets moving from amortized cost to fair value); and
– recognition of IFRS 9 ECL for in-scope assets, off-balance sheet positions and other credit lines.

The following table also includes the effects recognized for deferred tax assets and therefore the total impact provided in *Retained earnings* in the table is net of tax effects. Explanatory footnotes provided after the table provide additional details on these changes.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Assets						
Cash and balances at central banks	Loans and receivables	87,775			0	87,775
Loans and advances to banks	Loans and receivables	13,739	(17)		(3)[12]	13,719
to: Brokerage receivables	*Loans and receivables*		*(17)[1]*			
Receivables from securities financing transactions	Loans and receivables	89,633	(4,957)		(2)[12]	84,674
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(4,957)[2]*			
Cash collateral receivables on derivative instruments	Loans and receivables	23,434			0	23,434
Loans and advances to customers	Loans and receivables	318,509	(7,822)	0	(235)[12]	310,451
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(2,678)[3]*			
to: Brokerage receivables	*Loans and receivables*		*(4,691)[1]*			
to: Financial assets at fair value held for trading	*Loans and receivables*		*(468)[4]*			
from: Financial assets at fair value not held for trading	*FVTPL (designated)*		*8[5]*	*0*		
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*6[5]*			
Other financial assets measured at amortized cost	Loans and receivables, held to maturity	36,861	(18,525)	0	(35)[12]	18,302
to: Brokerage receivables	*Loans and receivables*		*(19,080)[1]*			
from: Financial assets measured at fair value through other comprehensive income	*Available for sale*		*555[6]*	*0*		
Total financial assets measured at amortized cost		569,950	(31,321)	0	(275)	538,354
Financial assets at fair value held for trading	FVTPL (held for trading)	126,144	(10,854)	(15)		115,275
to: Loans and advances to customers	*FVTPL (held for trading)*		*(6)[5]*			
to: Financial assets at fair value not held for trading	*FVTPL (held for trading)*		*(11,316)[7]*			
from: Loans and advances to customers	*Loans and receivables*		*468[4]*	*(15)[4]*		
of which: assets pledged as collateral that may be sold or repledged by counterparties	*FVTPL (held for trading)*	*35,363*				*35,363*
Derivative financial instruments	FVTPL (derivatives)	118,227				118,227
Brokerage receivables	Loans and receivables		23,787			23,787
from: Loans and advances to banks	*Loans and receivables*		*17[1]*			
from: Loans and advances to customers	*Loans and receivables*		*4,691[1]*			
from: Other financial assets measured at amortized cost	*Loans and receivables*		*19,080[1]*			
Financial assets at fair value not held for trading	FVTPL (designated)	58,933[9]	20,297	(287)		78,943
to: Loans and advances to customers	*FVTPL (designated)*		*(8)[5]*			
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*11,316[7]*			
from: Receivables from securities financing transactions	*Loans and receivables*		*4,957[2]*	*(1)*		
from: Loans and advances to customers	*Loans and receivables*		*2,678[3]*	*(286)[3]*		
from: Financial assets measured at fair value through other comprehensive income	*Available for sale*		*1,356[8]*			
Total financial assets measured at fair value through profit or loss		303,304	33,231	(303)		336,232
Financial assets measured at fair value through other comprehensive income	**Available for sale**	8,665	(1,911)			6,755[10]
to: Other financial assets measured at amortized cost	*Available for sale*		*(555)[6]*			
to: Financial assets at fair value not held for trading	*Available for sale*		*(1,356)[8]*			
Investments in associates		1,018				1,018
Property, equipment and software		8,829				8,829
Goodwill and intangible assets		6,398				6,398
Deferred tax assets		9,844		58[11]	64[11]	9,967
Other non-financial assets		7,633				7,633
Total assets		915,642		(245)	(211)	915,187

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9 (continued)

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Liabilities						
Amounts due to banks	Amortized cost	7,533				7,533
Payables from securities financing transactions	Amortized cost	17,044	(5,081)			11,963
to: Other financial liabilities designated at fair value	*Amortized cost*		*(5,081)*[13]			
Cash collateral payables on derivative instruments	Amortized cost	30,247				30,247
Customer deposits	Amortized cost	408,999	(5,268)			403,731
to: Brokerage payables designated at fair value	*Amortized cost*		*(5,268)*[14]			
Debt issued measured at amortized cost	Amortized cost	139,551				139,551
Other financial liabilities measured at amortized cost	Amortized cost	36,337	(29,646)	(4)		6,686
to: Brokerage payables designated at fair value	*Amortized cost*		*(29,646)*[14]			
Derecognition: deferred fees on other loan commitments	*Amortized cost*			*(4)*[4]		
Total financial liabilities measured at amortized cost		639,711	(39,996)	(4)		599,712
Financial liabilities at fair value held for trading	FVTPL (held for trading)	30,463				30,463
Derivative financial instruments	FVTPL (derivatives)	116,133		57		116,191
Recognition: Loan commitments	*Amortized cost – off-balance sheet*			*60*[4]		
Derecognition: Loan commitments	*FVTPL (derivatives)*			*(2)*[5]		
Brokerage payables designated at fair value	Amortized cost		34,915			34,915
from: Customer deposits	*Amortized cost*		*5,268*[14]			
from: Other financial liabilities measured at amortized cost	*Amortized cost*		*29,646*[14]			
Debt issued designated at fair value	FVTPL (designated)	49,502				49,502
Other financial liabilities designated at fair value	FVTPL (designated)	16,223	5,081	(5)		21,300
from: Payables from securities financing transactions	*Amortized cost*		*5,081*[13]	*(5)*[13]		
Total financial liabilities measured at fair value through profit or loss		212,322	39,996	53		252,370
Provisions		3,133			74[12]	3,207
Other non-financial liabilities		9,205				9,205
Total liabilities		864,371		49	74	864,494
Equity						
Share capital		385				385
Share premium		25,942				25,942
Treasury shares		(2,133)				(2,133)
Retained earnings		32,752	72[8,15]	(293)	(284)	32,247
Other comprehensive income recognized directly in equity, net of tax		(5,732)	(72)[8,15]			(5,804)
Equity attributable to shareholders		51,214	0	(293)[15]	(284)[15]	50,637
Equity attributable to non-controlling interests		57				57
Total equity		51,271	0	(293)	(284)	50,694
Total liabilities and equity		915,642	0	(245)	(211)	915,187

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9"

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018
1	Certain customer and prime brokerage receivable balances, in the Investment Bank and Global Wealth Management, fail the solely payments of principal and interest (SPPI) criteria for measurement at amortized cost. These include CHF 4,691 million previously included within *Loans and advances to customers*, CHF 17 million from *Loans and advances to banks* and CHF 19,080 million previously included within *Other financial assets measured at amortized cost*. The receivables are managed under a business model whose objective is to hold the assets to collect contractual cash flows. However, the reported receivables represent an aggregation of cash receivable and payable balances that form a single unit of account at the client level and generate a return that does not constitute consideration for the time value of money, credit risk and other basic lending risks. The SPPI criterion is therefore not met and under IFRS 9 the receivables are mandatorily measured at FVTPL and separately presented as *Brokerage receivables*. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
2	Based on the business model assessment under IFRS 9, certain reverse repurchase agreements with a carrying amount of CHF 4,957 million as of 31 December 2017 were determined to be managed on a fair value basis and were therefore reclassified from amortized cost to FVTPL measurement under IFRS 9. The carrying value has been reclassified from *Receivables from securities financing transactions* to *Financial assets at fair value not held for trading* as of 1 January 2018. A remeasurement loss of CHF 1 million has been recorded in *Retained earnings*. CHF 11,490 million of forward starting reverse repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
3	Certain positions previously included within *Loans and advances to customers* with a carrying amount of CHF 2,678 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* upon adoption of IFRS 9. This includes: – auction rate securities (CHF 2,114 million) that are held in Corporate Center and that contain an embedded leverage feature triggering the failure of the SPPI criteria, and – certain loans in the Investment Bank (CHF 552 million) and in Corporate Center (CHF 12 million), which either fail the SPPI criteria or are held within a business model with an intent to sell or substantially hedge the primary risks. These assets are mandatorily measured at FVTPL under IFRS 9. A corresponding net remeasurement loss of CHF 286 million was recognized in *Retained earnings* related to these reclassifications. This remeasurement loss also included reversal of specific credit loss allowances (CHF 11 million).
4	Due to a change in the underlying business model, loans and advances to customers with a carrying amount of CHF 468 million as of 31 December 2017 have been reclassified to *Financial assets at fair value held for trading* as of 1 January 2018. A corresponding net remeasurement loss of CHF 15 million, which includes the reversal of specific IAS 39 credit loss allowances, was recognized in *Retained earnings* related to this reclassification. Irrevocable loan commitments that are contractually linked with these financial assets are now recognized as *Derivative financial instruments* (derivative liabilities) and are measured at FVTPL as of 1 January 2018. This reclassification resulted in a CHF 60 million loss with a corresponding entry to *Retained earnings*. Liabilities related to deferred fees of CHF 4 million related to these loan commitments recorded as *Other financial liabilities measured at amortized cost* at 31 December 2017 were derecognized with a corresponding entry to *Retained earnings*.
5	Financial assets with a carrying amount of CHF 14 million as of 31 December 2017 were reclassified to *Loans and advances to customers* from *Financial assets at fair value not held for trading* (CHF 8 million) and from *Financial assets at fair value held for trading* (CHF 6 million) given management's intent to hold these financial assets to collect contractual cash flows. Loan commitments related to these financial assets, which were recognized as derivative liabilities with a carrying value of CHF 2 million as of 31 December 2017, were accordingly derecognized on 1 January 2018 with a corresponding entry to *Retained earnings*.
6	Certain debt instruments with a carrying amount of CHF 555 million as of 31 December 2017 were formerly classified as available for sale and measured at FVOCI under IAS 39 but are measured at amortized cost under IFRS 9. Those positions, which are held to collect cash flows solely representing payment of principal and interest, are presented within *Other financial assets measured at amortized cost* as of 1 January 2018. The fair value of these assets was consistent with the amortized cost value as of 1 January 2018 and no remeasurement gain or loss has been recognized.
7	Upon adopting IFRS 9, UBS has elected to refine the assets classified within *Financial assets at fair value held for trading* to carve out those that are segregated from UBS's trading activities, where UBS's role is primarily to manage the assets on a fair value basis on behalf of others. Instead, such assets will be presented alongside others managed on a fair value basis within *Financial assets at fair value not held for trading*. As a consequence of this refinement, UBS has reclassified assets held to hedge unit-linked investment contracts of CHF 11,316 million from *Financial assets at fair value held for trading* to *Financial assets at fair value not held for trading* as of 1 January 2018. No remeasurement gain or loss has been recognized.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018 (continued)
8	UBS holds certain global and local liquidity buffers that were determined to be managed on a fair value basis as management utilizes fair value information for reporting and decision making purposes. Therefore, assets previously classified as available for sale under IAS 39 with a carrying amount of CHF 620 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading*. An unrealized gain of CHF 5 million related to these positions was reclassified from *Other comprehensive income* to *Retained earnings*. Additionally, equity instruments and investment fund units previously classified as available for sale under IAS 39 with a carrying amount of CHF 736 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules. A related unrealized gain in OCI of CHF 199 million has been reclassified to *Retained earnings*. Additionally, a net tax expense of CHF 131 million was transferred from OCI to *Retained earnings* related to the positions above which were reclassified out of the IAS 39 available-for-sale category.
9	Assets previously designated at FVTPL with a carrying amount of CHF 58,933 million as of 31 December 2017 are no longer designated as such under IFRS 9, as it was determined that these assets were either held in a business model that is managed on a fair value basis, did not meet the SPPI criteria, or did meet the SPPI criteria and are held in a hold to collect business model. Of the total, assets with a carrying amount of CHF 58,924 million are now mandatorily measured at FVTPL and included within *Financial assets at fair value not held for trading*. The remaining assets with a carrying amount of CHF 8 million have been de-designated and were reclassified to *Loans and advances to customers* given a change in business model to hold to collect (refer to footnote 5).
10	Certain debt instruments with a carrying amount of CHF 6,755 million as of 31 December 2017 were formerly classified as available for sale under IAS 39 and are measured at FVOCI under IFRS 9. These instruments include US government bonds and US government sponsored mortgage-backed securities and other debt that are held in a business model whose objective is achieved by both collecting contractual cash flows and selling, and that meet the SPPI criteria. These positions are now presented within *Financial assets measured at fair value through other comprehensive income*.
11	Deferred tax assets of CHF 122 million have been recognized in connection with the adoption of IFRS 9. Of the total effect, CHF 64 million relates to the recognition of ECL and CHF 58 million relates to classification and measurement changes upon adoption of IFRS 9.
12	Upon adoption of the ECL requirements of IFRS 9, a transition impact of CHF 348 million was recognized, consisting of CHF 144 million of stage 1 allowances, CHF 188 million of stage 2 allowances and an incremental increase in stage 3 allowances of CHF 16 million. The effect was mainly recognized within *Loans and advances to customers* (CHF 235 million), with effects also recognized in *Other financial assets measured at amortized cost* (CHF 35 million), *Loans and advances to banks* (CHF 3 million), *Receivables from securities financing transactions* (CHF 2 million) and *Provisions* (CHF 74 million).
13	Certain repurchase agreements with a carrying amount of CHF 5,081 million as of 31 December 2017 have been designated at FVTPL as they are managed in conjunction with reverse repurchase agreements that are mandatorily measured at FVTPL under IFRS 9. These amounts are included within *Other financial liabilities designated at fair value* as of 1 January 2018. A remeasurement gain of CHF 5 million has been recognized in *Retained earnings* as of 1 January 2018 related to this reclassification. CHF 7,730 million of forward starting repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
14	To achieve measurement consistency with reclassified customer and prime brokerage receivables that are measured at FVTPL following adoption of IFRS 9, certain customer deposits with a carrying amount of CHF 5,268 million and prime brokerage payables with a carrying amount of CHF 29,646 million as of 31 December 2017 have been designated at FVTPL and are presented within *Brokerage payables designated at fair value* as of 1 January 2018. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
15	The adoption of IFRS 9 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of ECL credit loss methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. In addition, CHF 72 million has been reclassified from *Other comprehensive income* recognized directly in equity, net of tax, to *Retained earnings* (refer to footnote 8 above), with no overall impact on equity attributable to shareholders.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

Reconciliation of allowances and provisions on adoption of IFRS 9 as of 1 January 2018

The table below provides a reconciliation from the IAS 39 allowances / IAS 37 provisions to the IFRS 9 ECL allowances / provisions recognized as of 1 January 2018 upon adoption of IFRS 9.

Reconciliation of allowances and provisions on adoption of IFRS 9

	31.12.2017	1.1.2018		
CHF million	Loss allowances and provisions (IAS 39 / IAS 37)	Reversal of allowances (IAS 39)	Recognition of ECL (IFRS 9)[1]	Allowances for ECL / Provisions for ECL (IFRS 9)
On-balance sheet				
Cash and balances at central banks			0	0
Loans and advances to banks	(3)		(3)	(5)
Receivables from securities financing transactions			(2)	(2)
Cash collateral receivables on derivative instruments			0	
Loans and advances to customers	(658)	26[2]	(235)[3]	(867)
Other financial assets measured at amortized cost	(101)[4]		(35)	(136)
Total on-balance sheet	(761)	26	(275)	(1,011)
Off-balance sheet financial instruments and other credit lines				
Guarantees	(29)		(8)	(37)
Loan commitments	(4)		(32)	(36)
Other credit lines			(34)	(34)
Total off-balance sheet financial instruments and other credit lines	(33)		(74)	(107)
Total	(794)	26	(348)	(1,117)
of which: stage 1			*(144)*	*(144)*
of which: stage 2			*(188)*	*(188)*
of which: stage 3			*(16)*[5]	*(785)*

1 Includes stage 1 and stage 2 expected credit losses and additional stage 3 expected credit losses. 2 The reversal of CHF 26 million of IAS 39 loss allowances relates to instruments reclassified from amortized cost to fair value through profit or loss on transition to IFRS 9. Refer also to footnotes 3 and 4 to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9." 3 Includes the reversal of collective allowances of CHF 13 million. 4 Includes CHF 82 million related to loans to financial advisors for which an allowance was reported as a direct reduction of the carrying amount as of 31 December 2017. 5 The incremental increase in stage 3 allowances of CHF 16 million arises from additional consideration of forward-looking scenarios under IFRS 9.

Note 19 Transition to IFRS 9 as of 1 January 2018 (continued)

IFRS 9 transition impact on other comprehensive income and retained earnings as of 1 January 2018

The table below presents the transition effects recognized in OCI and retained earnings upon adoption of IFRS 9.

IFRS 9 impact on other comprehensive income and retained earnings

CHF million	
Other comprehensive income recognized directly in equity, net of tax	
Reclassification of financial assets (available for sale to fair value through profit or loss) – equity instruments	(199)
Reclassification of financial assets (available for sale to fair value through profit or loss) – debt instruments	(5)
Tax (expense) / benefit	131
Total change in other comprehensive income	(72)
Retained earnings	
Remeasurement of financial assets (reclassified from amortized cost to fair value through profit or loss)	(303)
Reclassification of financial assets (reclassified from available for sale to fair value through profit or loss)	204
Recognition of ECL for on-balance sheet financial assets	(275)
Remeasurement of financial liabilities (reclassified from amortized cost to designated at fair value through profit or loss)	5
Recognition of derivative loan commitments measured at fair value through profit or loss	(60)
Derecognition of liabilities for deferred fees on other loan commitments	4
Derecognition of derivative loan commitments measured at fair value through profit or loss	2
Recognition of ECL for off-balance sheet positions	(74)
Tax (expense) / benefit	(9)
Total change in retained earnings	(505)
Total change in equity due to the adoption of IFRS 9	(577)

Appendix 10 – Excerpts from the UBS AG Third Quarter 2018 Report

It should be noted that the term "pro-forma" as used in this Appendix 10 does not refer to the term "pro forma financial information" within the meaning of Regulation (EC) 809/2004.

UBS AG interim consolidated financial statements (unaudited)

Income statement

		For the quarter ended			Year-to-date	
CHF million	Note	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income		2,492	2,473	2,579	7,217	7,510
Interest expense from financial instruments measured at amortized cost		(1,641)	(1,583)	(1,378)	(4,554)	(3,869)
Interest income from financial instruments measured at fair value through profit or loss		1,777	1,715	1,032	5,086	3,082
Interest expense from financial instruments measured at fair value through profit or loss		(979)	(1,637)	(503)	(3,405)	(1,902)
Net interest income		1,649	967	1,729	4,344	4,822
Other net income from fair value changes on financial instruments		1,145	2,182	1,090	4,793	3,990
Credit loss (expense) / recovery	8	(9)	(28)	7	(62)	(39)
Fee and commission income		4,779	4,799	4,694	14,478	14,246
Fee and commission expense		(401)	(416)	(442)	(1,226)	(1,327)
Net fee and commission income	3	4,378	4,383	4,252	13,252	12,920
Other income	4	212	137	200	513	544
Total operating income		7,375	7,641	7,279	22,839	22,237
Personnel expenses	5	3,331	3,524	3,598	10,411	11,253
General and administrative expenses	6	2,233	2,308	2,282	6,777	5,993
Depreciation and impairment of property, equipment and software		264	241	221	737	694
Amortization and impairment of intangible assets		15	16	16	47	53
Total operating expenses		5,843	6,089	6,117	17,971	17,993
Operating profit / (loss) before tax		1,532	1,553	1,161	4,868	4,244
Tax expense / (benefit)	7	393	369	256	1,172	937
Net profit / (loss)		1,140	1,184	905	3,696	3,307
Net profit / (loss) attributable to preferred noteholders				0		46
Net profit / (loss) attributable to non-controlling interests		3	1	2	6	3
Net profit / (loss) attributable to shareholders		1,137	1,183	904	3,690	3,257

Statement of comprehensive income

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Comprehensive income attributable to shareholders					
Net profit / (loss)	1,137	1,183	904	3,690	3,257
Other comprehensive income that may be reclassified to the income statement					
Foreign currency translation					
Foreign currency translation movements related to net assets of foreign operations, before tax	(460)	787	532	(152)	(1,035)
Effective portion of changes in fair value of hedging instruments designated as net investment hedges, before tax	100	(55)	(157)	140	44
Foreign currency translation differences on foreign operations reclassified to the income statement	6	15	2	21	27
Effective portion of changes in fair value of hedging instruments designated in net investment hedge reclassified to the income statement	0	0	0	0	0
Income tax relating to foreign currency translations, including the impact of net investment hedges	(34)	(1)	226	(34)	229
Subtotal foreign currency translation, net of tax	(389)	747	602	(25)	(735)
Financial assets measured at fair value through other comprehensive income					
Net unrealized gains / (losses), before tax	(22)	(24)	57	(117)	110
Impairment charges reclassified to the income statement from equity	0	0	0	0	13
Realized gains reclassified to the income statement from equity	0	0	(13)	0	(156)
Realized losses reclassified to the income statement from equity	0	0	2	0	9
Income tax relating to net unrealized gains / (losses)	6	6	(22)	31	(24)
Subtotal financial assets measured at fair value through other comprehensive income, net of tax	(16)	(18)	24	(86)	(47)
Cash flow hedges of interest rate risk					
Effective portion of changes in fair value of derivative instruments designated as cash flow hedges, before tax	(253)	(127)	60	(822)	195
Net (gains) / losses reclassified to the income statement from equity	(45)	(70)	(209)	(242)	(640)
Income tax relating to cash flow hedges	64	37	30	215	93
Subtotal cash flow hedges, net of tax	(234)	(161)	(118)	(849)	(351)
Total other comprehensive income that may be reclassified to the income statement, net of tax	(639)	569	508	(960)	(1,133)
Other comprehensive income that will not be reclassified to the income statement					
Defined benefit plans					
Gains / (losses) on defined benefit plans, before tax	(43)	250	135	173	299
Income tax relating to defined benefit plans	2	2	(7)	25	(4)
Subtotal defined benefit plans, net of tax	(41)	252	128	197	295
Own credit on financial liabilities designated at fair value					
Gains / (losses) from own credit on financial liabilities designated at fair value, before tax	(284)	248	(36)	135	(288)
Income tax relating to own credit on financial liabilities designated at fair value	2	0	0	0	(1)
Subtotal own credit on financial liabilities designated at fair value, net of tax	(283)	248	(36)	135	(290)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	(324)	499	92	332	5
Total other comprehensive income	(963)	1,068	600	(627)	(1,128)
Total comprehensive income attributable to shareholders	174	2,251	1,504	3,063	2,129

Statement of comprehensive income (continued)

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Comprehensive income attributable to preferred noteholders					
Net profit / (loss)	0	0	0	0	46
Other comprehensive income that will not be reclassified to the income statement					
Foreign currency translation movements, before tax	0	0	30	0	44
Income tax relating to foreign currency translation movements	0	0	0	0	0
Subtotal foreign currency translation, net of tax	0	0	30	0	44
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	0	30	0	44
Total comprehensive income attributable to preferred noteholders	0	0	30	0	90
Comprehensive income attributable to non-controlling interests					
Net profit / (loss)	3	1	2	6	3
Other comprehensive income that will not be reclassified to the income statement					
Foreign currency translation movements, before tax	0	(2)	0	(2)	(1)
Income tax relating to foreign currency translation movements	0	0	0	0	0
Subtotal foreign currency translation, net of tax	0	(2)	0	(2)	(1)
Total other comprehensive income that will not be reclassified to the income statement, net of tax	0	(2)	0	(2)	(1)
Total comprehensive income attributable to non-controlling interests	3	(1)	1	4	2
Total comprehensive income					
Net profit / (loss)	1,140	1,184	905	3,696	3,307
Other comprehensive income	(963)	1,066	630	(629)	(1,085)
of which: other comprehensive income that may be reclassified to the income statement	*(639)*	*569*	*508*	*(960)*	*(1,133)*
of which: other comprehensive income that will not be reclassified to the income statement	*(324)*	*497*	*121*	*330*	*48*
Total comprehensive income	177	2,250	1,535	3,066	2,221

Balance sheet

CHF million	Note	30.9.18	30.6.18	31.12.17
Assets				
Cash and balances at central banks		92,632	102,262	87,775
Loans and advances to banks		15,284	15,518	13,693
Receivables from securities financing transactions		81,951	76,450	89,633
Cash collateral receivables on derivative instruments	10	21,414	24,937	23,434
Loans and advances to customers	8	320,236	320,569	320,659
Other financial assets measured at amortized cost	11	20,682	21,072	36,935
Total financial assets measured at amortized cost		552,199	560,808	572,129
Financial assets at fair value held for trading	9	121,004	112,258	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties		*37,019*	*36,580*	*35,363*
Derivative financial instruments	9, 10	114,248	121,605	118,229
Brokerage receivables	9	20,235	18,415	
Financial assets at fair value not held for trading	9	86,852	92,875	58,556
Total financial assets measured at fair value through profit or loss		342,339	345,153	303,028
Financial assets measured at fair value through other comprehensive income	9	6,618	6,941	8,665
Investments in associates		982	1,026	1,018
Property, equipment and software		8,181	8,216	7,985
Goodwill and intangible assets		6,316	6,391	6,398
Deferred tax assets		9,584	9,804	9,783
Other non-financial assets	11	6,873	6,956	7,358
Total assets		933,091	945,296	916,363

Balance sheet (continued)

CHF million	Note	30.9.18	30.6.18	31.12.17
Liabilities				
Amounts due to banks		10,109	10,242	7,533
Payables from securities financing transactions		10,816	10,130	17,044
Cash collateral payables on derivative instruments	10	27,635	31,843	30,247
Customer deposits		404,875	407,171	412,392
Funding from UBS Group AG and its subsidiaries		38,172	38,771	34,749
Debt issued measured at amortized cost	13	96,012	98,929	104,749
Other financial liabilities measured at amortized cost	11	6,836	7,187	37,133
Total financial liabilities measured at amortized cost		594,454	604,274	643,847
Financial liabilities at fair value held for trading	9	32,030	31,416	30,463
Derivative financial instruments	9, 10	113,553	119,224	116,134
Brokerage payables designated at fair value	9	38,268	37,904	
Debt issued designated at fair value	9, 12	61,631	56,849	49,502
Other financial liabilities designated at fair value	9, 11	34,605	37,342	16,223
Total financial liabilities measured at fair value through profit or loss		280,087	282,736	212,323
Provisions	14	2,930	3,084	3,084
Other non-financial liabilities	11	5,446	5,181	6,335
Total liabilities		882,917	895,275	865,588
Equity				
Share capital		386	386	386
Share premium		26,986	26,984	26,966
Retained earnings		29,531	28,718	29,102
Other comprehensive income recognized directly in equity, net of tax		(6,766)	(6,127)	(5,736)
Equity attributable to shareholders		50,136	49,961	50,718
Equity attributable to non-controlling interests		38	60	57
Total equity		50,174	50,021	50,775
Total liabilities and equity		933,091	945,296	916,363

Statement of changes in equity

CHF million	Share capital	Share premium	Retained earnings	Other comprehensive income recognized directly in equity, net of tax[1]
Balance as of 1 January 2017	**386**	**29,505**	**28,265**	**(4,494)**
Issuance of share capital				
Premium on shares issued and warrants exercised		6		
Tax (expense) / benefit		12		
Dividends		(2,250)		
Preferred notes				
New consolidations / (deconsolidations) and other increases / (decreases)		(313)		
Total comprehensive income for the period			3,262	(1,133)
of which: net profit / (loss)			*3,257*	
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				*(1,133)*
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans			*295*	
of which: OCI that will not be reclassified to the income statement, net of tax – own credit			*(290)*	
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 September 2017	**386**	**26,960**	**31,527**	**(5,627)**
Balance as of 1 January 2018 before the adoption of IFRS 9 and IFRS 15	386	26,966	29,102	(5,736)
Effect of adoption of IFRS 9			(505)	(72)
Effect of adoption of IFRS 15			(24)	
Balance as of 1 January 2018 after the adoption of IFRS 9 and IFRS 15	386	26,966	28,573	(5,808)
Issuance of share capital				
Premium on shares issued and warrants exercised		22		
Tax (expense) / benefit		6		
Dividends			(3,065)	
New consolidations / (deconsolidations) and other increases / (decreases)		(8)		
Total comprehensive income for the period			4,022	(960)
of which: net profit / (loss)			*3,690*	
of which: other comprehensive income (OCI) that may be reclassified to the income statement, net of tax				*(960)*
of which: OCI that will not be reclassified to the income statement, net of tax – defined benefit plans			*197*	
of which: OCI that will not be reclassified to the income statement, net of tax – own credit			*135*	
of which: OCI that will not be reclassified to the income statement, net of tax – foreign currency translation				
Balance as of 30 September 2018	386	26,986	29,531	(6,766)

1 Excludes defined benefit plans and own credit that are recorded directly in Retained earnings.

of which: foreign currency translation	*of which: financial assets measured at fair value through OCI*	*of which: cash flow hedges*	Total equity attributable to shareholders	Preferred noteholders	Non-controlling interests	Total equity
(5,564)	*98*	*972*	53,662	**642**	**40**	**54,343**
			0			0
			6			6
			12			12
			(2,250)	(46)	(4)	(2,300)
			0	1		1
			(313)		19	(294)
(735)	*(47)*	*(351)*	2,129	90	2	2,221
			3,257	*46*	*3*	*3,307*
(735)	*(47)*	*(351)*	*(1,133)*			*(1,133)*
			295			*295*
			(290)			*(290)*
			0	*44*	*(1)*	*43*
(6,299)	*51*	*621*	53,246	**687**	**56**	**53,989**
(6,099)	*12*	*351*	50,718		57	50,775
	(72)		(577)			(577)
			(24)			(24)
(6,099)	*(60)*	*351*	50,117		57	50,174
			0			0
			22			22
			6			6
			(3,065)		(7)	(3,072)
			(8)		(16)	(24)
(25)	*(86)*	*(849)*	3,063		4	3,066
			3,690		*6*	*3,696*
(25)	*(86)*	*(849)*	*(960)*			*(960)*
			197			*197*
			135			*135*
			0		*(2)*	*(2)*
(6,124)	*(144)*	*(498)*	50,136		38	50,174

Statement of cash flows[1]

	Year-to-date	
CHF million	30.9.18	30.9.17
Cash flow from / (used in) operating activities		
Net profit / (loss)	3,696	3,307
Non-cash items included in net profit and other adjustments:		
Depreciation and impairment of property, equipment and software	737	694
Amortization and impairment of intangible assets	47	53
Credit loss expense / (recovery)	62	39
Share of net profits of associates / joint ventures and impairment of associates	(46)	(49)
Deferred tax expense / (benefit)	602	296
Net loss / (gain) from investing activities	(16)	85
Net loss / (gain) from financing activities	2,636	583
Other net adjustments	(383)	(342)
Net change in operating assets and liabilities:		
Loans and advances to banks / amounts due to banks	2,359	27
Securities financing transactions	887	(12,944)
Cash collateral on derivative instruments	(340)	(2,199)
Loans and advances to customers	(8,356)	(11,536)
Customer deposits	(1,252)	(17,054)
Financial assets and liabilities at FV held for trading and derivative financial instruments	(7,037)	(7,142)
Brokerage receivables and payables	7,385	
Financial assets at fair value not held for trading, other financial assets and liabilities	6,765	9,935
Provisions, other non-financial assets and liabilities	(108)	(1,293)
Income taxes paid, net of refunds	(704)	(857)
Net cash flow from / (used in) operating activities	6,932	(38,397)
Cash flow from / (used in) investing activities		
Purchase of subsidiaries, associates and intangible assets	(16)	(100)
Disposal of subsidiaries, associates and intangible assets[2]	126	148
Purchase of property, equipment and software	(1,011)	(1,064)
Disposal of property, equipment and software	103	27
Purchase of financial assets measured at fair value through other comprehensive income	(1,038)	(7,829)
Disposal and redemption of financial assets measured at fair value through other comprehensive income	1,049	10,559
Net (purchase) / redemption of debt securities measured at amortized cost	(2,084)	
Net (purchase) / redemption of financial assets held to maturity		11
Net cash flow from / (used in) investing activities	(2,872)	1,752

Table continues on the next page.

Statement of cash flows (continued)[1]

Table continued from previous page.

	Year-to-date	
CHF million	30.9.18	30.9.17
Cash flow from / (used in) financing activities		
Net short-term debt issued / (repaid)	(7,302)	21,855
Distributions paid on UBS shares	(3,065)	(2,250)
Issuance of long-term debt, including debt issued designated at fair value[3]	48,932	40,066
Repayment of long-term debt, including debt issued designated at fair value[3]	(35,163)	(32,346)
Dividends paid and repayments of preferred notes	0	(45)
Net changes in non-controlling interests	14	(5)
Net cash flow from / (used in) financing activities	3,416	27,275
Total cash flow		
Cash and cash equivalents at the beginning of the period	102,154	121,107
Net cash flow from / (used in) operating, investing and financing activities	7,476	(9,370)
Effects of exchange rate differences on cash and cash equivalents	(933)	(324)
Cash and cash equivalents at the end of the period[4]	108,697	111,413
of which: cash and balances at central banks	*92,518*	*94,563*
of which: loans and advances to banks	*13,790*	*13,753*
of which: money market paper[5]	*2,389*	*3,097*
Additional information		
Net cash flow from / (used in) operating activities includes:		
Interest received in cash	10,269	9,132
Interest paid in cash	6,810	5,127
Dividends on equity investments, investment funds and associates received in cash[6]	1,884	1,465

1 Upon adoption of IFRS 9 on 1 January 2018, cash flows from certain financial instruments have been reclassified from investing to operating activities. Refer to Note 18 for more information. 2 Includes dividends received from associates. 3 Includes funding from UBS Group AG and its subsidiaries. 4 CHF 3,054 million and CHF 2,559 million of cash and cash equivalents (mainly reflected in Loans and advances to banks) were restricted as of 30 September 2018 and 30 September 2017, respectively. Refer to "Note 23 Restricted and transferred financial assets" in the "Consolidated financial statements" section in the Annual Report 2017 for more information. 5 Money market paper is included in the balance sheet under Financial assets at fair value held for trading, Financial assets measured at fair value through other comprehensive income, Financial assets at fair value not held for trading and Other financial assets measured at amortized cost. 6 Includes dividends received from associates reported within Cash flow from / (used in) investing activities.

Notes to the UBS AG interim consolidated financial statements (unaudited)

Note 1 Basis of accounting

1.1 Basis of preparation

The consolidated financial statements (the Financial Statements) of UBS AG and its subsidiaries (together "UBS AG") are prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB), and are presented in Swiss francs (CHF), which is also the functional currency of UBS AG's Head Office and its Swiss-based operations.[1] These interim Financial Statements are prepared in accordance with IAS 34, *Interim Financial Reporting*.

In preparing these interim Financial Statements, the same accounting policies and methods of computation have been applied as in the UBS AG consolidated annual Financial Statements for the period ended 31 December 2017, except for the changes described in this note, in Note 18 of this report and in "Note 1 Basis of accounting" in the "Consolidated financial statements" section of the first and second quarter 2018 reports. These interim Financial Statements are unaudited and should be read in conjunction with UBS AG's audited consolidated Financial Statements included in the Annual Report 2017. In the opinion of management, all necessary adjustments were made for a fair presentation of UBS AG's financial position, results of operations and cash flows.

Preparation of these interim Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, income, expenses and disclosures of contingent assets and liabilities. These estimates and assumptions are based on the best available information. Actual results in the future could differ from such estimates and such differences may be material to the Financial Statements. Revisions to estimates, based on regular reviews, are recognized in the period in which they occur. For more information on areas of estimation uncertainty considered to require critical judgment, refer to "Note 1a) Significant accounting policies" in the "Consolidated financial statements" section of the Annual Report 2017 and in Note 18.1 of this report.

1.2 Adoption of IFRS 9 and IFRS 15 in the first quarter of 2018

IFRS 9, *Financial Instruments*

As disclosed in the UBS AG first and second quarter 2018 reports, effective 1 January 2018, UBS AG adopted IFRS 9, *Financial Instruments*, which replaces IAS 39*, Financial Instruments: Recognition and Measurement* and substantially changes accounting and financial reporting in three key areas: classification and measurement of financial assets, impairment and hedge accounting. In addition, UBS AG early adopted the Amendment to IFRS 9*, Prepayment Features with Negative Compensation*, issued in October 2017, which allows UBS AG to continue to apply amortized cost accounting to Swiss private mortgages and corporate loans that provide for two-way compensation if a prepayment occurs. UBS AG continues to apply hedge accounting under IAS 39 as permitted by IFRS 9 and early adopted the own credit requirements of IFRS 9 during the first quarter of 2016.

As permitted by the transitional provisions of IFRS 9, UBS AG elected not to restate comparative period information. Any effect on the carrying amounts of financial assets and liabilities at the date of transition to IFRS 9 was recognized as an adjustment to opening retained earnings. The adoption of IFRS 9 effective 1 January 2018 resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of impairment requirements based on an expected credit loss (ECL) methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax.

1 Following expectations set out in the Annual Report 2017 of UBS Group AG and UBS AG and as disclosed in the third quarter 2018 report of UBS Group AG, the functional currency of UBS AG's Head Office in Switzerland has changed from Swiss francs to US dollars (USD), and the functional currency of UBS AG's London Branch operations has changed from British pounds to USD effective 1 October 2018 on a prospective basis, in light of cumulative changes in UBS's legal structure, business activities and evolving changes to its structural currency management strategy. In line with these changes, the presentation currency of UBS AG's consolidated financial statements has changed from Swiss francs to USD. Refer to Note 16 for more information on events after the reporting period.

Note 1 Basis of accounting (continued)

The calculation of ECL requires management to apply judgment and make estimates and assumptions that involve significant uncertainty at the time they are made and can have a material effect on the timing and amount of ECL to be recognized. These judgments, estimates and assumptions are an inherent part of the ECL calculation which includes probability of default (PD), loss given default (LGD) and exposure at default (EAD) models, the determination of a significant increase in credit risk, the selection of appropriate scenarios and macroeconomic factors and the ECL measurement period. These inputs are based on the best available information and are subject to frequent re-assessment.

The updated accounting policies for classification and measurement of financial instruments and impairment of financial assets as applied from 1 January 2018 are presented in Note 18.1 of this report, alongside further detail on areas of critical accounting estimates and judgments. The detailed effects of the adoption of IFRS 9 on 1 January 2018 are presented in Note 18.2.

→ **Refer to the 31 March 2018 Pillar 3 report – UBS Group and significant regulated subsidiaries and sub-groups under "Pillar 3 disclosures" at *www.ubs.com/investors* for more information on the effect of the IFRS 9 transition on UBS's capital adequacy**

IFRS 15, *Revenue from Contracts with Customers*

As disclosed in the UBS AG first quarter and second quarter 2018 reports, effective from 1 January 2018, UBS AG adopted IFRS 15, *Revenue from Contracts with Customers*, which replaces IAS 18, *Revenue* and establishes principles for revenue recognition that apply to all contracts with customers except those relating to financial instruments, leases and insurance contracts and requires an entity to recognize revenue as performance obligations are satisfied.

The adoption of IFRS 15 resulted in changes to UBS AG's accounting policies applicable from 1 January 2018. Accounting policies set out in Note 1.3.2 in the "Consolidated financial statements" section of the first quarter 2018 report replace item 4 of Note 1a) in the UBS AG consolidated annual Financial Statements for the year ended 31 December 2017. The primary changes stem from IFRS 15 requirements that fee and commission income is measured based on consideration specified in a legally enforceable contract and variable consideration that is contingent on an uncertain event can only be recognized to the extent that it is highly probable that a significant reversal will not occur. UBS AG does not generally consider the highly probable criteria to be met where the contingency is beyond the control of UBS AG .

As permitted by the transitional provisions of IFRS 15, UBS AG elected not to restate comparative figures. Instead, the cumulative effect of initially applying the standard was recognized as an adjustment to the opening balance of retained earnings. A transition adjustment of CHF 27 million on a pre-tax basis and CHF 24 million net of tax was posted to retained earnings to reverse income recognized prior to 1 January 2018 under IAS 18 that must be deferred under IFRS 15 either due to the variable consideration constraint (asset management performance fees of CHF 16 million) or because UBS AG does not have an enforceable right to a specified amount of consideration (commission-sharing agreements for research services of CHF 11 million).

IFRS 15 also resulted in changes to presentation. Fee and commission income and expenses are presented gross rather than net on the face of the income statement when UBS AG is considered principal to the contract with a customer. In turn, fees and expenses can only be presented net when UBS AG is considered to be an agent.

→ **Refer to Note 3 for more information**

1.3 New accounting standards to be adopted in 2019

IFRS 16, *Leases*

UBS AG will adopt IFRS 16, *Leases,* on 1 January 2019. IFRS 16 will fundamentally change how UBS accounts for operating leases when UBS AG is acting as a lessee, with a requirement to record a lease obligation and a right of use asset on the balance sheet. Upon adoption of IFRS 16, assets and liabilities are expected to increase by approximately CHF 4 billion with no material impact to UBS AG's equity. UBS AG has made significant progress during 2018 in developing the core technology build, reporting impacts and governance frameworks, which it intends to finalize in the fourth quarter of 2018.

Note 2 Segment reporting

UBS AG's businesses are organized globally into four business divisions: Global Wealth Management, Personal & Corporate Banking, Asset Management and the Investment Bank, all of which are supported by Corporate Center. The four business divisions qualify as reportable segments for the purpose of segment reporting and, together with Corporate Center and its units, reflect the management structure of UBS AG. Corporate Center – Non-core and Legacy Portfolio is managed and reported as a separate reportable segment within Corporate Center. Refer to "Note 1a Significant accounting policies" item 2 and "Note 2 Segment reporting" in the "Consolidated financial statements" section of the Annual Report 2017 for more information on UBS AG's reporting segments.

Effective 1 February 2018, UBS AG integrated its Wealth Management and Wealth Management Americas business divisions into a single Global Wealth Management business division. Refer to "Note 1.2 Changes to segment reporting effective first quarter 2018" in the "Consolidated financial statements" section of the first quarter 2018 report for more information.

	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	Corporate Center			UBS AG
CHF million					Services	Group ALM	Non-core and Legacy Portfolio	
For the nine months ended 30 September 2018[1]								
Net interest income	3,042	1,504	(22)	758	(288)	(670)	21	4,344
Non-interest income	9,269	1,347	1,360	5,970	428	(63)	246	18,558
Allocations from CC – Group ALM	89	35	10	(304)	32	217	(78)	0
Income	12,399	2,885	1,348	6,424	172	(516)	189	22,902
Credit loss (expense) / recovery	(4)	(38)	0	(20)	0	0	(2)	(62)
Total operating income	12,396	2,847	1,348	6,404	172	(515)	187	22,839
Personnel expenses	5,629	598	521	2,325	1,279	29	28	10,411
General and administrative expenses	915	174	144	434	5,001	29	82	6,777
Services (to) / from CC and other BDs	2,748	865	354	2,042	(6,142)	2	132	0
of which: services from CC – Services	*2,671*	*920*	*385*	*1,984*	*(6,197)*	*124*	*114*	*0*
Depreciation and impairment of property, equipment and software	3	10	1	6	717	0	0	737
Amortization and impairment of intangible assets	35	0	1	10	1	0	0	47
Total operating expenses	9,329	1,646	1,021	4,817	856	59	242	17,971
Operating profit / (loss) before tax	**3,067**	**1,201**	**327**	**1,587**	**(685)**	**(575)**	**(55)**	**4,868**
Tax expense / (benefit)								1,172
Net profit / (loss)								**3,696**
As of 30 September 2018								
Total assets	**195,996**	**136,125**	**26,116**	**269,777**	**19,135**	**251,787**	**34,155**	**933,091**
For the nine months ended 30 September 2017[1]								
Net interest income	2,694	1,427	(23)	855	(265)	112	22	4,822
Non-interest income	8,940	1,320	1,432	5,344	329	39	52	17,454
Allocations from CC – Group ALM	275	139	14	(264)	89	(199)	(54)	0
Income	11,909	2,886	1,422	5,935	153	(50)	19	22,276
Credit loss (expense) / recovery	(3)	(23)	0	(10)	0	0	(3)	(39)
Total operating income	11,906	2,864	1,422	5,925	153	(50)	16	22,237
Personnel expenses	5,635	646	542	2,306	2,064	25	34	11,253
General and administrative expenses	917	205	162	447	4,267	14	(19)	5,993
Services (to) / from CC and other BDs	2,641	817	374	2,008	(5,997)	(10)	167	0
of which: services from CC – Services	*2,567*	*885*	*402*	*1,940*	*(6,038)*	*100*	*144*	*0*
Depreciation and impairment of property, equipment and software	3	9	1	7	674	0	0	694
Amortization and impairment of intangible assets	34	0	3	9	6	0	0	53
Total operating expenses	9,230	1,677	1,083	4,777	1,015	29	183	17,993
Operating profit / (loss) before tax	**2,676**	**1,186**	**340**	**1,148**	**(861)**	**(79)**	**(167)**	**4,244**
Tax expense / (benefit)								937
Net profit / (loss)								**3,307**
As of 31 December 2017								
Total assets	**190,074**	**135,587**	**14,270**	**263,046**	**19,447**	**247,739**	**46,200**	**916,363**

1 Prior period information may not be comparable as a result of the adoption of IFRS 9 and IFRS 15, both effective 1 January 2018. Refer to Note 1 for more information on these changes.

Note 3 Net fee and commission income[1]

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Underwriting fees	206	189	244	637	814
of which: equity underwriting fees	*96*	*88*	*149*	*302*	*459*
of which: debt underwriting fees	*111*	*101*	*95*	*335*	*355*
M&A and corporate finance fees	256	178	174	627	521
Brokerage fees	770	877	871	2,615	2,839
Investment fund fees	1,198	1,213	1,052	3,618	3,159
Portfolio management and related services	1,911	1,902	1,890	5,649	5,536
Other	439	440	461	1,332	1,377
Total fee and commission income[2]	4,779	4,799	4,694	14,478	14,246
of which: recurring	*3,176*	*3,161*		*9,408*	
of which: transaction-based	*1,585*	*1,617*		*5,012*	
of which: performance-based	*18*	*22*		*58*	
Brokerage fees paid	62	75	162	221	506
Other	340	341	280	1,005	821
Total fee and commission expense	401	416	442	1,226	1,327
Net fee and commission income	4,378	4,383	4,252	13,252	12,920
of which: net brokerage fees	*709*	*802*	*709*	*2,394*	*2,333*

1 Upon adoption of IFRS 15, certain brokerage fees paid in an agency capacity have been reclassified from Fee and commission expense to Fee and commission income on a prospective basis from 1 January 2018, primarily relating to third-party execution costs for exchange-traded derivative transactions and fees payable to third-party research providers on behalf of clients. In addition to the IFRS 15 changes, certain revenues, primarily distribution fees and fund management fees, have been reclassified between reporting lines to better reflect the nature of the revenues, with prior period information restated accordingly. This resulted in the following impacts: For the quarter ended 30 September 2017, CHF 68 million was reclassified from Underwriting fees to Brokerage fees and CHF 265 million was reclassified from Portfolio management and related services to Investment fund fees. For the first nine months of 2017, CHF 233 million was reclassified from total Underwriting fees to Brokerage fees and CHF 764 million was reclassified from Portfolio management and related services to Investment fund fees. Also, certain expenses that are incremental and incidental to revenues have been reclassified prospectively from General and administrative expenses to Fee and commission expense to improve the alignment of transaction-based costs with the associated revenue stream, primarily impacting clearing costs, client loyalty costs, fund and custody expenses. As the impact of this reclassification was not material, prior period information was not restated. 2 Reflects third-party fee and commission income for the third quarter of 2018 of CHF 2,783 million for Global Wealth Management (second quarter of 2018: CHF 2,832 million), CHF 306 million for Personal & Corporate Banking (second quarter of 2018: CHF 301 million), CHF 792 million for Asset Management (second quarter of 2018: CHF 801 million), CHF 891 million for the Investment Bank (second quarter of 2018: CHF 863 million) and CHF 8 million for Corporate Center (second quarter of 2018: CHF 3 million).

Note 4 Other income

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Associates, joint ventures and subsidiaries					
Net gains / (losses) from disposals of subsidiaries[1]	19	(10)	3	8	(19)
Share of net profits of associates and joint ventures	16	15	20	46	56
Impairments related to associates			(7)		(7)
Total	35	5	17	54	30
Financial assets measured at fair value through other comprehensive income					
Net gains / (losses) from disposals	0	0	11	0	147
Impairments	0	0	0	0	(13)
Total	0	0	10	0	133
Net gains / (losses) from disposals of financial assets measured at amortized cost	0	(1)	2	0	17
Net income from properties (excluding net gains / (losses) from disposals)[2]	6	6	6	18	18
Net gains / (losses) from disposals of properties held for sale	30	0	0	30	(1)
Income from shared services provided to UBS Group AG or its subsidiaries[3]	114	105	124	339[4]	259
Other	27	22	41	72	88
Total other income	212	137	200	513	544

1 Includes foreign exchange gains / (losses) reclassified from other comprehensive income related to disposed foreign subsidiaries and branches. 2 Includes net rent received from third parties and net operating expenses. 3 Relates to subsidiaries not in the UBS AG scope of consolidation. 4 The increase compared with the first nine months of 2017 was mainly due to the transfer of shared services functions in Switzerland and the UK from UBS AG to UBS Business Solutions AG in the second quarter and fourth quarter of 2017, respectively. Refer to the Annual Report 2017 for more information.

Note 5 Personnel expenses

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Salaries and variable compensation	1,918	2,084	2,103	6,214	6,661
Financial advisor variable compensation[1]	996	996	976	2,966	2,956
Contractors	42	50	83	133	247
Social security	145	156	183	491	547
Pension and other post-employment benefit plans	98	119	132	238[2]	464
Other personnel expenses	131	118	122	370	377
Total personnel expenses	3,331	3,524	3,598	10,411[3]	11,253

1 Financial advisor variable compensation consists of grid-based compensation based directly on compensable revenues generated by financial advisors and supplemental compensation calculated on the basis of financial advisor productivity, firm tenure, assets and other variables. It also includes expenses related to compensation commitments with financial advisors entered into at the time of recruitment that are subject to vesting requirements. 2 Changes to the Pension Fund of UBS in Switzerland in the first quarter of 2018 resulted in a reduction in the pension obligation recognized by UBS AG. As a consequence, a pre-tax gain of CHF 123 million was recognized in the income statement in the first quarter of 2018, with no overall effect on total equity. Refer to "Note 5 Personnel expenses" in the "Consolidated financial statements" section of the first quarter 2018 report for more information. 3 The decrease compared with the first nine months of 2017 was mainly due to the transfer of shared services functions in Switzerland and the UK from UBS AG to UBS Business Solutions AG in the second quarter and fourth quarter of 2017, respectively. Refer to the Annual Report 2017 for more information.

Note 6 General and administrative expenses

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Occupancy	211	207	204	623	628
Rent and maintenance of IT and other equipment	75	77	91	228	331
Communication and market data services	129	123	129	376	409
Administration	1,275	1,217	882	3,784	2,109
of which: shared services costs charged by UBS Group AG or its subsidiaries[1]	*1,156*	*1,151*	*733*	*3,461[2]*	*1,766*
of which: UK bank levy[3]	*0*	*(45)*	*0*	*(45)*	*(71)*
Marketing and public relations	58	61	66	189	225
Travel and entertainment	87	96	87	262	270
Professional fees	197	208	275	600	781
Outsourcing of IT and other services	175	181	320	532	908
Litigation, regulatory and similar matters[4]	3	131	197	123	239
Other	23	7	32	59	93
Total general and administrative expenses	2,233	2,308	2,282	6,777	5,993

1 Relates to subsidiaries not in the UBS AG scope of consolidation. 2 The increase compared with the first nine months of 2017 was mainly due to the transfer of shared services functions in Switzerland and the UK from UBS AG to UBS Business Solutions AG in the second quarter and fourth quarter of 2017, respectively. Refer to the Annual Report 2017 for more information. 3 The credits presented for the periods shown are related to prior years. 4 Reflects the net increase / (release) in provisions for litigation, regulatory and similar matters recognized in the income statement. Refer to Note 14 for more information. Also includes recoveries from third parties (third quarter of 2018: CHF 0 million; second quarter of 2018: CHF 10 million; third quarter of 2017: CHF 50 million).

Note 7 Income taxes

UBS AG recognized an income tax expense of CHF 393 million for the third quarter of 2018 compared with an income tax expense of CHF 256 million for the third quarter of 2017.

The current tax expense was CHF 211 million compared with CHF 217 million in the third quarter of 2017 and related to taxable profits of UBS Switzerland AG and other subsidiaries and branches of UBS AG.

Deferred tax expenses were CHF 182 million in the third quarter of 2018 compared with CHF 39 million in the third quarter of 2017 and mainly related to the amortization of deferred tax assets previously recognized in relation to tax losses carried forward and deductible temporary differences to reflect their offset against profits for the quarter.

Note 8 Expected credit loss measurement

a) Expected credit losses in the period

Total net credit loss expenses amounted to CHF 9 million in the third quarter of 2018, reflecting an CHF 11 million decrease in expected credit losses (ECL) from stage 1 and 2 positions and a CHF 20 million increase in losses from credit-impaired (stage 3) positions.

An CHF 11 million decrease in stage 1 and 2 ECL was recognized in the period, primarily arising from a canceled facility in the Investment Bank, as well as improvements in market data, macroeconomic data and other risk parameters, predominantly impacting Personal & Corporate Banking and Global Wealth Management portfolios, partly offset by the effect of updated scenario weights, as well as new transactions.

Stage 3 losses of CHF 20 million were recognized across a number of defaulted positions, predominantly in Personal & Corporate Banking and Global Wealth Management.

There have not been any material changes to the models used to calculate ECL and to determine stage allocation since 1 January 2018, the date of transition to IFRS 9.

As outlined in Note 18, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. A quantitative estimation of the scenario weights was re-performed in the third quarter of 2018 and the model-based quantitative results indicated a shift from the upside scenario to the mild downside scenario. Consequently, UBS AG decided to update the scenario weights applied to calculate ECL as of 30 September 2018, resulting in a shift of 2.5% from the upside to the mild downside scenario when compared with the weights applied as of 30 June 2018.

Economic scenarios and weights applied

	Assigned weights in %	
ECL scenario	30.9.18	30.6.18
Upside	17.5	20.0
Baseline	42.5	42.5
Mild downside	32.5	30.0
Severe downside	7.5	7.5

Market data, such as house prices, equity indices and foreign exchange rates, and macroeconomic factors, such as unemployment rates and gross domestic product (GDP), have been updated to reflect the most recently observed economic trends and future outlooks. The updates reflect favorable developments in the last quarter and offset the effect of the aforementioned change in scenario weights.

b) ECL-relevant balance sheet and off-balance sheet positions including ECL allowances and provisions

The tables on the following pages provide information on financial instruments and certain non-financial instruments that are subject to ECL. For amortized cost instruments, the net carrying value represents the maximum exposure to credit risk, taking into account the allowance for credit losses. Financial assets measured at fair value through other comprehensive income (FVOCI) are also subject to ECL; however, unlike amortized cost instruments, the allowance does not reduce the carrying value of these financial assets. The carrying value of financial assets measured at FVOCI represents the maximum exposure to credit risk. Tables provided for 30 September 2018 and 30 June 2018 include additional detail on certain segments that have not been provided for balances as of 1 January 2018.

In addition to on-balance sheet financial assets, certain off-balance sheet and other credit lines are also subject to ECL. The maximum exposure to credit risk for off-balance sheet financial instruments is calculated based on notional amounts.

Note 8 Expected credit loss measurement (continued)

UBS AG has established ECL disclosure segments or "ECL segments" to disaggregate portfolios based on shared risk characteristics and on the same or similar rating methods applied. The key segments are presented in the table below.

Segment	Segment description	Description of credit risk sensitivity	Business division / Corporate Center
Private clients with mortgages	Lending to private clients secured by owner-occupied real estate and personal account overdrafts of those clients	Sensitive to the interest rate environment, employment status and influence from regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Real estate financing	Rental or income-producing real estate financing to private and corporate clients secured by real estate	Sensitive to GDP development, the interest rate environment and regional effects (e.g., property values)	– Personal & Corporate Banking – Global Wealth Management
Large corporate clients	Lending to large corporate and multinational clients	Sensitive to GDP development, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking – Investment Bank
SME clients	Lending to small- and medium-sized corporate clients	Sensitive to GDP development, the interest rate environment and, to some extent, seasonality and business cycles and collateral values (diverse collateral including real estate and other collateral types)	– Personal & Corporate Banking
Financial intermediaries and hedge funds	Financial institutions and pension funds, including exposures to broker-dealers and clearing houses	Sensitive to GDP development, the interest rate environment, regulatory changes and political risk	– Personal & Corporate Banking – Investment Bank – Corporate Center
Lombard	Loans secured by pledges of marketable securities, guarantees and other forms of collateral	Sensitive to the market (e.g., changes in collateral, as well as in invested assets)	– Personal & Corporate Banking – Global Wealth Management
Credit cards	Credit card solutions in Switzerland and the US	Sensitive to the interest rate environment and employment status	– Personal & Corporate Banking – Global Wealth Management
Commodity trade finance	Working capital financing of commodity traders, generally extended on a self-liquidating transactional basis	Sensitive primarily to the strength of individual transaction structures and collateral values (price volatility of commodities) as the primary source for debt service is directly linked to the shipments financed	– Personal & Corporate Banking
Leasing (finance lease receivables)	Financing of private aircraft Financing of investment goods	Sensitive to changes in collateral values Sensitive to GDP development, the interest rate environment, seasonality and business cycles and collateral values	– Personal & Corporate Banking

Note 8 Expected credit loss measurement (continued)

CHF million	30.9.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	92,632	92,632	0	0	0	0	0	0
Loans and advances to banks	15,284	15,277	5	2	(5)	(2)	0	(3)
Receivables from securities financing transactions	81,951	81,951	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	21,414	21,414	0	0	0	0	0	0
Loans and advances to customers	320,236	297,696	20,939	1,601	(832)	(50)	(170)	(612)
of which: Private clients with mortgage	*123,568*	*112,299*	*10,505*	*765*	*(117)*	*(10)*	*(74)*	*(33)*
of which: Real estate financing	*35,964*	*27,332*	*8,592*	*39*	*(62)*	*(4)*	*(48)*	*(10)*
of which: Large corporate clients	*10,710*	*10,095*	*543*	*72*	*(84)*	*(5)*	*(10)*	*(68)*
of which: SME clients	*9,710*	*8,351*	*812*	*546*	*(291)*	*(6)*	*(25)*	*(261)*
of which: Lombard	*114,093*	*114,070*	*0*	*23*	*(97)*	*(4)*	*0*	*(93)*
of which: Credit cards	*1,427*	*1,126*	*288*	*13*	*(36)*	*(6)*	*(12)*	*(18)*
of which: Commodity trade finance	*3,534*	*3,505*	*12*	*17*	*(84)*	*(5)*	*0*	*(80)*
Other financial assets measured at amortized cost	20,682	19,757	274	651	(168)	(37)	(5)	(125)
of which: Loans to financial advisors	*3,294*	*2,889*	*103*	*302*	*(121)*	*(30)*	*(3)*	*(89)*
Total financial assets measured at amortized cost[1]	552,199	528,727	21,217	2,254	(1,007)	(92)	(176)	(740)
Financial assets measured at fair value through other comprehensive income	6,618	6,618	0	0	0	0	0	0
Total on-balance sheet financial assets in scope of ECL requirements	558,817	535,345	21,217	2,254	(1,007)	(92)	(176)	(740)

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,133	16,616	336	182	(39)	(7)	(1)	(31)
of which: Large corporate clients	*3,798*	*3,481*	*203*	*115*	*(7)*	*(1)*	*0*	*(5)*
of which: SME clients	*1,246*	*1,075*	*115*	*56*	*(23)*	*0*	*0*	*(22)*
of which: Financial intermediaries and hedge funds	*6,972*	*6,967*	*5*	*0*	*(4)*	*(4)*	*0*	*0*
of which: Lombard	*2,317*	*2,317*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*1,861*	*1,840*	*10*	*11*	*(1)*	*(1)*	*0*	*0*
Irrevocable loan commitments	29,659	29,042	550	66	(39)	(31)	(8)	0
of which: Large corporate clients	*21,286*	*20,697*	*537*	*52*	*(31)*	*(23)*	*(8)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	3,833	3,833	0	0	0	0	0	0
Committed unconditionally revocable credit lines	37,146	36,030	1,026	90	(35)	(17)	(18)	0
of which: Real estate financing	*2,797*	*2,351*	*446*	*0*	*(18)*	*(4)*	*(14)*	*0*
of which: Large corporate clients	*4,200*	*4,121*	*62*	*17*	*(1)*	*(1)*	*0*	*0*
of which: SME clients	*4,440*	*4,191*	*179*	*70*	*(7)*	*(6)*	*(2)*	*0*
of which: Lombard	*6,063*	*6,063*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*7,032*	*6,745*	*287*	*0*	*(5)*	*(3)*	*(2)*	*0*
of which: Commodity trade finance	*3,061*	*3,048*	*12*	*1*	*(1)*	*(1)*	*0*	*0*
Irrevocable committed prolongation of existing loans	2,454	2,369	85	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	90,226	87,890	1,998	338	(115)	(56)	(27)	(31)
Total allowances and provisions					(1,122)	(148)	(203)	(771)

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 8 Expected credit loss measurement (continued)

CHF million	30.6.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	102,262	102,262	0	0	0	0	0	0
Loans and advances to banks	15,518	15,510	8	0	(4)	(2)	0	(2)
Receivables from securities financing transactions	76,450	76,450	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	24,937	24,937	0	0	0	0	0	0
Loans and advances to customers	320,569	295,332	23,612	1,625	(847)	(53)	(174)	(620)
of which: Private clients with mortgage	*121,858*	*108,533*	*12,498*	*826*	*(122)*	*(9)*	*(79)*	*(34)*
of which: Real estate financing	*35,659*	*26,826*	*8,795*	*39*	*(60)*	*(3)*	*(49)*	*(8)*
of which: Large corporate clients	*10,486*	*9,841*	*555*	*91*	*(82)*	*(5)*	*(9)*	*(68)*
of which: SME clients	*9,920*	*8,055*	*1,284*	*581*	*(292)*	*(8)*	*(25)*	*(258)*
of which: Lombard	*116,795*	*116,779*	*0*	*16*	*(90)*	*(4)*	*0*	*(86)*
of which: Credit cards	*1,406*	*1,123*	*268*	*14*	*(37)*	*(6)*	*(11)*	*(20)*
of which: Commodity trade finance	*3,075*	*3,049*	*13*	*13*	*(88)*	*(4)*	*0*	*(84)*
Other financial assets measured at amortized cost	21,072	20,264	292	516	(168)	(39)	(6)	(123)
of which: Loans to financial advisors	*3,394*	*3,139*	*85*	*171*	*(124)*	*(32)*	*(2)*	*(90)*
Total financial assets measured at amortized cost[1]	**560,808**	**534,755**	**23,912**	**2,141**	**(1,022)**	**(97)**	**(179)**	**(746)**
Financial assets measured at fair value through other comprehensive income	**6,941**	**6,941**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**567,749**	**541,696**	**23,912**	**2,141**	**(1,022)**	**(97)**	**(179)**	**(746)**

	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3
Guarantees	18,529	17,826	506	197	(34)	(7)	(1)	(26)
of which: Large corporate clients	*3,818*	*3,462*	*218*	*138*	*(7)*	*(1)*	*0*	*(5)*
of which: SME clients	*1,262*	*996*	*221*	*45*	*(16)*	*0*	*(1)*	*(15)*
of which: Financial intermediaries and hedge funds	*7,473*	*7,464*	*9*	*0*	*(4)*	*(4)*	*0*	*0*
of which: Lombard	*2,493*	*2,493*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Commodity trade finance	*2,398*	*2,342*	*43*	*13*	*(4)*	*(1)*	*0*	*(3)*
Irrevocable loan commitments	31,009	30,407	563	38	(42)	(34)	(8)	0
of which: Large corporate clients	*21,914*	*21,342*	*550*	*22*	*(34)*	*(27)*	*(7)*	*0*
Forward starting reverse repurchase and securities borrowing agreements	1,545	1,545	0	0	0	0	0	0
Committed unconditionally revocable credit lines	34,129	33,011	1,053	65	(33)	(21)	(13)	0
of which: Real estate financing	*2,676*	*2,404*	*272*	*0*	*(16)*	*(8)*	*(8)*	*0*
of which: Large corporate clients	*4,065*	*4,000*	*65*	*0*	*(1)*	*(1)*	*0*	*0*
of which: SME clients	*4,407*	*3,961*	*390*	*57*	*(8)*	*(5)*	*(2)*	*0*
of which: Lombard	*6,231*	*6,231*	*0*	*0*	*0*	*0*	*0*	*0*
of which: Credit cards	*6,980*	*6,712*	*267*	*0*	*(5)*	*(3)*	*(1)*	*0*
of which: Commodity trade finance	*2,707*	*2,703*	*0*	*5*	*(1)*	*(1)*	*0*	*0*
Irrevocable committed prolongation of existing loans	2,760	2,741	19	0	(1)	(1)	0	0
Total off-balance sheet financial instruments and other credit lines	**87,972**	**85,531**	**2,142**	**300**	**(111)**	**(62)**	**(23)**	**(26)**
Total allowances and provisions					**(1,133)**	**(159)**	**(202)**	**(772)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances.

Note 8 Expected credit loss measurement (continued)

CHF million	1.1.18							
	Carrying amount				ECL allowance			
Financial instruments measured at amortized cost	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Cash and balances at central banks	87,775	87,775	0	0	0	0	0	0
Loans and advances to banks	13,673	13,654	18	0	(5)	(2)	0	(3)
Receivables from securities financing transactions	84,674	84,674	0	0	(2)	(2)	0	0
Cash collateral receivables on derivative instruments	23,434	23,434	0	0	0	0	0	0
Loans and advances to customers	312,602	283,256	27,855	1,491	(867)	(61)	(163)	(644)
of which: Private clients with mortgage	*119,560*	*103,867*	*15,006*	*686*	*(124)*	*(12)*	*(69)*	*(44)*
of which: Real estate financing	*35,896*	*26,210*	*9,657*	*29*	*(62)*	*(3)*	*(53)*	*(6)*
of which: Large corporate clients	*11,004*	*10,358*	*557*	*88*	*(69)*	*(6)*	*0*	*(63)*
of which: SME clients	*10,322*	*8,218*	*1,518*	*585*	*(287)*	*(8)*	*(23)*	*(256)*
of which: Lombard	*110,601*	*110,584*	*0*	*17*	*(84)*	*(5)*	*0*	*(79)*
Other financial assets measured at amortized cost	18,375	17,877	32	465	(136)	(29)	(1)	(106)
of which: Loans to financial advisors	*3,086*	*2,874*	*32*	*179*	*(115)*	*(28)*	*(1)*	*(87)*
Total financial assets measured at amortized cost[1]	**540,533**	**510,671**	**27,906**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
Financial assets measured at fair value through other comprehensive income	**6,755**	**6,755**	**0**	**0**	**0**	**0**	**0**	**0**
Total on-balance sheet financial assets in scope of ECL requirements	**547,288**	**517,426**	**27,906**	**1,956**	**(1,011)**	**(95)**	**(164)**	**(752)**
	Total exposure				ECL provision			
Off-balance sheet (in scope of ECL)	Total	Stage 1	Stage 2	Stage 3[2]	Total	Stage 1	Stage 2	Stage 3
Guarantees	17,152	16,331	633	189	(37)	(6)	(2)	(29)
Irrevocable loan commitments	30,852	30,153	662	37	(36)	(24)	(8)	(4)
of which: Large corporate clients	*21,999*	*21,344*	*629*	*26*	*(27)*	*(19)*	*(4)*	*(4)*
Forward starting reverse repurchase and securities borrowing agreements	1,216	1,216	0	0	0	0	0	0
Committed unconditionally revocable credit lines	36,690	34,471	2,157	62	(34)	(19)	(15)	0
of which: Real estate financing	*3,103*	*2,097*	*1,007*	*0*	*(9)*	*(2)*	*(7)*	*0*
of which: SME clients	*4,770*	*4,311*	*406*	*53*	*(7)*	*(5)*	*(2)*	*0*
Irrevocable committed prolongation of existing loans	1,635	1,634	0	1	0	0	0	0
Total off-balance sheet financial instruments and other credit lines	**87,545**	**83,805**	**3,452**	**288**	**(107)**	**(49)**	**(24)**	**(33)**
Total allowances and provisions					**(1,117)**	**(144)**	**(188)**	**(785)**

1 The carrying value of financial assets at amortized cost is net of the respective ECL allowances. 2 Upon adoption of IFRS 9 as of 1 January 2018, an instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is purchased or originated credit-impaired and includes credit-impaired exposures for which no loss has occurred or no allowance has been recognized (e.g., because they are expected to be fully recoverable through the collateral held). Refer to Note 18 for more information on the adoption of IFRS 9.

Note 9 Fair value measurement

This Note provides fair value measurement information for both financial and non-financial instruments and should be read in conjunction with "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017, which provides more information on valuation principles, valuation governance, fair value hierarchy classification, valuation adjustments, valuation techniques and inputs, sensitivity of fair value measurements and methods applied to calculate fair values for financial instruments not measured at fair value.

Adoption of IFRS 9

Upon adoption of IFRS 9 on 1 January 2018, certain classification and measurement changes were made, primarily resulting in a reclassification of certain financial assets and liabilities from amortized cost to fair value through profit or loss. This included:

- brokerage receivables and payables held in the Investment Bank and Global Wealth Management;
- auction rate securities held in Corporate Center; and
- certain loans held in the Investment Bank.

Certain financial assets and liabilities that have been newly classified at fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018 are designated as Level 3 in the fair value hierarchy. Refer to the tables and text within this Note for more information.

An immaterial amount of financial assets were reclassified from *Financial assets at fair value held for trading* and *Financial assets at fair value not held for trading* to *Loans and advances to customers* upon adoption of IFRS 9. An immaterial amount of associated loan commitments, which were recognized as derivative liabilities as of 31 December 2017, were also derecognized from the balance sheet. No material fair value gains and losses would have been recognized in the income statement in the third quarter of 2018 had these instruments not been reclassified. Similarly, no material fair value gains or losses would have been recognized in Other comprehensive income related to debt instruments that were reclassified from *Financial assets available for sale* to *Other financial assets measured at amortized cost* upon adoption of IFRS 9.

→ **Refer to Note 18 for more information on the adoption of IFRS 9**

Note 9 Fair value measurement (continued)

a) Fair value hierarchy

The fair value hierarchy classification of financial and non-financial assets and liabilities measured at fair value is summarized in the table below.

Determination of fair values from quoted market prices or valuation techniques[1]

	30.9.18				30.6.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial assets measured at fair value on a recurring basis												
Financial assets at fair value held for trading	104,346	14,171	2,487	121,004	96,133	12,862	3,263	112,258	108,963	15,309	1,972	126,244
of which:												
Government bills / bonds	9,961	1,275	0	11,237	10,650	877	0	11,527	11,935	918	0	12,854
Corporate and municipal bonds	462	8,043	617	9,123	550	7,596	627	8,773	37	8,072	552	8,662
Loans	0	2,872	1,174	4,046	0	2,096	1,733	3,829	0	3,346	501	3,847
Investment fund units	8,534	1,614	441	10,590	8,716	1,974	540	11,230	7,223	1,839	571	9,632
Asset-backed securities	0	159	153	312	0	110	157	266	0	194	174	368
Equity instruments	85,388	208	101	85,697	76,218	210	188	76,615	79,276	186	105	79,566
Financial assets for unit-linked investment contracts[2]									10,492	755	69	11,316
Derivative financial instruments	799	111,900	1,549	114,248	878	119,245	1,481	121,605	458	116,222	1,549	118,229
of which:												
Interest rate contracts	0	34,599	458	35,056	0	38,555	226	38,782	1	43,913	135	44,049
Credit derivative contracts	0	1,700	484	2,184	0	1,674	452	2,127	0	2,266	550	2,816
Foreign exchange contracts	448	49,347	40	49,834	563	52,941	186	53,690	207	46,749	189	47,145
Equity / index contracts	8	24,586	561	25,154	7	24,320	612	24,939	16	21,541	675	22,232
Commodity contracts	0	1,585	0	1,585	0	1,564	0	1,564	0	1,727	0	1,727
Brokerage receivables[3]	0	20,235	0	20,235	0	18,415	0	18,415				
Financial assets at fair value not held for trading	38,107	44,019	4,725	86,852	42,929	45,177	4,769	92,875	23,032	34,104	1,419	58,556
of which:												
Government bills / bonds	18,271	3,635	0	21,906	21,853	3,452	0	25,305	22,062	3,900	0	25,961
Corporate and municipal bonds	914	18,462	0	19,375	958	21,849	0	22,807	765	20,702	0	21,467
Financial assets for unit-linked investment contracts[2]	18,644	4,652	0	23,295	19,824	4,735	8	24,568				
Loans (including structured loans)	0	7,455	1,871	9,326	0	7,394	1,904	9,298	0	9,385	758	10,143
Structured securities financing transactions[4]	0	9,647	53	9,700	0	7,556	65	7,622	0	118	173	291
Auction-rate securities[3]	0	0	1,780	1,780	0	0	1,832	1,832				
Investment fund units	188	102	115	405	194	117	118	429	205	0	0	205
Equity instruments[5]	92	19	557	668	101	16	484	602				
Other	0	47	350	397	0	57	357	414	0	0	489	489
Financial assets measured at fair value through other comprehensive income on a recurring basis												
Financial assets measured at fair value through other comprehensive income	2,400	4,218	0	6,618	2,608	4,333	0	6,941	3,000	5,157	507	8,665
of which:												
Government bills / bonds	2,359	82	0	2,441	2,563	111	0	2,675	2,733	133	0	2,866
Corporate and municipal bonds	41	406	0	446	44	390	0	434	121	1,060	9	1,189
Asset-backed securities	0	3,731	0	3,731	0	3,832	0	3,832	0	3,880	0	3,880
Other[5]	0	0	0	0	0	0	0	0	146	85	499	730
Non-financial assets measured at fair value on a recurring basis												
Other non-financial assets												
Precious metals and other physical commodities	4,035	0	0	4,035	3,975	0	0	3,975	4,563	0	0	4,563
Non-financial assets measured at fair value on a non-recurring basis												
Other non-financial assets[6]	0	81	3	84	0	57	9	65	0	54	42	95
Total assets measured at fair value	149,687	194,625	8,764	353,075	146,523	200,090	9,522	356,135	140,017	170,848	5,489	316,353

Note 9 Fair value measurement (continued)

Determination of fair values from quoted market prices or valuation techniques (continued)[1]

	30.9.18				30.6.18				31.12.17			
CHF million	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Financial liabilities measured at fair value on a recurring basis												
Financial liabilities at fair value held for trading	26,331	5,579	120	32,030	26,211	5,117	88	31,416	26,037	4,309	117	30,463
of which:												
Government bills / bonds	*3,279*	*308*	*0*	*3,588*	*4,386*	*299*	*0*	*4,685*	*5,153*	*256*	*0*	*5,409*
Corporate and municipal bonds	*7*	*4,680*	*62*	*4,749*	*138*	*4,113*	*34*	*4,285*	*50*	*3,453*	*35*	*3,538*
Investment fund units	*294*	*138*	*0*	*432*	*785*	*214*	*2*	*1,002*	*541*	*263*	*16*	*820*
Equity instruments	*22,750*	*452*	*57*	*23,259*	*20,901*	*488*	*52*	*21,440*	*20,293*	*336*	*66*	*20,695*
Derivative financial instruments	758	110,384	2,411	113,553	875	115,955	2,394	119,224	398	112,929	2,807	116,134
of which:												
Interest rate contracts	*5*	*30,837*	*320*	*31,163*	*6*	*33,738*	*285*	*34,030*	*5*	*38,196*	*186*	*38,387*
Credit derivative contracts	*0*	*2,514*	*576*	*3,090*	*0*	*2,620*	*613*	*3,233*	*0*	*3,196*	*601*	*3,797*
Foreign exchange contracts	*445*	*48,084*	*97*	*48,627*	*585*	*52,922*	*115*	*53,621*	*213*	*45,151*	*122*	*45,486*
Equity / index contracts	*5*	*27,209*	*1,415*	*28,629*	*2*	*25,122*	*1,369*	*26,493*	*42*	*24,803*	*1,896*	*26,741*
Commodity contracts	*0*	*1,671*	*1*	*1,672*	*0*	*1,365*	*1*	*1,366*	*0*	*1,561*	*1*	*1,562*
Financial liabilities designated at fair value on a recurring basis												
Brokerage payables designated at fair value[3]	0	38,268	0	38,268	0	37,904	0	37,904				
Debt issued designated at fair value	0	51,527	10,105	61,631	0	46,683	10,166	56,849	0	38,617	10,885	49,502
Other financial liabilities designated at fair value	0	33,931	673	34,605	2	36,252	1,089	37,342	0	14,282	1,941	16,223
of which:												
Amounts due under unit-linked investment contracts	*0*	*23,499*	*0*	*23,499*	*0*	*24,913*	*0*	*24,913*	*0*	*11,523*	*0*	*11,523*
Structured securities financing transactions[4]	*0*	*8,335*	*71*	*8,406*	*0*	*6,533*	*0*	*6,533*	*0*	*372*	*4*	*376*
Over-the-counter debt instruments	*0*	*2,095*	*599*	*2,694*	*2*	*4,801*	*1,085*	*5,888*	*0*	*2,385*	*1,930*	*4,315*
Non-financial liabilities measured at fair value on a non-recurring basis												
Other non-financial liabilities	0	0	0	0	0	0	0	0	0	1	0	1
Total liabilities measured at fair value	27,089	239,689	13,309	280,087	27,087	241,911	13,737	282,736	26,435	170,139	15,750	212,324

1 Bifurcated embedded derivatives are presented on the same balance sheet lines as their host contracts and are excluded from this table. The fair value of these derivatives was not material for the periods presented. 2 Financial assets for unit-linked investment contracts were reclassified from Financial assets at fair value held for trading to Financial assets at fair value not held for trading as of 1 January 2018. Refer to Note 18 for more information. 3 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 18 for more information. 4 The increases in Structured securities financing transactions from 31 December 2017 to 30 June 2018 primarily relate to the reclassification of certain balances from amortized cost to fair value through profit or loss upon adoption of IFRS 9 on 1 January 2018. Refer to Note 18 for more information. 5 Upon adoption of IFRS 9 on 1 January 2018, equity instruments that were formerly classified as available for sale under IAS 39 were reclassified to Financial assets at fair value not held for trading. Refer to Note 18 for more information. 6 Other non-financial assets primarily consist of properties and other non-current assets held for sale, which are measured at the lower of their net carrying amount or fair value less costs to sell.

All financial and non-financial assets and liabilities measured or disclosed at fair value are categorized into one of three fair value hierarchy levels. In certain cases, the inputs used to measure fair value may fall within different levels of the fair value hierarchy. For disclosure purposes, the level in the hierarchy within which the instrument is classified in its entirety is based on the lowest level input that is significant to the position's fair value measurement:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities;
- Level 2 – valuation techniques for which all significant inputs are, or are based on, observable market data; or
- Level 3 – valuation techniques for which significant inputs are not based on observable market data.

Product description, valuation and classification in the fair value hierarchy for products newly classified at fair value upon adoption of IFRS 9 on 1 January 2018

Product description, valuation and fair value hierarchy information is provided on the next page for significant products classified at fair value that are not described in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Note 9 Fair value measurement (continued)

Auction rate securities

There are two types of auction rate securities (ARS): auction preferred securities (APS) and auction rate certificates (ARC). ARC are issued by municipalities and are used by investors as tax-exempt alternatives to money market instruments. Interest rates for these instruments are reset through a periodic Dutch auction. APS are similar to ARC with the primary difference being that they are issued from closed-end funds. ARS are valued directly using market prices that reflect recent transactions after applying an adjustment for trade size or quoted dealer prices where available. Suitably deep and liquid pricing information is generally not available for ARS securities. As a result, these securities are classified as Level 3.

Brokerage receivables and payables

Brokerage receivables and payables include callable, on-demand balances, including long cash credits, short cash debits, margin debit balances and short sale proceeds. The business model for these accounts is similar to any current or on-demand account, with account holders using the account to house subscriptions, redemptions and billed amounts. Fair value is determined based on value of the underlying balances. Due to their on-demand nature, these receivables and payables are designated as Level 2.

b) Valuation adjustments

Deferred day-1 profit or loss reserves

The table below summarizes the changes in deferred day-1 profit or loss reserves during the respective period.

Deferred day-1 profit or loss is generally released into *Other net income from fair value changes on financial instruments* when pricing of equivalent products or the underlying parameters become observable or when the transaction is closed out.

In the second quarter of 2018, a deferred day-1 profit or loss reserve release of CHF 192 million was recognized in the income statement related to long-dated UBS-issued structured notes, which are reported within *Debt issued designated at fair value* on the balance sheet. The deferred day-1 profit or loss reserve release was driven by increased observability of the own credit adjustment (OCA) curve used to value these positions following the issuance of a 30-year senior unsecured bond in the second quarter of 2018.

Deferred day-1 profit or loss reserves

	For the quarter ended			Year-to-date	
CHF million	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
Reserve balance at the beginning of the period	274	457	349	329	371
Profit / (loss) deferred on new transactions	42	53	76	282	192
(Profit) / loss recognized in the income statement	(67)	(248)	(79)	(368)	(199)
Foreign currency translation	(4)	13	5	3	(13)
Reserve balance at the end of the period	245	274	351	245	351

c) Transfers between Level 1 and Level 2

The amounts disclosed below reflect transfers between Level 1 and Level 2 for instruments that were held for the entire reporting period.

Assets totaling approximately CHF 0.8 billion, which were mainly comprised of financial assets at fair value held for trading, primarily equity instruments and investment fund units, were transferred from Level 2 to Level 1 during the first nine months of 2018, generally due to increased levels of trading activity observed within the market. Liabilities transferred from Level 2 to Level 1 during the first nine months of 2018 were not material. Assets and liabilities transferred from Level 1 to Level 2 during the first nine months of 2018 were also not material.

Note 9 Fair value measurement (continued)

d) Level 3 instruments: valuation techniques and inputs

The table below presents material Level 3 assets and liabilities together with the valuation techniques used to measure fair value, the significant inputs used in the valuation technique that are considered unobservable and a range of values for those unobservable inputs.

The range of values represents the highest- and lowest-level input used in the valuation techniques. Therefore, the range does not reflect the level of uncertainty regarding a particular input, but rather the different underlying characteristics of the relevant assets and liabilities. The ranges will therefore vary from period to period and parameter to parameter based on characteristics of the instruments held at each balance sheet date. Furthermore, the ranges and weighted averages of unobservable inputs may differ across other financial institutions due to the diversity of the products in each firm's inventory.

The significant unobservable inputs disclosed in the table below are generally consistent with those included in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017. A description of the potential effect that a change in each unobservable input in isolation may have on a fair value measurement, including information to facilitate an understanding of factors that give rise to the input ranges shown, is also provided in "Note 22 Fair value measurement" in the "Consolidated financial statements" section of the Annual Report 2017.

Valuation techniques and inputs used in the fair value measurement of Level 3 assets and liabilities

	Fair value						Range of inputs						
	Assets		Liabilities				30.9.18			31.12.17			
CHF billion	30.9.18	31.12.17	30.9.18	31.12.17	Valuation technique(s)	Significant unobservable input(s)[1]	low	high	weighted average[2]	low	high	weighted average[2]	unit[1]
Financial assets and liabilities at fair value held for trading and Financial assets at fair value not held for trading[3]													
Corporate and municipal bonds	0.6	0.6	0.1	0.0	Relative value to market comparable	Bond price equivalent	0	134	93	0	133	92	points
Traded loans, loans mandatorily at fair value, loan commitments and guarantees	3.3	1.7	0.0	0.0	Relative value to market comparable	Loan price equivalent	0	102	99	50	102	98	points
					Discounted expected cash flows	Credit spread	63	513		23	124		basis points
					Market comparable and securitization model	Discount margin	0	14	1	0	14	2	%
Auction rate securities[4]	1.8		0.0		Relative value to market comparable	Bond price equivalent	77	99	90				points
Investment fund units[5]	0.6	0.7	0.0	0.0	Relative value to market comparable	Net asset value							
Equity instruments[5]	0.7	0.5	0.1	0.1	Relative value to market comparable	Price							
Debt issued designated at fair value[6]			10.1	10.9									
Other financial liabilities designated at fair value[6]			0.6	1.9									
Derivative financial instruments													
Interest rate contracts	0.5	0.1	0.3	0.2	Option model	Volatility of interest rates[7]	46	78		28	70		basis points
Credit derivative contracts	0.5	0.5	0.6	0.6	Discounted expected cash flows	Credit spreads	3	266		6	550		basis points
						Bond price equivalent	0	99		2	102		points
Equity / index contracts	0.6	0.7	1.4	1.9	Option model	Equity dividend yields	0	12		0	13		%
						Volatility of equity stocks, equity and other indices	3	77		0	172		%
						Equity-to-FX correlation	(45)	71		(39)	70		%
						Equity-to-equity correlation	(50)	97		(50)	97		%

1 The ranges of significant unobservable inputs are represented in points, percentages and basis points. Points are a percentage of par (e.g., 100 points would be 100% of par). 2 Weighted averages are provided for non-derivative financial instruments and were calculated by weighting inputs based on the fair values of the respective instruments. Weighted averages are not provided for inputs related to derivative contracts as this would not be meaningful. 3 Comparative period information includes equity instruments that were formerly classified as available for sale under IAS 39 and have been reclassified to Financial assets at fair value not held for trading upon adoption of IFRS 9 on 1 January 2018. Refer to Note 18 for more information. 4 Comparative period information is not disclosed for financial assets and liabilities that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 18 for more information. 5 The range of inputs is not disclosed due to the dispersion of values given the diverse nature of the investments. 6 Valuation techniques, significant unobservable inputs and the respective input ranges for Debt issued designated at fair value and Other financial liabilities designated at fair value, which are primarily comprised of over-the-counter debt instruments, are the same as the equivalent derivative or structured financing instruments presented elsewhere in this table. 7 Effective 31 March 2018, the range of inputs reported for this significant unobservable input is based on normal volatility and the unit has been updated to basis points. Log-normal volatility with the unit as points was reported previously. Prior-period information has been restated to reflect this change in presentation.

Note 9 Fair value measurement (continued)

e) Level 3 instruments: sensitivity to changes in unobservable input assumptions

The table below summarizes those financial assets and liabilities classified as Level 3 for which a change in one or more of the unobservable inputs to reflect reasonably possible alternative assumptions would change fair value significantly, and the estimated effect thereof.

The table shown presents the favorable and unfavorable effects for each class of financial assets and liabilities for which the potential change in fair value is considered significant. The sensitivity of fair value measurements for debt issued designated at fair value and over-the-counter debt instruments designated at fair value is reported with the equivalent derivative or structured financing instrument within the table below.

The sensitivity data presented represent an estimation of valuation uncertainty based on reasonably possible alternative values for Level 3 inputs at the balance sheet date and do not represent the estimated effect of stress scenarios. Typically, these financial assets and liabilities are sensitive to a combination of inputs from Levels 1–3. Although well-defined interdependencies may exist between Levels 1–2 and Level 3 parameters (e.g., between interest rates, which are generally Level 1 or Level 2, and prepayments, which are generally Level 3), these have not been incorporated in the table. Furthermore, direct interrelationships between the Level 3 parameters are not a significant element of the valuation uncertainty.

Sensitivity of fair value measurements to changes in unobservable input assumptions

	30.9.18		30.6.18		31.12.17	
CHF million	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes	Favorable changes	Unfavorable changes
Traded loans, loans measured at fair value, loan commitments and guarantees	91	(16)	89	(15)	79	(11)
Structured securities financing transactions	17	(12)	20	(15)	34	(34)
Auction rate securities[1]	89	(89)	92	(92)		
Asset-backed securities	30	(25)	31	(26)	19	(15)
Equity instruments	185	(123)	182	(115)	79	(53)
Interest rate derivative contracts, net	12	(49)	12	(37)	13	(26)
Credit derivative contracts, net	31	(35)	40	(35)	64	(99)
Foreign exchange derivative contracts, net	8	(5)	6	(3)	12	(6)
Equity / index derivative contracts, net	184	(198)	212	(228)	190	(193)
Other	19	(19)	21	(21)	13	(13)
Total	666	(572)	704	(586)	502	(450)

1 Comparative period information as of 31 December 2017 is not disclosed for financial assets that were measured at amortized cost prior to the adoption of IFRS 9 on 1 January 2018. Refer to Note 18 for more information.

f) Level 3 instruments: movements during the period

Significant changes in Level 3 instruments

The table on the following pages presents additional information about Level 3 assets and liabilities measured at fair value on a recurring basis. Level 3 assets and liabilities may be hedged with instruments classified as Level 1 or Level 2 in the fair value hierarchy and, as a result, realized and unrealized gains and losses included in the table may not include the effect of related hedging activity. Furthermore, the realized and unrealized gains and losses presented within the table are not limited solely to those arising from Level 3 inputs, as valuations are generally derived from both observable and unobservable parameters.

Upon adoption of IFRS 9 on 1 January 2018, certain financial assets and liabilities were newly classified at fair value through profit or loss and were designated as Level 3 in the fair value hierarchy. These financial instruments are presented in the table on the following pages, including the associated effect upon adoption. This includes auction rate securities held in Corporate Center and certain loans held in the Investment Bank.

In addition to various financial assets and liabilities being newly classified at fair value through profit or loss, certain equity investments and investment fund units measured at fair value through other comprehensive income were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules, which resulted in an opening balance reclassification between reporting lines in the table on the following pages.

Note 9 Fair value measurement (continued)

Movements of Level 3 instruments

CHF billion	Balance as of 31 December 2016	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	Total gains / (losses) included in comprehensive income: *of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 September 2017
Financial assets at fair value held for trading	**1.7**	**0.0**	***0.0***	**0.5**	**(2.4)**	**2.2**	**0.0**	**0.3**	**(0.2)**	**0.0**	**2.0**
of which:											
Corporate and municipal bonds	*0.6*	*0.0*	*0.0*	*0.3*	*(0.4)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.5*
Loans	*0.7*	*0.1*	*0.0*	*0.0*	*(1.8)*	*2.2*	*0.0*	*0.0*	*(0.1)*	*0.0*	*1.1*
Investment fund units	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Other	*0.4*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.4*
Financial assets at fair value not held for trading	**2.1**	**0.0**	***0.0***	**0.0**	**0.0**	**0.3**	**(0.8)**	**0.1**	**(0.1)**	**0.0**	**1.6**
of which:											
Loans (including structured loans)	*1.2*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*(0.7)*	*0.0*	*(0.1)*	*0.0*	*0.5*
Auction rate securities[3]											
Equity instruments											
Other	*0.9*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.3*	*(0.1)*	*0.1*	*0.0*	*0.0*	*1.1*
Financial assets measured at fair value through other comprehensive income	**0.5**	**0.0**	***0.0***	**0.0**	**0.0**	**0.0**	**0.0**	**0.1**	**0.0**	**0.0**	**0.5**
Derivative financial instruments – assets	**2.5**	**(0.2)**	***(0.3)***	**0.0**	**0.0**	**0.7**	**(1.0)**	**0.2**	**(0.7)**	**0.0**	**1.6**
of which:											
Credit derivative contracts	*1.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.0*	*(0.4)*	*0.0*	*(0.3)*	*0.0*	*0.6*
Equity / index contracts	*0.7*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.6*	*(0.4)*	*0.1*	*(0.4)*	*0.0*	*0.6*
Other	*0.5*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*(0.2)*	*0.0*	*(0.1)*	*0.0*	*0.3*
Derivative financial instruments – liabilities	**4.0**	**0.1**	***(0.1)***	**0.0**	**0.0**	**0.4**	**(0.9)**	**0.2**	**(1.3)**	**0.0**	**2.5**
of which:											
Credit derivative contracts	*1.5*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.5)*	*0.0*	*(0.8)*	*0.0*	*0.3*
Equity / index contracts	*1.9*	*0.1*	*0.1*	*0.0*	*0.0*	*0.3*	*(0.3)*	*0.1*	*(0.5)*	*0.0*	*1.6*
Other	*0.6*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.1*	*0.0*	*0.0*	*0.5*
Debt issued designated at fair value	**9.7**	**1.0**	***0.8***	**0.0**	**0.0**	**3.8**	**(3.3)**	**0.6**	**(1.2)**	**(0.2)**	**10.4**
Other financial liabilities designated at fair value	**1.3**	**0.1**	***0.0***	**0.0**	**0.0**	**1.3**	**(0.7)**	**0.0**	**(0.1)**	**0.0**	**1.8**

1 Net gains / (losses) included in comprehensive income are comprised of Net interest income, Other net income from fair value changes on financial instruments and Other income. 2 Total Level 3 assets as of 30 September 2018 were CHF 8.8 billion (30 June 2018: CHF 9.5 billion; 31 December 2017: CHF 5.5 billion). Total Level 3 liabilities as of 30 September 2018 were CHF 13.3 billion (30 June 2018: CHF 13.7 billion; 31 December 2017: CHF 15.7 billion). 3 Comparative period information is not disclosed for items that were measured at amortized cost prior to the adoption of IFRS 9. Refer to Note 18 for more information.

Note 9 Fair value measurement (continued)

Balance as of 31 December 2017	Reclassifications and remeasurements upon adoption of IFRS 9	Balance as of 1 January 2018	Total gains / (losses) included in comprehensive income: Net gains / (losses) included in income[1]	*of which: related to Level 3 instruments held at the end of the reporting period*	Purchases	Sales	Issuances	Settlements	Transfers into Level 3	Transfers out of Level 3	Foreign currency translation	Balance as of 30 September 2018[2]
2.0	0.4	2.4	(0.4)	*(0.4)*	1.6	(5.5)	3.8	0.0	0.8	(0.2)	0.0	2.5
0.6		*0.6*	*(0.1)*	*(0.1)*	*0.5*	*(0.8)*	*0.0*	*0.0*	*0.6*	*0.0*	*0.0*	*0.6*
0.5	*0.4*	*0.9*	*0.0*	*0.0*	*0.6*	*(4.2)*	*3.8*	*0.0*	*0.1*	*0.0*	*0.0*	*1.2*
0.6		*0.6*	*(0.2)*	*(0.1)*	*0.2*	*(0.1)*	*0.0*	*0.0*	*0.1*	*(0.1)*	*0.0*	*0.4*
0.3		*0.3*	*0.0*	*0.0*	*0.3*	*(0.4)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.3*
1.4	2.9	4.3	0.1	*0.1*	1.5	(1.3)	0.0	0.0	0.1	(0.1)	0.1	4.7
0.8	*0.6*	*1.3*	*(0.2)*	*(0.1)*	*1.2*	*(0.6)*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*1.9*
	1.8	*1.8*	*0.1*	*0.1*	*0.0*	*(0.3)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.1*	*1.8*
	0.4	*0.4*	*0.1*	*0.1*	*0.2*	*(0.2)*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
0.7	*0.1*	*0.8*	*0.0*	*0.0*	*0.1*	*(0.3)*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.5*
0.5	(0.5)											
1.5		1.5	(0.3)	*(0.3)*	0.0	0.0	0.9	(0.9)	0.6	(0.3)	0.0	1.5
0.5		*0.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.5*
0.7		*0.7*	*(0.1)*	*(0.1)*	*0.0*	*0.0*	*0.7*	*(0.7)*	*0.1*	*(0.1)*	*0.0*	*0.6*
0.3		*0.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.2*	*(0.1)*	*0.4*	*(0.1)*	*0.0*	*0.5*
2.8	0.0	2.8	(0.4)	*(0.4)*	0.0	0.0	1.2	(1.0)	0.3	(0.4)	0.0	2.4
0.6		*0.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*(0.1)*	*0.0*	*0.0*	*0.0*	*0.6*
1.9		*1.9*	*(0.3)*	*(0.2)*	*0.0*	*0.0*	*0.9*	*(0.9)*	*0.2*	*(0.4)*	*0.0*	*1.4*
0.3	*0.0*	*0.3*	*(0.2)*	*(0.2)*	*0.0*	*0.0*	*0.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*
10.9		10.9	0.7	*0.3*	0.0	0.0	5.0	(3.6)	1.4	(4.2)	0.0	10.1
1.9		1.9	0.0	*0.0*	0.0	0.0	0.9	(2.1)	0.0	0.0	0.0	0.7

Note 9 Fair value measurement (continued)

Assets and liabilities transferred into or out of Level 3 are presented as if those assets or liabilities had been transferred at the beginning of the year.

Assets transferred into and out of Level 3 totaled CHF 1.5 billion and CHF 0.5 billion, respectively. Transfers into Level 3 were primarily comprised of corporate and municipal bonds reflecting decreased observability of the respective bond price equivalent inputs. Transfers out of Level 3 were primarily comprised of equity / index contracts due to increased observability of the respective equity volatility inputs.

Liabilities transferred into and out of Level 3 totaled CHF 1.7 billion and CHF 4.6 billion, respectively. Transfers into Level 3 were primarily comprised of structured medium-term notes and equity-linked issued debt instruments due to decreased observability of the embedded derivative inputs. Transfers out of Level 3 were primarily comprised of interest rate-linked and equity-linked issued debt instruments resulting from changes in the observability of the respective OCA curve and equity volatility inputs used to determine the fair value of these instruments.

g) Financial instruments not measured at fair value

The table below reflects the estimated fair values of financial instruments not measured at fair value.

Financial instruments not measured at fair value

	30.9.18		30.6.18		31.12.17	
CHF billion	Carrying value	Fair value	Carrying value	Fair value	Carrying value	Fair value
Assets						
Cash and balances at central banks	92.6	92.6	102.3	102.3	87.8	87.8
Loans and advances to banks	15.3	15.3	15.5	15.5	13.7	13.7
Receivables from securities financing transactions	82.0	82.0	76.4	76.4	89.6	89.6
Cash collateral receivables on derivative instruments	21.4	21.4	24.9	24.9	23.4	23.4
Loans and advances to customers	320.2	320.3	320.6	321.1	320.7	322.1
Other financial assets measured at amortized cost	20.7	20.4	21.1	20.8	36.9	36.8
Liabilities						
Amounts due to banks	10.1	10.1	10.2	10.2	7.5	7.5
Payables from securities financing transactions	10.8	10.8	10.1	10.1	17.0	17.0
Cash collateral payables on derivative instruments	27.6	27.6	31.8	31.8	30.2	30.2
Customer deposits	404.9	404.9	407.2	407.2	412.4	412.4
Funding from UBS Group AG and its subsidiaries	38.2	38.6	38.8	39.5	34.7	36.4
Debt issued measured at amortized cost	96.0	98.5	98.9	100.7	104.8	107.0
Other financial liabilities measured at amortized cost	6.8	6.8	7.2	7.2	37.1	37.1

The fair values included in the table above were calculated for disclosure purposes only. The fair value valuation techniques and assumptions relate only to the fair value of UBS's financial instruments not measured at fair value. Other institutions may use different methods and assumptions for their fair value estimation, and therefore such fair value disclosures cannot necessarily be compared from one financial institution to another.

Note 10 Derivative instruments

a) Derivative instruments

As of 30.9.18, CHF billion	Derivative financial assets	Notional values related to derivative financial assets[3]	Derivative financial liabilities	Notional values related to derivative financial liabilities[3]	Other notional values[4]
Derivative financial instruments[1,2]					
Interest rate contracts	35.1	1,124	31.2	1,099	10,994
Credit derivative contracts	2.2	80	3.1	77	0
Foreign exchange contracts	49.8	2,672	48.6	2,545	1
Equity / index contracts	25.2	440	28.6	560	107
Commodity contracts	1.6	39	1.7	37	9
Unsettled purchases of non-derivative financial instruments[5]	0.2	27	0.2	21	
Unsettled sales of non-derivative financial instruments[5]	0.3	34	0.2	23	
Total derivative financial instruments, based on IFRS netting[6]	114.2	4,416	113.6	4,362	11,111
Further netting potential not recognized on the balance sheet[7]	(101.2)		(97.7)		
of which: netting of recognized financial liabilities / assets	*(83.0)*		*(83.0)*		
of which: netting with collateral received / pledged	*(18.2)*		*(14.7)*		
Total derivative financial instruments, after consideration of further netting potential	13.1		15.9		
As of 30.6.18, CHF billion					
Derivative financial instruments[1,2]					
Interest rate contracts	38.8	1,169	34.0	1,093	11,322
Credit derivative contracts	2.1	81	3.2	83	0
Foreign exchange contracts	53.7	2,736	53.6	2,588	1
Equity / index contracts	24.9	446	26.5	530	101
Commodity contracts	1.6	44	1.4	39	11
Unsettled purchases of non-derivative financial instruments[5]	0.2	26	0.2	18	
Unsettled sales of non-derivative financial instruments[5]	0.3	31	0.3	20	
Total derivative financial instruments, based on IFRS netting[6]	121.6	4,533	119.2	4,371	11,435
Further netting potential not recognized on the balance sheet[7]	(106.6)		(103.1)		
of which: netting of recognized financial liabilities / assets	*(87.4)*		*(87.4)*		
of which: netting with collateral received / pledged	*(19.2)*		*(15.7)*		
Total derivative financial instruments, after consideration of further netting potential	15.1		16.2		
As of 31.12.17, CHF billion					
Derivative financial instruments[1]					
Interest rate contracts	44.0	1,142	38.4	1,044	10,462
Credit derivative contracts	2.8	92	3.8	98	1
Foreign exchange contracts	47.1	2,389	45.5	2,193	0
Equity / index contracts	22.2	380	26.7	487	83
Commodity contracts	1.7	33	1.6	37	8
Unsettled purchases of non-derivative financial instruments[5]	0.1	12	0.1	11	
Unsettled sales of non-derivative financial instruments[5]	0.1	15	0.1	9	
Total derivative financial instruments, based on IFRS netting[6]	118.2	4,063	116.1	3,878	10,555
Further netting potential not recognized on the balance sheet[7]	(104.2)		(98.5)		
of which: netting of recognized financial liabilities / assets	*(83.5)*		*(83.5)*		
of which: netting with collateral received / pledged	*(20.7)*		*(15.0)*		
Total derivative financial instruments, after consideration of further netting potential	14.0		17.7		

1 Derivative financial liabilities as of 30 September 2018 include CHF 0.0 billion related to derivative loan commitments (30 June 2018: CHF 0.0 billion; 31 December 2017: CHF 0.0 billion). No notional amounts related to these commitments are included in this table but they are disclosed within Note 15 under Loan commitments. 2 Upon adoption of IFRS 9 on 1 January 2018, certain forward starting repurchase and reverse repurchase agreements have been classified as measured at fair value through profit or loss and are recognized within derivative instruments. The fair value of these derivative instruments was not material as of 30 September 2018 or 30 June 2018. No notional amounts related to these instruments are included in this table, but they are disclosed within Note 15 under Forward starting transactions. 3 In cases where derivative financial instruments are presented on a net basis on the balance sheet, the respective notional values of the netted derivative financial instruments are still presented on a gross basis. 4 Other notional values relate to derivatives that are cleared through either a central counterparty or an exchange. The fair value of these derivatives is presented on the balance sheet net of the corresponding cash margin under Cash collateral receivables on derivative instruments and Cash collateral payables on derivative instruments and was not material for all periods presented. 5 Changes in the fair value of purchased and sold non-derivative financial instruments between trade date and settlement date are recognized as derivative financial instruments. 6 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of the entity and all of the counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 7 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

Note 10 Derivative instruments (continued)

b) Cash collateral on derivative instruments

CHF billion	Receivables 30.9.18	Payables 30.9.18	Receivables 30.6.18	Payables 30.6.18	Receivables 31.12.17	Payables 31.12.17
Cash collateral on derivative instruments, based on IFRS netting[1]	21.4	27.6	24.9	31.8	23.4	30.2
Further netting potential not recognized on the balance sheet[2]	(11.6)	(14.2)	(13.0)	(15.5)	(12.5)	(17.4)
of which: netting of recognized financial liabilities / assets	*(10.8)*	*(13.2)*	*(12.5)*	*(14.5)*	*(11.7)*	*(16.3)*
of which: netting with collateral received / pledged	*(0.8)*	*(1.1)*	*(0.5)*	*(1.0)*	*(0.7)*	*(1.2)*
Cash collateral on derivative instruments, after consideration of further netting potential	9.9	13.4	11.9	16.4	11.0	12.8

1 Financial assets and liabilities are presented net on the balance sheet if UBS has the unconditional and legally enforceable right to offset the recognized amounts, both in the normal course of business and in the event of default, bankruptcy or insolvency of UBS or its counterparties, and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously. 2 Reflects the netting potential in accordance with enforceable master netting and similar arrangements where not all criteria for a net presentation on the balance sheet have been met. Refer to "Note 24 Offsetting financial assets and financial liabilities" in the "Consolidated financial statements" section of the Annual Report 2017 for more information.

Note 11 Other assets and liabilities

a) Other financial assets measured at amortized cost

CHF million	30.9.18	30.6.18	31.12.17
Prime brokerage receivables[1]			19,080
Debt securities	11,827	12,241	9,166
of which: government bills / bonds	*9,058*	*9,787*	*6,465*
Loans to financial advisors[2]	3,294	3,394	3,118
Fee- and commission-related receivables	1,639	1,747	1,748
Finance lease receivables	1,109	1,076	1,059
Settlement and clearing accounts	779	448	716
Accrued interest income	710	669	578
Other	1,324	1,496	1,470
Total other financial assets measured at amortized cost	20,682	21,072	36,935

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 18 for more information. 2 Related to financial advisors in the US and Canada.

b) Other non-financial assets

CHF million	30.9.18	30.6.18	31.12.17
Precious metals and other physical commodities	4,035	3,975	4,563
Bail deposit[1]	1,302	1,320	1,337
Prepaid expenses	775	795	819
Net defined benefit pension and post-employment assets	32	61	0
VAT and other tax receivables	271	304	292
Properties and other non-current assets held for sale	84	65	95
Other	374	436	251
Total other non-financial assets	6,873	6,956	7,358

1 Refer to item 1 in Note 14b for more information.

Note 11 Other assets and liabilities (continued)

c) Other financial liabilities measured at amortized cost

CHF million	30.9.18	30.6.18	31.12.17
Prime brokerage payables[1]			29,646
Other accrued expenses	1,860	1,884	2,105
Accrued interest expenses	1,156	1,084	1,533
Settlement and clearing accounts	1,227	1,239	1,380
Other	2,592	2,981	2,468
Total other financial liabilities measured at amortized cost	6,836	7,187	37,133

1 Upon adoption of IFRS 9 on 1 January 2018, the classification of prime brokerage receivables and payables changed from amortized cost to fair value through profit or loss, and brokerage receivables and payables are now presented separately on the balance sheet. Refer to Note 18 for more information.

d) Other financial liabilities designated at fair value

CHF million	30.9.18	30.6.18	31.12.17
Amounts due under unit-linked investment contracts	23,499	24,913	11,523
Structured securities financing transactions	8,406	6,533	375
Over-the-counter debt instruments	2,694	5,888	4,317
of which: life-to-date own credit (gain) / loss	*(11)*	*(41)*	*36*
Other	5	8	9
Total other financial liabilities designated at fair value	34,605	37,342	16,223

e) Other non-financial liabilities

CHF million	30.9.18	30.6.18	31.12.17
Compensation-related liabilities	4,028	3,601	4,909
of which: accrued expenses	*1,984*	*1,578*	*2,372*
of which: other deferred compensation plans	*1,478*	*1,400*	*1,613*
of which: net defined benefit pension and post-employment liabilities	*566*	*623*	*925*
Current and deferred tax liabilities	667	814	844
VAT and other tax payables	414	391	378
Deferred income	231	239	150
Other	105	136	53
Total other non-financial liabilities	5,446	5,181	6,335

Note 12 Debt issued designated at fair value

CHF million	30.9.18	30.6.18	31.12.17
Issued debt instruments			
Equity-linked[1]	41,822	39,355	34,162
Rates-linked	9,362	7,505	5,811
Credit-linked	3,232	3,034	2,937
Fixed-rate	4,755	4,293	3,921
Other	2,460	2,661	2,671
Total debt issued designated at fair value	61,631	56,849	49,502
of which: life-to-date own credit (gain) / loss	*68*	*(188)*	*159*

1 Includes investment fund unit-linked instruments issued.

Note 13 Debt issued measured at amortized cost

CHF million	30.9.18	30.6.18	31.12.17
Certificates of deposit	9,198	12,720	23,831
Commercial paper	30,025	28,878	23,532
Other short-term debt	3,973	3,730	3,590
Short-term debt[1]	43,196	45,328	50,953
Senior unsecured debt	33,182	33,699	32,268
Covered bonds	3,935	4,029	4,112
Subordinated debt	7,322	7,453	8,985
of which: low-trigger loss-absorbing tier 2 capital instruments	*6,627*	*6,748*	*8,286*
of which: non-Basel III-compliant tier 2 capital instruments	*695*	*705*	*700*
Debt issued through the Swiss central mortgage institutions	8,317	8,357	8,345
Other long-term debt	60	63	87
Long-term debt[2]	52,816	53,601	53,796
Total debt issued measured at amortized cost[3]	96,012	98,929	104,749

1 Debt with an original maturity of less than one year. 2 Debt with an original maturity greater than or equal to one year. The classification of debt issued into short-term and long-term does not consider any early redemption features. 3 Net of bifurcated embedded derivatives, the fair value of which was not material for the periods presented.

Note 14 Provisions and contingent liabilities

a) Provisions

The table below presents an overview of total provisions recognized under both IAS 37 and IFRS 9.

CHF million	30.9.18	30.6.18	31.12.17
Provisions recognized under IAS 37	2,815	2,973	3,051
Provisions for off-balance sheet financial instruments[1]	78	76	33
Provisions for other credit lines[1]	36	35	0
Total provisions	2,930	3,084	3,084

1 Provisions recognized in 2018 relate to exposures in the scope of the expected credit loss requirements of IFRS 9. Refer to Notes 8 and 18 for more information. 2017 provisions for off-balance sheet financial instruments relate to loss provisions recognized under IAS 37.

The following table presents additional information for provisions recognized under IAS 37.

CHF million	Operational risks[1]	Litigation, regulatory and similar matters[2]	Restructuring	Real estate	Employee benefits[5]	Other	Total
Balance as of 31 December 2017	43	2,444	294	125	55	89	3,051
Balance as of 30 June 2018	41	2,442	232	123	53	81	2,973
Increase in provisions recognized in the income statement	5	76	23	1	2	17	124
Release of provisions recognized in the income statement	0	(72)	(12)	(1)	(2)	0	(88)
Provisions used in conformity with designated purpose	(4)	(109)	(36)	(6)	0	(9)	(164)
Capitalized reinstatement costs	0	0	0	(1)	0	0	(1)
Foreign currency translation / unwind of discount	0	(24)	(2)	(1)	(1)	0	(28)
Balance as of 30 September 2018	42	2,312	205[3]	115[4]	52	89	2,815

1 Comprises provisions for losses resulting from security risks and transaction processing risks. 2 Comprises provisions for losses resulting from legal, liability and compliance risks. 3 Primarily consists of personnel-related restructuring provisions of CHF 37 million as of 30 September 2018 (30 June 2018: CHF 44 million; 31 December 2017: CHF 54 million) and provisions for onerous lease contracts of CHF 164 million as of 30 September 2018 (30 June 2018: CHF 183 million; 31 December 2017: CHF 235 million). 4 Consists of reinstatement costs for leasehold improvements of CHF 79 million as of 30 September 2018 (30 June 2018: CHF 84 million; 31 December 2017: CHF 86 million) and provisions for onerous lease contracts of CHF 36 million as of 30 September 2018 (30 June 2018: CHF 39 million; 31 December 2017: CHF 39 million). 5 Includes provisions for sabbatical and anniversary awards.

Restructuring provisions primarily relate to onerous lease contracts and severance payments. The use of onerous lease provisions is driven by the maturities of the underlying lease contracts. Severance-related provisions are used within a short time period, usually within six months, but potential changes in amount may be triggered when natural staff attrition reduces the number of people affected by a restructuring and therefore the estimated costs.

Information on provisions and contingent liabilities in respect of litigation, regulatory and similar matters, as a class, is included in Note 14b. There are no material contingent liabilities associated with the other classes of provisions.

b) Litigation, regulatory and similar matters

UBS operates in a legal and regulatory environment that exposes it to significant litigation and similar risks arising from disputes and regulatory proceedings. As a result, UBS (which for purposes of this Note may refer to UBS AG and / or one or more of its subsidiaries, as applicable) is involved in various disputes and legal proceedings, including litigation, arbitration, and regulatory and criminal investigations.

Such matters are subject to many uncertainties, and the outcome and the timing of resolution are often difficult to predict, particularly in the earlier stages of a case. There are also situations where UBS may enter into a settlement agreement. This may occur in order to avoid the expense, management distraction or reputational implications of continuing to contest liability, even for those matters for which UBS believes it should be exonerated. The uncertainties inherent in all such matters affect the amount and timing of any potential outflows for both matters with respect to which provisions have been established and other contingent liabilities. UBS makes provisions for such matters brought against it when, in the opinion of management after seeking legal advice, it is more likely than not that UBS has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required, and the amount can be reliably estimated. Where these factors are otherwise satisfied, a provision may be established for claims that have not yet been asserted against UBS, but are nevertheless expected to be, based on UBS's experience with similar asserted claims. If any of those conditions is not met, such matters result in contingent liabilities. If the amount of an obligation cannot be reliably estimated, a liability exists that is not recognized even if an outflow of resources is probable. Accordingly, no provision is established even if the potential outflow of resources with respect to such matters could be significant.

Specific litigation, regulatory and other matters are described below, including all such matters that management considers to be material and others that management believes to be of significance due to potential financial, reputational and other effects. The amount of damages claimed, the size of a transaction or other information is provided where available and appropriate in order to assist users in considering the magnitude of potential exposures.

Note 14 Provisions and contingent liabilities (continued)

In the case of certain matters below, we state that we have established a provision, and for the other matters, we make no such statement. When we make this statement and we expect disclosure of the amount of a provision to prejudice seriously our position with other parties in the matter because it would reveal what UBS believes to be the probable and reliably estimable outflow, we do not disclose that amount. In some cases we are subject to confidentiality obligations that preclude such disclosure. With respect to the matters for which we do not state whether we have established a provision, either (a) we have not established a provision, in which case the matter is treated as a contingent liability under the applicable accounting standard, or (b) we have established a provision but expect disclosure of that fact to prejudice seriously our position with other parties in the matter because it would reveal the fact that UBS believes an outflow of resources to be probable and reliably estimable.

With respect to certain litigation, regulatory and similar matters for which we have established provisions, we are able to estimate the expected timing of outflows. However, the aggregate amount of the expected outflows for those matters for which we are able to estimate expected timing is immaterial relative to our current and expected levels of liquidity over the relevant time periods.

The aggregate amount provisioned for litigation, regulatory and similar matters as a class is disclosed in the "Provisions" table in Note 14a above. It is not practicable to provide an aggregate estimate of liability for our litigation, regulatory and similar matters as a class of contingent liabilities. Doing so would require us to provide speculative legal assessments as to claims and proceedings that involve unique fact patterns or novel legal theories, that have not yet been initiated or are at early stages of adjudication, or as to which alleged damages have not been quantified by the claimants. Although we therefore cannot provide a numerical estimate of the future losses that could arise from litigation, regulatory and similar matters, we believe that the aggregate amount of possible future losses from this class that are more than remote substantially exceeds the level of current provisions. Litigation, regulatory and similar matters may also result in non-monetary penalties and consequences. For example, the Non-Prosecution Agreement (NPA) described in item 5 of this Note, which we entered into with the US Department of Justice (DOJ), Criminal Division, Fraud Section in connection with our submissions of benchmark interest rates, including, among others, the British Bankers' Association London Interbank Offered Rate (LIBOR), was terminated by the DOJ based on its determination that we had committed a US crime in relation to foreign exchange matters. As a consequence, UBS AG pleaded guilty to one count of wire fraud for conduct in the LIBOR matter, paid a fine and is subject to probation through January 2020. A guilty plea to, or conviction of, a crime could have material consequences for UBS. Resolution of regulatory proceedings may require us to obtain waivers of regulatory disqualifications to maintain certain operations, may entitle regulatory authorities to limit, suspend or terminate licenses and regulatory authorizations, and may permit financial market utilities to limit, suspend or terminate our participation in such utilities. Failure to obtain such waivers, or any limitation, suspension or termination of licenses, authorizations or participations, could have material consequences for UBS.

The risk of loss associated with litigation, regulatory and similar matters is a component of operational risk for purposes of determining our capital requirements. Information concerning our capital requirements and the calculation of operational risk for this purpose is included in the "Capital management" section of the UBS Group third quarter 2018 report.

Provisions for litigation, regulatory and similar matters by business division and Corporate Center unit[1]

CHF million	Global Wealth Management	Personal & Corporate Banking	Asset Management	Investment Bank	CC – Services	CC – Group ALM	CC – Non-core and Legacy Portfolio	UBS
Balance as of 31 December 2017	555	79	1	345	240	0	1,224	2,444
Balance as of 30 June 2018	567	75	0	333	216	0	1,251	2,442
Increase in provisions recognized in the income statement	31	0	0	11	30	0	4	76
Release of provisions recognized in the income statement	(3)	0	0	(68)	(1)	0	0	(72)
Provisions used in conformity with designated purpose	(48)	0	0	0	0	0	(60)	(109)
Foreign currency translation / unwind of discount	(6)	0	0	(3)	0	0	(13)	(24)
Balance as of 30 September 2018	541	75	0	272	244	0	1,180	2,312

1 Provisions, if any, for the matters described in this Note are recorded in Global Wealth Management (item 3 and item 4), the Investment Bank (item 7) and Corporate Center – Non-core and Legacy Portfolio (item 2). Provisions, if any, for the matters described in items 1 and 6 of this Note are allocated between Global Wealth Management and Personal & Corporate Banking, and provisions, if any, for the matters described in this Note in item 5 are allocated between the Investment Bank, Corporate Center – Services and Corporate Center – Non-core and Legacy Portfolio.

Note 14 Provisions and contingent liabilities (continued)

1. Inquiries regarding cross-border wealth management businesses

Tax and regulatory authorities in a number of countries have made inquiries, served requests for information or examined employees located in their respective jurisdictions relating to the cross-border wealth management services provided by UBS and other financial institutions. It is possible that the implementation of automatic tax information exchange and other measures relating to cross-border provision of financial services could give rise to further inquiries in the future. UBS has received disclosure orders from the Swiss Federal Tax Administration (FTA) to transfer information based on requests for international administrative assistance in tax matters. The requests concern a number of UBS account numbers pertaining to current and former clients and are based on data from 2006 and 2008. UBS has taken steps to inform affected clients about the administrative assistance proceedings and their procedural rights, including the right to appeal. The requests are based on data received from the German authorities, who seized certain data related to UBS clients booked in Switzerland during their investigations and have apparently shared this data with other European countries. UBS expects additional countries to file similar requests.

The Swiss Federal Administrative Court ruled in 2016 that, in the administrative assistance proceedings related to a French bulk request, UBS has the right to appeal all final FTA client data disclosure orders. On 30 July 2018, the Swiss Federal Administrative Court granted UBS's appeal by holding the French administrative assistance request inadmissible. The FTA filed a final appeal with the Swiss Federal Supreme Court.

Since 2013, UBS (France) S.A., UBS AG and certain former employees have been under investigation in France for alleged complicity in having illicitly solicited clients on French territory, regarding the laundering of proceeds of tax fraud, and of banking and financial solicitation by unauthorized persons. In connection with this investigation, the investigating judges ordered UBS AG to provide bail ("*caution*") of EUR 1.1 billion and UBS (France) S.A. to post bail of EUR 40 million, which was reduced on appeal to EUR 10 million.

In February 2016, the investigating judges notified UBS AG and UBS (France) S.A. that they have closed their investigation. In July 2016, UBS AG and UBS (France) S.A. received the National Financial Prosecutor's recommendation ("*réquisitoire*"). In March 2017, the investigating judges issued the trial order ("*ordonnance de renvoi*") that charges UBS AG and UBS (France) S.A., as well as various former employees, with illicit solicitation of clients on French territory and with participation in the laundering of the proceeds of tax fraud, and that transfers the case to court. The trial started on 8 October 2018 and is scheduled to last until 15 November 2018.

In 2016, UBS was notified by the Belgian investigating judge that it is under formal investigation ("*inculpé*") regarding the laundering of proceeds of tax fraud, of banking and financial solicitation by unauthorized persons, and of serious tax fraud.

UBS has, and reportedly numerous other financial institutions have, received inquiries from authorities concerning accounts relating to the Fédération Internationale de Football Association (FIFA) and other constituent soccer associations and related persons and entities. UBS is cooperating with authorities in these inquiries.

Our balance sheet at 30 September 2018 reflected provisions with respect to matters described in this item 1 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

2. Claims related to sales of residential mortgage-backed securities and mortgages

From 2002 through 2007, prior to the crisis in the US residential loan market, UBS was a substantial issuer and underwriter of US residential mortgage-backed securities (RMBS) and was a purchaser and seller of US residential mortgages. A subsidiary of UBS, UBS Real Estate Securities Inc. (UBS RESI), acquired pools of residential mortgage loans from originators and (through an affiliate) deposited them into securitization trusts. In this manner, from 2004 through 2007, UBS RESI sponsored approximately USD 80 billion in RMBS, based on the original principal balances of the securities issued.

UBS RESI also sold pools of loans acquired from originators to third-party purchasers. These whole loan sales during the period 2004 through 2007 totaled approximately USD 19 billion in original principal balance.

UBS was not a significant originator of US residential loans. A branch of UBS originated approximately USD 1.5 billion in US residential mortgage loans during the period in which it was active from 2006 to 2008, and securitized less than half of these loans.

Note 14 Provisions and contingent liabilities (continued)

Lawsuits related to contractual representations and warranties concerning mortgages and RMBS: When UBS acted as an RMBS sponsor or mortgage seller, it generally made certain representations relating to the characteristics of the underlying loans. In the event of a material breach of these representations, UBS was in certain circumstances contractually obligated to repurchase the loans to which the representations related or to indemnify certain parties against losses. In 2012, certain RMBS trusts filed an action (Trustee Suit) in the US District Court for the Southern District of New York (SDNY) seeking to enforce UBS RESI's obligation to repurchase loans in the collateral pools for three RMBS securitizations issued and underwritten by UBS with an original principal balance of approximately USD 2 billion. In July 2018, UBS and the trustee entered into an agreement under which UBS will pay USD 850 million to resolve this matter. A significant portion of this amount will be borne by other parties that indemnified UBS. The settlement remains subject to approval by the court and proceedings to determine how the settlement funds will be distributed to RMBS holders. After giving effect to this settlement, UBS considers claims relating to substantially all loan repurchase demands to be resolved, and believes that new demands to repurchase US residential mortgage loans are time-barred under a decision rendered by the New York Court of Appeals.

Mortgage-related regulatory matters: In 2014, UBS received a subpoena from the US Attorney's Office for the Eastern District of New York issued pursuant to the Financial Institutions Reform, Recovery and Enforcement Act of 1989 (FIRREA), which seeks documents and information related to UBS's RMBS business from 2005 through 2007. In 2015, the Eastern District of New York identified a number of transactions that are the focus of their inquiry, and subsequently provided a revised list of transactions. UBS has provided information in response to this subpoena. UBS has also responded to inquiries from both the Special Inspector General for the Troubled Asset Relief Program (SIGTARP) (who is working in conjunction with the US Attorney's Office for Connecticut and the DOJ) and the US Securities and Exchange Commission (SEC) relating to trading practices in connection with purchases and sales of mortgage-backed securities in the secondary market from 2009 through 2014. UBS is cooperating with the authorities in these matters.

Our balance sheet at 30 September 2018 reflected a provision with respect to matters described in this item 2 in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of this matter cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

3. Madoff

In relation to the Bernard L. Madoff Investment Securities LLC (BMIS) investment fraud, UBS AG, UBS (Luxembourg) S.A. (now UBS Europe SE, Luxembourg branch) and certain other UBS subsidiaries have been subject to inquiries by a number of regulators, including the Swiss Financial Market Supervisory Authority (FINMA) and the Luxembourg Commission de Surveillance du Secteur Financier (CSSF). Those inquiries concerned two third-party funds established under Luxembourg law, substantially all assets of which were with BMIS, as well as certain funds established in offshore jurisdictions with either direct or indirect exposure to BMIS. These funds faced severe losses, and the Luxembourg funds are in liquidation. The documentation establishing both funds identifies UBS entities in various roles, including custodian, administrator, manager, distributor and promoter, and indicates that UBS employees serve as board members.

In 2009 and 2010, the liquidators of the two Luxembourg funds filed claims against UBS entities, non-UBS entities and certain individuals, including current and former UBS employees, seeking amounts aggregating approximately EUR 2.1 billion, which includes amounts that the funds may be held liable to pay the trustee for the liquidation of BMIS (BMIS Trustee).

A large number of alleged beneficiaries have filed claims against UBS entities (and non-UBS entities) for purported losses relating to the Madoff fraud. The majority of these cases have been filed in Luxembourg, where decisions that the claims in eight test cases were inadmissible have been affirmed by the Luxembourg Court of Appeal, and the Luxembourg Supreme Court has dismissed a further appeal in one of the test cases.

In the US, the BMIS Trustee filed claims against UBS entities, among others, in relation to the two Luxembourg funds and one of the offshore funds. The total amount claimed against all defendants in these actions was not less than USD 2 billion. In 2014, the US Supreme Court rejected the BMIS Trustee's motion for leave to appeal decisions dismissing all claims except those for the recovery of fraudulent conveyances and preference payments. In 2016, the Bankruptcy Court dismissed the remaining claims against the UBS entities. The BMIS Trustee appealed.

Note 14 Provisions and contingent liabilities (continued)

4. Puerto Rico

Declines since 2013 in the market prices of Puerto Rico municipal bonds and of closed-end funds (funds) that are sole-managed and co-managed by UBS Trust Company of Puerto Rico and distributed by UBS Financial Services Incorporated of Puerto Rico (UBS PR) have led to multiple regulatory inquiries, as well as customer complaints and arbitrations with aggregate claimed damages of USD 2.8 billion, of which claims with aggregate claimed damages of USD 1.7 billion have been resolved through settlements, arbitration or withdrawal of the claim. The claims have been filed by clients in Puerto Rico who own the funds or Puerto Rico municipal bonds and / or who used their UBS account assets as collateral for UBS non-purpose loans; customer complaint and arbitration allegations include fraud, misrepresentation and unsuitability of the funds and of the loans.

A shareholder derivative action was filed in 2014 against various UBS entities and current and certain former directors of the funds, alleging hundreds of millions of US dollars in losses in the funds. In 2015, defendants' motion to dismiss was denied and a request for permission to appeal that ruling was denied by the Puerto Rico Supreme Court. In 2014, a federal class action complaint also was filed against various UBS entities, certain members of UBS PR senior management and the co-manager of certain of the funds, seeking damages for investor losses in the funds during the period from May 2008 through May 2014. In September 2018 the court denied plaintiffs' motion for class certification.

In 2015, a class action was filed in Puerto Rico state court against UBS PR seeking equitable relief in the form of a stay of any effort by UBS PR to collect on non-purpose loans it acquired from UBS Bank USA based on plaintiffs' allegation that the loans are not valid. The trial court granted UBS PR's motion for summary judgment and dismissed the action.

In 2014 and 2015, UBS entered into settlements with the Office of the Commissioner of Financial Institutions for the Commonwealth of Puerto Rico (OCFI), the SEC and the Financial Industry Regulatory Authority (FINRA) in relation to their examination of UBS's operations. We also understand that the DOJ is conducting a criminal inquiry into the impermissible reinvestment of non-purpose loan proceeds. We are cooperating with the authorities in this inquiry.

In 2011, a purported derivative action was filed on behalf of the Employee Retirement System of the Commonwealth of Puerto Rico (System) against over 40 defendants, including UBS PR, which was named in connection with its underwriting and consulting services. Plaintiffs alleged that defendants violated their purported fiduciary duties and contractual obligations in connection with the issuance and underwriting of USD 3 billion of bonds by the System in 2008 and sought damages of over USD 800 million. In 2016, the court granted the System's request to join the action as a plaintiff, but ordered that plaintiffs must file an amended complaint. In 2017, the court denied defendants' motion to dismiss the amended complaint.

Beginning in 2015, and continuing through 2017, certain agencies and public corporations of the Commonwealth of Puerto Rico (Commonwealth) defaulted on certain interest payments on Puerto Rico bonds. The funds hold significant amounts of those bonds and the defaults on interest payments have had, and are expected to continue to have, an adverse effect on dividends from the funds. Executive orders of the Governor of Puerto Rico that have diverted funds to pay for essential services instead of debt payments and stayed any action to enforce creditors' rights on the Puerto Rico bonds continue to be in effect. In 2016, US federal legislation created an oversight board with power to oversee Puerto Rico's finances and to restructure its debt. The oversight board has imposed a stay on the exercise of creditors' rights. In 2017, the oversight board placed certain of the bonds into a bankruptcy-like proceeding under the supervision of a Federal District Judge. These events, further defaults, any further legislative action to create a legal means of restructuring Commonwealth obligations or to impose additional oversight on the Commonwealth's finances, or any restructuring of the Commonwealth's obligations may increase the number of claims against UBS concerning Puerto Rico securities, as well as potential damages sought.

Our balance sheet at 30 September 2018 reflected provisions with respect to matters described in this item 4 in amounts that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provisions that we have recognized.

Note 14 Provisions and contingent liabilities (continued)

5. Foreign exchange, LIBOR and benchmark rates, and other trading practices

Foreign exchange-related regulatory matters: Beginning in 2013 numerous authorities commenced investigations concerning possible manipulation of foreign exchange markets and precious metals prices. In 2014 and 2015, UBS reached settlements with the UK Financial Conduct Authority (FCA) and the US Commodity Futures Trading Commission (CFTC) in connection with their foreign exchange investigations, FINMA issued an order concluding its formal proceedings relating to UBS's foreign exchange and precious metals businesses, and the Board of Governors of the Federal Reserve System (Federal Reserve Board) and the Connecticut Department of Banking issued a Cease and Desist Order and assessed monetary penalties against UBS AG. In 2015, the DOJ's Criminal Division (Criminal Division) terminated the 2012 Non-Prosecution Agreement (NPA) with UBS AG related to UBS's submissions of benchmark interest rates and UBS AG pleaded guilty to one count of wire fraud, paid a fine and is subject to probation through January 2020. UBS has ongoing obligations to cooperate with these authorities and to undertake certain remediation measures. UBS has also been granted conditional immunity by the Antitrust Division of the DOJ (Antitrust Division) and by authorities in other jurisdictions in connection with potential competition law violations relating to foreign exchange and precious metals businesses. Investigations relating to foreign exchange and precious metals matters by certain authorities remain ongoing notwithstanding these resolutions.

Foreign exchange-related civil litigation: Putative class actions have been filed since 2013 in US federal courts and in other jurisdictions against UBS and other banks on behalf of putative classes of persons who engaged in foreign currency transactions with any of the defendant banks. UBS has entered into a settlement agreement that would resolve US federal court class actions relating to foreign currency transactions with the defendant banks and persons who transacted in foreign exchange futures contracts and options on such futures. The settlement agreement, which has been approved by the court, requires, among other things, that UBS pay an aggregate of USD 141 million and provide cooperation to the settlement classes.

A putative class action has been filed in federal court in New York against UBS and other banks on behalf of participants, beneficiaries and named fiduciaries of plans qualified under the Employee Retirement Income Security Act of 1974 (ERISA) for whom a defendant bank provided foreign exchange transactional services or authorized or permitted the execution of any foreign currency exchange transactional services involving such plan's assets. The complaint asserts claims under ERISA. In July 2018, the Second Circuit affirmed the dismissal of the case with prejudice.

In 2015, a putative class action was filed in federal court against UBS and numerous other banks on behalf of persons and businesses in the US who directly purchased foreign currency from the defendants and alleged co-conspirators for their own end use. In March 2017, the court granted UBS's (and the other banks') motions to dismiss the complaint. The plaintiffs filed an amended complaint in August 2017. In March 2018, the court denied the defendants' motions to dismiss the amended complaint.

In 2016, a putative class action was filed in federal court in New York against UBS and numerous other banks on behalf of persons and entities who had indirectly purchased foreign exchange instruments from a defendant or co-conspirator in the US. The complaint asserts claims under federal and state antitrust laws. In response to defendants' motion to dismiss, plaintiffs agreed to dismiss their complaint.

In 2017, two new putative class actions were filed in federal court in New York against UBS and numerous other banks on behalf of different proposed classes of indirect purchasers of currency, and a consolidated complaint was filed in June 2017. In March 2018, the court dismissed the consolidated complaint. Plaintiffs have filed a motion seeking leave to file an amended complaint.

Putative class actions were also filed against UBS and other banks in federal court in New York and other jurisdictions on behalf of putative classes of persons who had bought or sold physical precious metals and various precious metal products and derivatives. The complaints in these lawsuits asserted claims under the antitrust laws and the Commodity Exchange Act (CEA), and other claims. In July 2018, the court in New York granted UBS's motions to dismiss amended complaints in the putative class actions relating to gold and silver. In 2017, the court granted UBS's motion to dismiss the platinum and palladium action. Plaintiffs in the platinum and palladium action subsequently filed an amended complaint that did not allege claims against UBS.

Note 14 Provisions and contingent liabilities (continued)

LIBOR and other benchmark-related regulatory matters: Numerous government agencies, including the SEC, the CFTC, the DOJ, the FCA, the UK Serious Fraud Office (SFO), the Monetary Authority of Singapore (MAS), the Hong Kong Monetary Authority (HKMA), FINMA, various state attorneys general in the US and competition authorities in various jurisdictions, have conducted or are continuing to conduct investigations regarding potential improper attempts by UBS, among others, to manipulate LIBOR and other benchmark rates at certain times. In 2012, UBS reached settlements relating to benchmark interest rates with the UK Financial Services Authority (FSA), the CFTC and the Criminal Division of the DOJ, and FINMA issued an order in its proceedings with respect to UBS relating to benchmark interest rates. In addition, UBS entered into settlements with the European Commission (EC) and with the Swiss Competition Commission (WEKO) regarding its investigation of bid-ask spreads in connection with Swiss franc interest rate derivatives. UBS has ongoing obligations to cooperate with the authorities with whom we have reached resolutions and to undertake certain remediation measures with respect to benchmark interest rate submissions. UBS has been granted conditional leniency or conditional immunity from authorities in certain jurisdictions, including the Antitrust Division of the DOJ and WEKO, in connection with potential antitrust or competition law violations related to certain rates. However, UBS has not reached a final settlement with WEKO as the Secretariat of WEKO has asserted that UBS does not qualify for full immunity. Investigations by certain governmental authorities remain ongoing notwithstanding these resolutions.

LIBOR and other benchmark-related civil litigation: A number of putative class actions and other actions are pending in the federal courts in New York against UBS and numerous other banks on behalf of parties who transacted in certain interest rate benchmark-based derivatives. Also pending in the US and in other jurisdictions are a number of other actions asserting losses related to various products whose interest rates were linked to LIBOR and other benchmarks, including adjustable rate mortgages, preferred and debt securities, bonds pledged as collateral, loans, depository accounts, investments and other interest-bearing instruments. The complaints allege manipulation, through various means, of certain benchmark interest rates, including USD LIBOR, Euroyen TIBOR, Yen LIBOR, EURIBOR, CHF LIBOR, GBP LIBOR, USD and SGD SIBOR and SOR, Australian BBSW and USD ISDAFIX, and seek unspecified compensatory and other damages under varying legal theories.

USD LIBOR class and individual actions in the US: In 2013 and 2015, the district court in the USD LIBOR actions dismissed, in whole or in part, certain plaintiffs' antitrust claims, federal racketeering claims, CEA claims, and state common law claims. Although the Second Circuit vacated the district court's judgment dismissing antitrust claims, the district court again dismissed antitrust claims against UBS in 2016. Certain plaintiffs have appealed that decision to the Second Circuit. Separately, in 2018, the Second Circuit reversed in part the district court's 2015 decision dismissing certain individual plaintiffs' claims. UBS entered into an agreement in 2016 with representatives of a class of bondholders to settle their USD LIBOR class action. The agreement has received preliminary court approval and remains subject to final approval. In 2018, the district court denied plaintiffs' motions for class certification in the USD class actions for claims pending against UBS, and plaintiffs have sought permission to appeal that ruling to the Second Circuit. In July 2018, the Second Circuit denied the petition to appeal of the class of USD lenders.

Other benchmark class actions and ISDAFIX class action in the US: In 2014, the court in one of the Euroyen TIBOR lawsuits dismissed certain of the plaintiff's claims, including a federal antitrust claim, for lack of standing. In 2015, this court dismissed the plaintiff's federal racketeering claims on the same basis and affirmed its previous dismissal of the plaintiff's antitrust claims against UBS. In 2017, this court also dismissed the other Yen LIBOR / Euroyen TIBOR action in its entirety on standing grounds, as did the court in the CHF LIBOR action. Also in 2017, the courts in the EURIBOR and the SIBOR / SOR lawsuits dismissed the cases as to UBS and certain other foreign defendants for lack of personal jurisdiction. Plaintiffs in the CHF LIBOR and SIBOR / SOR actions have filed amended complaints following the dismissals, which UBS and other defendants have moved to dismiss. UBS and other defendants have also moved to dismiss the GBP LIBOR and Australian BBSW actions. In 2017, UBS agreed to pay USD 14 million to resolve putative class actions filed in federal court in New York and New Jersey against UBS and other financial institutions on behalf of parties who entered into interest rate derivative transactions linked to ISDAFIX. The final settlement was approved in June 2018.

Government bonds: Putative class actions have been filed since 2015 in US federal courts against UBS and other banks on behalf of persons who participated in markets for US Treasury securities since 2007. A consolidated complaint was filed in 2017 in the SDNY alleging that the banks colluded with respect to, and manipulated prices of, US Treasury securities sold at auction and in the secondary market and asserting claims under the antitrust laws and for unjust enrichment. Defendants' motions to dismiss the consolidated complaint are pending.

Following filing of these complaints, UBS and reportedly other banks are responding to investigations and requests for information from various authorities regarding US Treasury securities and other government bond trading practices. As a result of its review to date, UBS has taken appropriate action.

Note 14 Provisions and contingent liabilities (continued)

With respect to additional matters and jurisdictions not encompassed by the settlements and orders referred to above, our balance sheet at 30 September 2018 reflected a provision in an amount that UBS believes to be appropriate under the applicable accounting standard. As in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

6. Swiss retrocessions

The Federal Supreme Court of Switzerland ruled in 2012, in a test case against UBS, that distribution fees paid to a firm for distributing third-party and intra-group investment funds and structured products must be disclosed and surrendered to clients who have entered into a discretionary mandate agreement with the firm, absent a valid waiver.

FINMA has issued a supervisory note to all Swiss banks in response to the Supreme Court decision. UBS has met the FINMA requirements and has notified all potentially affected clients.

The Supreme Court decision has resulted, and may continue to result, in a number of client requests for UBS to disclose and potentially surrender retrocessions. Client requests are assessed on a case-by-case basis. Considerations taken into account when assessing these cases include, among other things, the existence of a discretionary mandate and whether or not the client documentation contained a valid waiver with respect to distribution fees.

Our balance sheet at 30 September 2018 reflected a provision with respect to matters described in this item 6 in an amount that UBS believes to be appropriate under the applicable accounting standard. The ultimate exposure will depend on client requests and the resolution thereof, factors that are difficult to predict and assess. Hence, as in the case of other matters for which we have established provisions, the future outflow of resources in respect of such matters cannot be determined with certainty based on currently available information and accordingly may ultimately prove to be substantially greater (or may be less) than the provision that we have recognized.

7. Investigation of UBS's role in initial public offerings in Hong Kong

The Hong Kong Securities and Futures Commission (SFC) has been conducting investigations into UBS's role as a sponsor of certain initial public offerings listed on the Hong Kong Stock Exchange. The SFC has previously indicated that it intended to take enforcement action against UBS and certain employees in relation to certain of these offerings. In March 2018, the SFC issued a decision notice in relation to one of the offerings under investigation. The notice provides for a fine of HKD 119 million and a suspension of UBS Securities Hong Kong Limited's ability to act as a sponsor for Hong Kong-listed initial public offerings for 18 months. UBS has appealed the decision.

Note 15 Guarantees, commitments and forward starting transactions

The table below presents the maximum irrevocable amount of guarantees, commitments and forward starting transactions.

CHF million	30.9.18				30.6.18				31.12.17			
	Gross		Sub-partici-pations	Net	Gross		Sub-partici-pations	Net	Gross		Sub-partici-pations	Net
	Measured at fair value	Not measured at fair value			Measured at fair value	Not measured at fair value			Measured at fair value	Not measured at fair value		
Total guarantees	1,605	17,133	(2,742)	15,996	1,646	18,529	(2,976)	17,199	1,620	17,234	(2,867)	15,987
Loan commitments	4,126	29,659	(624)	33,160	8,558	31,009	(662)	38,905	7,754	31,315	(1,074)	37,995
Forward starting transactions[1]												
Reverse repurchase agreements	19,803	3,814			12,014	1,508				12,683		
Securities borrowing agreements		19				38				23		
Repurchase agreements	16,098	1,000			9,522	1,346				8,187		

1 Cash to be paid in the future by either UBS or the counterparty. Upon adoption of IFRS 9 on 1 January 2018, certain securities financing transactions are presented as measured at fair value through profit or loss. Refer to Note 18 for more information.

Note 16 Events after the reporting period

Changes to functional and presentation currencies

Effective 1 October 2018, and as required by IAS 21, The Effects of Changes in Foreign Exchange Rates, the functional currency of UBS Group AG and UBS AG's Head Office in Switzerland has changed from Swiss francs to US dollars, and the functional currency of UBS AG's London Branch operations has changed from British pounds to US dollars. In line with these changes, the presentation currency of UBS Group AG's and UBS AG's consolidated financial statements will change from Swiss francs to US dollars. Prior periods will be restated for this presentation currency change, with assets, liabilities and total equity converted to US dollars at historic closing exchange rates prevailing on the respective balance sheet dates, and income and expenses translated at the respective average rates prevailing for the relevant periods. There will be no material changes to prior-period profit and loss or total equity attributable to UBS AG shareholders as a result of this change.

→ **Refer to the "Recent developments" section of the UBS Group AG third quarter 2018 report for more information**

Changes in Corporate Center cost allocations to business divisions and Corporate Center segment reporting

Effective 1 January 2019, UBS AG will no longer separately assess the performance of Corporate Center – Non-core and Legacy Portfolio as a result of its substantially reduced size and resource consumption. Following this change, and in line with IFRS 8, Operating Segments, UBS will include the results of Corporate Center – Non-core and Legacy Portfolio with Corporate Center – Services. In addition, in order to align Group and divisional performance, UBS AG will adjust its methodology for allocating Corporate Center expenses, funding costs and balance sheet to the business divisions. Prior-period information will be restated.

→ **Refer to the "Recent developments" section of the UBS Group AG third quarter 2018 report for more information**

Increase in stake in UBS Securities China

UBS AG submitted a preliminary application in May 2018 to increase its shareholding in UBS Securities Co. Limited (UBSS) from 24.99% to 51%. The transaction is subject to completion of a share purchase from existing shareholders and regulatory approval. If UBS AG acquires majority ownership, UBS AG is expected to consolidate UBSS and remeasure its current 24.99% holding at fair value, resulting in an estimated loss of CHF 0.3 billion if the disclosed offer prices are accepted.

→ **Refer to the "Recent developments" section of the UBS Group AG third quarter 2018 report for more information**

Worldline to acquire SIX Payment Services

On 15 May 2018, SIX and Worldline signed a binding agreement to enter into a strategic partnership in the cards business. Under the agreement, SIX will transfer its existing cards business to Worldline and receive a 27% stake in Worldline. The transaction is currently expected to close in the fourth quarter of 2018. When the transaction closes, UBS AG expects to recognize in its income statement a share of the gain recognized by SIX, proportional to UBS AG's 17.31% investment in SIX, which is accounted for as an Investment in associate. The gain is estimated at CHF 0.4 billion subject to Worldline's share price upon closing.

→ **Refer to the "Recent developments" section of the UBS Group AG third quarter 2018 report for more information**

Note 17 Currency translation rates

The following table shows the rates of the main currencies used to translate the financial information of UBS AG's foreign operations into Swiss francs.

	Spot rate				Average rate[1]				
	As of				For the quarter ended			Year-to-date	
	30.9.18	30.6.18	31.12.17	30.9.17	30.9.18	30.6.18	30.9.17	30.9.18	30.9.17
1 USD	0.98	0.99	0.97	0.97	0.98	0.99	0.97	0.97	0.98
1 EUR	1.14	1.16	1.17	1.14	1.14	1.17	1.14	1.16	1.10
1 GBP	1.28	1.31	1.32	1.30	1.28	1.33	1.27	1.31	1.26
100 JPY	0.86	0.89	0.86	0.86	0.87	0.90	0.87	0.88	0.88

1 Monthly income statement items of foreign operations with a functional currency other than the Swiss franc are translated with month-end rates into Swiss francs. Disclosed average rates for a quarter represent an average of three month-end rates, weighted according to the income and expense volumes of all foreign operations of UBS AG with the same functional currency for each month. Weighted average rates for individual business divisions may deviate from the weighted average rates for UBS AG.

Note 18 Transition to IFRS 9 as of 1 January 2018

18.1 Update to significant accounting policies disclosed in Note 1a) to the Financial Statements 2017 related to IFRS 9

The adoption of IFRS 9, *Financial Instruments* (IFRS 9) resulted in changes to UBS AG's accounting policies applicable from 1 January 2018. Accounting polices set out below replace item 3) b, c, g, h, i, l, o and p in Note 1a) in the UBS AG consolidated annual Financial Statements for the year ended 31 December 2017.

As permitted by the transition provisions of IFRS 9 UBS AG elected not to restate comparative period information, and the accounting policies as set out in Note 1 in the UBS AG consolidated annual Financial Statements for the period ended 31 December 2017 apply to comparative periods.

Update to Note 1a) 3) Financial instruments

b. Classification, measurement and presentation

On initial recognition, financial assets are classified as measured at amortized cost, fair value through other comprehensive income (FVOCI) or fair value through profit or loss (FVTPL).

A debt instrument is measured at amortized cost if it meets the following conditions:

- it is held within a business model that has an objective to hold financial assets to collect contractual cash flows; and
- the contractual terms of the financial asset result in cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

A debt instrument is measured at FVOCI if it meets both of the following conditions:

- it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets; and
- the contractual terms of the financial asset result in cash flows that are SPPI.

Equity instruments are accounted for at FVTPL. All other financial assets are measured at FVTPL and consist of held for trading assets, assets mandatorily measured on a fair value basis and derivatives, except to the extent that they are designated in a hedging relationship, in which case the IAS 39 hedge accounting requirements continue to apply.

Business model assessment

UBS AG determines the nature of the business model, for example if the objective is to hold the financial asset and collect the contractual cash flows, by considering the way in which the financial assets are managed to achieve a particular business objective as determined by management.

Financial assets that are held for trading or managed on a fair value basis are measured at FVTPL insofar as the associated business model is neither to hold the financial assets to collect contractual cash flows nor to hold to collect contractual cash flows and sell.

UBS AG originates loans to hold to maturity and to sell or sub-participate to other parties, resulting in a transfer of substantially all the risks and rewards, and derecognition of the loan or portions of it. UBS AG considers the activities of lending to hold and lending to sell or sub-participate as two separate business models, with financial assets within the former considered to be within a business model that has an objective to hold the assets to collect contractual cash flows, and those within the latter included in a trading portfolio. In certain cases, it may not be possible on origination to identify whether loans or portions of loans will be sold or sub-participated and certain loans may be managed on a fair value basis through, for instance, using credit derivatives. These financial assets are mandatorily measured at FVTPL.

Critical accounting estimates and judgments

UBS AG exercises judgment to determine the appropriate level at which to assess its business models. In general the assessment is performed at the product level, e.g., retail and commercial mortgages. In other cases the assessment is carried out at a more granular level, e.g., loan portfolios by region, and, if required, further disaggregation is performed by business strategy. In addition, UBS AG exercises judgment in determining the effect of sales of financial instruments on the business model assessment.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Contractual cash flow characteristics

In assessing whether the contractual cash flows are SPPI, UBS AG considers whether the contractual terms of the financial asset contain a term that could change the timing or amount of contractual cash flows arising over the life of the instrument, which could affect whether the instrument is considered to meet the SPPI criteria.

For example, UBS AG holds portfolios of private mortgage contracts and corporate loans in Personal & Corporate Banking that commonly contain clauses that provide for two-way compensation if prepayment occurs. The amount of compensation paid by or to UBS AG reflects the effect of changes in market interest rates. UBS AG has determined that the inclusion of the change in market interest rates in the compensation amount is reasonable for the early termination of the contract, and therefore results in contractual cash flows that are SPPI.

Critical accounting estimates and judgments

UBS AG applies judgment when considering whether certain contractual features, such as interest rate reset frequency or non-recourse features, significantly affect future cash flows. Furthermore, judgment is required when assessing whether compensation paid or received on early termination of lending arrangements results in cash flows that are not SPPI.

All financial instruments are initially measured at fair value. In the case of financial instruments subsequently measured at amortized cost or FVOCI, the initial fair value is adjusted for directly attributable transaction costs.

After initial recognition, UBS AG classifies, measures and presents its financial assets and liabilities in accordance with IFRS 9 as described in the table on the following pages.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at amortized cost		A debt financial asset is measured at amortized cost if: – it is held in a business model that has an objective to hold assets to collect contractual cash flows, and – the contractual terms give rise to cash flows that are SPPI. This classification includes: – cash and balances at central banks – loans and advances to banks – cash collateral receivable on securities borrowed – receivables on reverse repurchase agreements – cash collateral receivables on derivative instruments – residential and commercial mortgages – corporate loans – secured loans, including Lombard loans, and unsecured loans – loans to financial advisors – debt securities held as high-quality liquid assets (HQLA) – fee and lease receivables.	Measured at amortized cost using the effective interest rate (EIR) method less allowances for expected credit losses (ECL) (refer to items 3c and 3g in this Note for more information). The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses Upfront fees and direct costs relating to loan origination, refinancing or restructuring as well as to loan commitments – when it is probable that UBS AG will enter into a specific lending relationship – are deferred and amortized over the life of the loan using the EIR method. When the financial asset at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amounts arising from exchange-traded derivatives (ETD) and certain over-the-counter (OTC) derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral receivables on derivative instruments.*
Measured at FVOCI	Debt instruments measured at FVOCI	A debt financial asset is measured at FVOCI if: – it is held in a business model whose objective is achieved by both holding assets to collect contractual cash flows and selling the assets, and – the contractual terms give rise to cash flows that are SPPI. This classification primarily includes debt securities and certain asset-backed securities held as HQLA for which the contractual cash flows meet the SPPI conditions.	Measured at fair value with unrealized gains and losses reported in *Other comprehensive income,* net of applicable income taxes, until such investments are derecognized (when sold, collected or otherwise disposed). Upon derecognition, any accumulated balances in *Other comprehensive income* are reclassified to the income statement and reported within *Other income.* The following items are recognized in the income statement: – Interest income, which is accounted for in accordance with item 3c in this Note – ECL and reversals – Foreign exchange translation gains and losses. The amounts recognized in the income statement are determined on the same basis as for financial assets measured at amortized cost.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial assets classification		Significant items included	Measurement and presentation
Measured at FVTPL	Held for trading	Financial assets held for trading include: – all derivatives with a positive replacement value, except those that are designated as effective hedging instruments – other financial assets acquired principally for the purpose of selling or repurchasing in the near term, or that are part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent actual pattern of short-term profit taking. Included in this category are debt instruments (including those in the form of securities, money market paper and traded corporate and bank loans) and equity instruments.	Measured at fair value with changes recognized in profit or loss. Changes in fair value, initial transaction costs and gains and losses realized on disposal or redemption are recognized in *Other net income from fair value changes on financial instruments*, except interest and dividend income on instruments other than derivatives (refer to item 3c in this Note for more information), interest on derivatives designated as hedging instruments in certain types of hedge accounting relationships and forward points on certain long- and short-duration foreign exchange contracts, which are reported in *Net interest income*. Derivative assets are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral receivables on derivative instruments.* The presentation of fair value changes on derivatives that are designated and effective as hedging instruments depends on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information). Financial assets held for trading (other than derivatives) are presented as *Financial assets at fair value held for trading*. Other financial assets mandatorily measured at fair value through profit or loss are presented as *Financial assets at fair value not held for trading*, except for brokerage receivables, which are presented as a separate line item on UBS AG's balance sheet.
	Mandatorily measured at FVTPL – Other	A financial asset is mandatorily measured at FVTPL if: – it is not held in a business model whose objective is to hold assets to collect contractual cash flows or to hold them to collect contractual cash flows and sell, and / or – the contractual terms give rise to cash flows that are not SPPI, and / or – it is not held for trading. The following financial assets are mandatorily measured at FVTPL: – Certain structured loans, certain commercial loans, receivables under reverse repurchase and cash collateral on securities borrowing agreements that are managed on a fair value basis – Loans, managed on a fair value basis and hedged with credit derivatives – Certain debt securities held as HQLA and managed on a fair value basis – Certain investment fund holdings and assets held to hedge delivery obligations related to cash-settled employee compensation plans. These assets represent holdings in investments funds, whereby the contractual cash flows do not meet the SPPI conditions because the entry and exit price is based on the fair value of the fund's assets – Brokerage receivables, for which contractual cash flows do not meet the SPPI conditions due to the aggregate balance being accounted for as a single unit of account, with interest being calculated on the individual components – Auction rate securities, for which contractual cash flows do not meet the SPPI conditions because interest may be reset at rates that contain leverage – Equity instruments – Assets held under unit-linked investment contracts.	

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Financial liabilities classification		Significant items included	Measurement and presentation
Measured at amortized cost		This classification includes: – Demand and time deposits, retail savings / deposits, amounts payable under repurchase agreements, cash collateral on securities lent, non-structured fixed-rate bonds, subordinated debt, certificates of deposit and covered bonds and obligations against funding from UBS Group AG and its subsidiaries – Cash collateral payables on derivative instruments.	Measured at amortized cost using the EIR method. Upfront fees and direct costs relating to the issuance or origination of the liability are deferred and amortized over the life of the liability using the EIR method. When the financial liability at amortized cost is derecognized, the gain or loss is recognized in the income statement. Amortized cost liabilities are presented on the balance sheet primarily as *Amounts due to banks, Customer deposits, Payables from securities financing transactions* , *Debt issued measured at amortized cost* and *Funding from UBS Group AG and its subsidiaries.* Amounts arising from ETD and certain OTC derivatives cleared through central clearing counterparties that are either considered to be daily settled or qualify for netting (refer to "Note 1a) Significant accounting policies" items 3d and 3j in the "Consolidated financial statements" section of the Annual Report 2017 for more information) are presented within *Cash collateral payables on derivative instruments.*
Measured at fair value through profit or loss	Held for trading	Financial liabilities held for trading include: – All derivatives with a negative replacement value (including certain loan commitments) except those that are designated and effective hedging instruments – Obligations to deliver financial instruments, such as debt and equity instruments, that UBS AG has sold to third parties, but does not own (short positions).	Measurement of financial liabilities classified at FVTPL follows the same principles as for financial assets classified at FVTPL, except that the amount of change in the fair value of the financial liability that is attributable to changes in UBS AG's own credit risk is presented in OCI. Financial liabilities measured at FVTPL are presented as *Financial liabilities at fair value held for trading* and *Other financial liabilities designated at fair value*, respectively, except for brokerage payables and debt issued, which are presented as separate sub-totals on UBS AG's balance sheet. Derivative liabilities are generally presented as *Derivative financial instruments*, except those exchange-traded and OTC-cleared derivatives that are considered to be settled on a daily basis or qualify for netting and are presented within *Cash collateral payables on derivative instruments.* Bifurcated embedded derivatives are measured at fair value, but are presented on the same balance sheet line as the host contract measured at amortized cost. Derivatives that are designated and effective as hedging instruments are also measured at fair value. The presentation of fair value changes differs depending on the type of hedge relationship (refer to "Note 1a) Significant accounting policies" item 3k in the "Consolidated financial statements" section of the Annual Report 2017 for more information).
	Designated at FVTPL	UBS AG designated at FVTPL the following financial liabilities: – Issued hybrid debt instruments that primarily include equity-linked, credit-linked and rates-linked bonds or notes – Issued debt instruments managed on a fair value basis – Certain payables under repurchase agreements and cash collateral on securities lending agreements that are managed in conjunction with associated reverse repurchase agreements and cash collateral on securities borrowed – Loan commitments that are hedged predominantly with credit derivatives and those managed on a fair value basis – Amounts due under unit-linked investment contracts whose cash flows are linked to financial assets measured at FVTPL and eliminate an accounting mismatch – Brokerage payables, which arise in conjunction with brokerage receivables and are measured at FVTPL to achieve measurement consistency.	

c. Interest income and expense

Interest income and expense are recognized in the income statement applying the EIR method.

In determining interest income and expense, the EIR is applied to the gross carrying amount of the financial asset (unless the asset is credit-impaired) or the amortized cost of a financial liability, based on estimated future cash flows that take into account all contractual cash flows, except those related to ECL. However, when a financial asset becomes credit-impaired after initial recognition, interest income is determined by applying EIR to the amortized cost of the instrument. Furthermore, for financial assets that were credit-impaired on initial recognition, interest is determined by applying a credit-adjusted EIR to the amortized cost of the instrument.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS AG also presents interest income and expense on financial instruments (excluding derivatives) measured at FVTPL separately from the rest of the fair value changes in the income statement. Interest income or expense on financial instruments measured at amortized cost and financial assets measured at FVOCI are presented separately within *Interest income from financial instruments measured at amortized cost and fair value through other comprehensive income* and *Interest expense from financial instruments measured at amortized cost,* with interest on financial instruments at FVTPL presented in *Interest income (or expense) from financial instruments measured at fair value through profit or loss*. All are part of *Net interest income*.

Interest income from financial instruments measured at fair value through profit or loss includes forward points on certain short- and long-duration foreign exchange contracts and dividend income.

Furthermore, interest income and expense on derivatives designated as hedging instruments in effective hedge relationships are presented consistently with the interest income and expense of the respective hedged item.

→ **Refer to "Note 1a) Significant Accounting Policies" in the "UBS AG consolidated financial statements" section of the Annual Report 2017 for more information**

g. Expected credit losses

Expected credit losses (ECL) are recognized for financial assets measured at amortized cost, financial assets measured at FVOCI, fee and lease receivables, financial guarantees and loan commitments. ECL are also recognized on the undrawn portion of revolving revocable credit lines, which include UBS AG's credit card limits and master credit facilities, which are customary in the Swiss market for corporate and commercial clients. UBS AG refers to both as "other credit lines," with clients allowed to draw down on-demand balances (with the Swiss master credit facilities also allowing for term products) and which can be terminated by UBS AG at any time. Though these other credit lines are revocable, UBS AG is exposed to credit risk because the client has the ability to draw down funds before UBS AG can take credit risk mitigation actions.

Recognition of expected credit losses

ECL represent the difference between contractual cash flows and those UBS AG expects to receive, discounted at the EIR. For loan commitments and other credit facilities in scope of ECL, expected cash shortfalls are determined by considering expected future draw downs.

ECL are recognized on the following basis:

- Maximum 12-month ECL are recognized from initial recognition, reflecting the portion of lifetime cash shortfalls that would result if a default occurs in the 12 months after the reporting date, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 1. For instruments with a remaining maturity of less than 12 months, ECL are determined for this shorter period.
- Lifetime ECL are recognized if a significant increase in credit risk (SICR) is detected subsequent to the instrument's initial recognition, reflecting lifetime cash shortfalls that would result from all possible default events over the expected life of a financial instrument, weighted by the risk of a default occurring. Instruments in this category are referred to as instruments in stage 2. Where an SICR is no longer observed, the instrument will move back to stage 1.
- Lifetime ECL are always recognized for credit-impaired financial instruments, referred to as instruments in stage 3. The IFRS 9 determination of whether an instrument is credit-impaired is based on the occurrence of one or more loss events, with lifetime ECL generally derived by estimating expected cash flows based on a chosen recovery strategy with additional consideration given to forward-looking economic scenarios. Credit-impaired exposures may include positions for which no loss has occurred or no allowance has been recognized, for example, because they are expected to be fully recoverable through the collateral held.
- Changes in lifetime ECL since initial recognition are also recognized for assets that are purchased or originated credit-impaired financial assets (POCI). POCI are initially recognized at fair value with interest income subsequently being recognized based on a credit-adjusted EIR. POCI include financial instruments that are newly recognized following a substantial restructuring and remain a separate category until maturity.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

UBS AG does not apply the low-credit-risk practical expedient that allows a lifetime ECL for lease or fee receivables to be recognized irrespective of whether a significant increase in credit risk has occurred. Instead, UBS AG has incorporated lease and fee receivables into the standard ECL calculation.

A write-off is made when all or part of a financial asset is deemed uncollectible or forgiven. Write-offs reduce the principal amount of a claim and are charged against previously established allowances for credit losses. Recoveries, in part or in full, of amounts previously written off are generally credited to *Credit loss expense / recovery*. Write-offs and partial write-offs represent derecognition / partial derecognition events.

ECL are recognized in profit or loss with a corresponding ECL allowance reported as a decrease in the carrying value of financial assets measured at amortized cost on the balance sheet. For financial assets measured at fair value through OCI, the carrying value is not reduced, but an accumulated amount is recognized in OCI. For off-balance sheet financial instruments and other credit lines, provisions for ECL are reported in *Provisions*. ECL are recognized within the income statement in *Credit loss expense / recovery.*

Default and credit impairment

The definition of default is based on quantitative and qualitative criteria. A counterparty is classified as defaulted at the latest when material payments of interest, principal or fees are overdue for more than 90 days, or more than 180 days for the Personal & Corporate Banking and Swiss wealth management portfolios. Counterparties are also classified as defaulted when bankruptcy, insolvency proceedings or enforced liquidation have commenced, obligations have been restructured on preferential terms or there is other evidence that payment obligations will not be fully met without recourse to collateral. The latter may be the case even if, to date, all contractual payments have been made when due. If a counterparty is defaulted, generally all claims against the counterparty are treated as defaulted.

An instrument is classified as credit-impaired if the counterparty is defaulted, and / or the instrument is POCI. An instrument is POCI if it has been purchased with a material discount to its carrying amount following a risk event of the issuer or originated with a defaulted counterparty. Once a financial asset is classified as defaulted / credit-impaired (except POCIs), it remains as such unless all past due amounts have been rectified, additional payments have been made on time, the position is not classified as credit-restructured, and there is general evidence of credit recovery. A minimum period of three months is applied whereby most instruments remain in stage 3 for a longer period.

Measurement of expected credit losses

IFRS 9 ECL reflect an unbiased, probability-weighted estimate based on either loss expectations resulting from default events over a maximum 12-month period from the reporting date or over the remaining life of a financial instrument. The method used to calculate individual probability-weighted unbiased ECL is based on a combination of the following principal factors: probability of default (PD), loss given default (LGD) and exposure at default (EAD). PDs and LGDs used in the ECL calculation are point in time (PIT)-based for key portfolios and consider both current conditions and expected cyclical changes. For each instrument or group of instruments, parameter time series are generated consisting of the instruments' PD, LGD and EAD profiles considering the respective period of exposure to credit risk.

For the purpose of determining the ECL-relevant parameters, UBS AG leverages its Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models. Adjustments have been made to these models and new IFRS 9-related models have been developed, which consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III through the cycle (TTC) parameters. The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III are not affected by the IFRS 9 ECL calculation.

Probability of default (PD): The PD represents the likelihood of a default over a specified time period. A 12-month PD represents the likelihood of default determined for the next 12 months and a lifetime PD represents the probability of default over the remaining lifetime of the instrument. The lifetime PD calculation is based on a series of 12-month PIT PDs that are derived from TTC PDs and scenario forecasts. This modeling is region-, industry- and client segment-specific and considers both scenario-systematic and client-idiosyncratic information. To derive the cumulative lifetime PD per scenario, the series of 12-month PIT PDs are transformed into marginal PIT PDs taking any assumed default events from previous periods into account.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Exposure at default (EAD): The EAD represents an estimate of the exposure to credit risk at the time of a potential default occurring during the life of a financial instrument. It represents the cash flows outstanding at the time of default, considering expected repayments, interest payments and accruals, discounted at the EIR. Future drawdowns on facilities are considered through a credit conversion factor (CCF) that is reflective of historical drawdown and default patterns and the characteristics of the respective portfolios. IFRS 9-specific CCFs have been modeled to capture client segment- and product-specific patterns after removing Basel standard-specific limitations, i.e., conservativism and focus on a 12-month period prior to default.

Loss given default (LGD): The LGD represents an estimate of the loss at the time of a potential default occurring during the life of a financial instrument. The determination of the LGD takes into account expected future cash flows from collateral and other credit enhancements, or expected payouts from bankruptcy proceedings for unsecured claims and, where applicable, time to realization of collateral and the seniority of claims. The LGD is commonly expressed as a percentage of the EAD.

PD and LGD are determined for four different scenarios whereas EAD projections are treated as scenario independent.

Parameters are generally determined on an individual financial asset level. For credit card exposures in Switzerland, personal account overdrafts and certain loans to financial advisors, a portfolio approach is applied that derives an average PD and LGD for the entire portfolio.

Scenarios and scenario weights

The determination of the probability-weighted ECL requires evaluating a range of diverse and relevant future economic conditions.

To accommodate this requirement, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. Each scenario is represented by a specific scenario narrative, which is relevant considering the exposure of key portfolios to economic risks, and for which a set of consistent macroeconomic variables is determined. Those variables range from above-trend economic growth to severe recession. A weight is computed for each scenario by using a probabilistic econometric model that considers recent information as well as several decades of historical data. The determined weights constitute the probabilities that the respective set of macroeconomic conditions will occur. The scenarios, including the narratives, the macroeconomic and financial variables and the scenario weights, are further discussed, challenged and potentially refined by a team of UBS-AG internal experts. The baseline scenario is aligned to the economic and market assumptions used for UBS AG business planning purposes.

Macroeconomic and other factors

The range of macroeconomic, market and other factors that is modeled as part of the scenario determination is wide, and historical information is used to support the identification of the key factors. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS AG projects the relevant economic factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Certain variables may only be relevant for specific types of exposures, such as house price indices for mortgage loans, while other variables have key relevance in the ECL calculation for all exposures. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS AG's key ECL-relevant portfolios.

For UBS AG, the following forward-looking macroeconomic variables represent the most relevant factors in the ECL calculation:

- GDP growth rates
- House price indices
- Unemployment rates
- Interest rates, specifically LIBOR and government bond yields
- Equity indices
- Consumer price indices

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

The forward-looking macroeconomic assumptions used in the ECL calculation are developed by UBS AG economists, risk methodology personnel and credit risk officers. Assumptions and scenarios are validated and approved through a scenario committee and an operating committee, which also aim to ensure a consistent use of forward-looking information throughout UBS AG, including in the business planning process. ECL inputs are tested and reassessed for appropriateness at least each quarter and appropriate adjustments are made when needed.

ECL measurement period

The period for which lifetime ECL are determined is based on the maximum contractual period that UBS AG is exposed to credit risk, taking into account contractual extension, termination and prepayment options. For irrevocable loan commitments and financial guarantee contracts, the measurement period represents the maximum contractual period for which UBS AG has an obligation to extend credit.

Additionally, some financial instruments include both an on-demand loan and a revocable undrawn commitment where the contractual cancelation right does not limit UBS AG's exposure to credit risk to the contractual notice period as the client has the ability to draw down funds before UBS AG can take risk mitigating actions. In such cases, UBS AG is required to estimate the period over which it is exposed to credit risk. This applies to UBS AG's credit card limits, which do not have a defined contractual maturity date, are callable on demand and where the drawn and undrawn components are managed as one unit. The exposure arising from UBS AG's credit card limits is not significant and is managed at a portfolio level, with credit actions triggered when balances are past due. An ECL measurement period of seven years is applied for credit card limits, capped at 12 months for stage 1 balances, as a proxy for the period that UBS AG is exposed to credit risk. Customary master credit agreements in the Swiss corporate market also include on-demand loans and revocable undrawn commitments. For smaller commercial facilities, a risk-based monitoring (RbM) approach is in place that highlights negative trends as risk events, at an individual facility level, based on a combination of continuously updated risk indicators. The risk events trigger additional credit reviews by a Risk Officer, allowing for informed credit decisions to be taken. Larger corporate facilities are not subject to RbM, but are reviewed at least annually through a formal credit review. UBS AG has assessed these credit risk management practices and considers both the RbM approach and formal credit review as a substantive credit review providing for a re-origination of the facility. Following this, a 12-month measurement period is used for both types of facilities as an appropriate proxy of the period over which UBS AG is exposed to credit risk, with 12 months also used as a look back period for assessing SICR.

Significant increase in credit risk

Financial instruments subject to ECL are monitored on an ongoing basis. To determine whether the recognition of a 12-month ECL continues to be appropriate, it is assessed whether an SICR has occurred since initial recognition of the financial instrument. The assessment criteria include both quantitative and qualitative factors.

Primarily, UBS AG assesses changes in an instrument's risk of default on a quantitative basis by comparing the annualized forward-looking and scenario-weighted lifetime PD of an instrument determined at two different dates:

– at the reporting date and
– at inception of the instrument.

In both cases, the respective PDs are determined for the residual lifetime of the instrument, i.e., the period between the reporting date and maturity. If, based on UBS AG's quantitative modeling, an increase exceeds a set threshold, an SICR is deemed to have occurred and the instrument is transferred to stage 2 with lifetime ECL being recognized.

The threshold applied varies depending on the original credit quality of the borrower. For instruments with lower default probabilities at inception due to good credit quality of the counterparty, the SICR threshold is set at a higher level than for instruments with higher default probabilities at inception. This implies that for instruments with initially lower default probabilities a relatively higher deterioration in credit quality is needed to trigger an SICR than for those instruments with originally higher PDs. The SICR assessment based on PD changes is made at an individual financial asset level. A high-level overview of the SICR trigger, expressed in rating downgrades, together with the corresponding ratings at origination of an instrument is provided in the "SICR thresholds" table below. This simplified view is aligned to internal ratings as disclosed in the internal ratings table presented in "Credit risk" in the "Risk management and control" section of the Annual Report 2017. The actual SICR thresholds applied are defined on a more granular level interpolating between the values shown in the table.

SICR thresholds

Internal rating at origination of the instrument	Rating downgrades / SICR trigger
0–3	3
4–8	2
9–13	1

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Irrespective of the SICR assessment based on default probabilities, credit risk is generally deemed to have significantly increased for an instrument if the borrower becomes more than 30 days past due on his contractual payments. This presumption is rebutted only where reasonable and supportable information is available that demonstrates that UBS AG is not exposed to an SICR even if contractual payments become more than 30 days past due.

For certain less material portfolios, specifically the Swiss credit card portfolio and the recruitment and retention loans to financial advisors within Global Wealth Management, the 30 days past due criterion is used as the primary indicator of an SICR. Where instruments are transferred to stage 2 due to the 30 days past due criterion, a minimum period of six months is applied before a transfer back to stage 1 can be triggered. For instruments in Personal & Corporate Banking that are between 90 and 180 days past due, a one-year period is applied before a transfer back to stage 1 can be triggered.

Additionally, based on individual counterparty-specific indicators, external market indicators of credit risk or general economic conditions, counterparties may be moved to a watch list, which is used as a secondary qualitative indicator for an SICR and hence for a transfer to stage 2. Exception management is further applied, allowing for individual and collective adjustments on exposures sharing the same credit risk characteristics to take account of specific situations that are not otherwise fully reflected. Instruments for which an SICR since initial recognition is determined based on criteria other than changed default probabilities remain in stage 2 for at least six months post resolution of the stage 2 trigger event.

The overall SICR determination process does not apply to Lombard loans, securities financing transactions and certain other asset-based lending transactions due to the risk management practices adopted, including daily monitoring processes with strict remargining requirements. If margin calls are not satisfied, a position is closed out and classified as a stage 3 position. ECL on these positions are not material.

Critical accounting estimates and judgments

The calculation of ECL requires management to apply significant judgment and make estimates and assumptions that involve significant uncertainty at the time they are made. Changes to these estimates and assumptions can result in significant changes to the timing and amount of ECL to be recognized.

Determination of a significant increase of credit risk
IFRS 9 does not include a definition of what constitutes an SICR. UBS AG assesses whether an SICR has occurred since initial recognition based on qualitative and quantitative reasonable and supportable forward-looking information that includes significant management judgment. More stringent criteria could significantly increase the number of instruments migrating to stage 2. An IFRS 9 Operating Committee has been established to review and challenge the SICR approach and any potential changes and determinations made in the quarter.

Scenarios, scenario weights and macroeconomic factors
ECL reflect an unbiased and probability-weighted amount, which UBS AG determines by evaluating a range of possible outcomes. Management selects forward-looking scenarios and judges the suitability of respective weights to be applied. Each of the scenarios is based on management's assumptions around future economic conditions in the form of macroeconomic, market and other factors. Changes in the scenarios and weights, the corresponding set of macroeconomic variables and the assumptions made around those variables for the forecast horizon would have a significant effect on the ECL. An IFRS 9 Scenario Committee, in addition to the Operating Committee, has been established to derive, review and challenge the selection and weights.

ECL measurement period
Lifetime ECL are generally determined based upon the contractual maturity of the transaction, which significantly affects ECL. The ECL calculation is therefore sensitive to any extension of contractual maturities triggered by business decisions, consumer behaviors and an increased number of stage 2 positions. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS AG must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit card limits, capped at 12 months for stage 1 positions, and a 12-month period has been applied for master credit facilities.

Modeling and management adjustments
A number of complex models have been developed or modified to calculate ECL, with additional management adjustments required. Internal counterparty rating changes, new or revised models and data may significantly affect ECL. The models are governed by UBS AG's model validation controls, which aim to ensure independent verification, and are approved by the Group Model Governance Board (GMGB). The management adjustments are approved by the IFRS 9 Operating Committee and endorsed by the GMGB.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

h. Restructured and modified financial assets

When a counterparty is in financial difficulties or where default has already occurred, UBS AG may restructure financial assets by providing concessions that would otherwise not be considered and that are outside of UBS AG's normal risk appetite, such as preferential interest rates, extension of maturity and subordination. When a credit restructuring takes place, each case is considered individually and the counterparty is generally classified as defaulted until the loan is collected or written off, non-preferential conditions are granted that supersede the preferential conditions, or until the counterparty has recovered and the preferential conditions no longer exceed UBS AG's risk appetite.

Concessions granted when there is no evidence of financial difficulties, or where changes to terms and conditions are within UBS AG's usual risk appetite, are not considered to be a credit restructuring.

Modifications represent contract amendments that result in an alteration of future contractual cash flows and that can occur within UBS AG's normal risk appetite or as part of a credit restructuring where a counterparty is in financial difficulties.

A restructuring or modification of a financial asset could lead to a substantial change in the terms and conditions, resulting in the original financial asset being derecognized and a new financial asset being recognized. Where the modification does not result in a derecognition, any difference between the modified contractual cash flows discounted at the original EIR and the existing gross carrying value of a financial asset is recognized in profit or loss as a modification gain or loss. Further, the subsequent SICR assessment is made by comparing the risk of default at the reporting date based on the modified contractual terms of the financial asset with the risk of default at initial recognition based on the original, unmodified contractual terms of the financial asset.

o. Loan commitments

Loan commitments are arrangements under which clients can borrow stipulated amounts under defined terms and conditions.

Loan commitments that can be canceled at any time by UBS AG at its discretion are neither recognized on the balance sheet nor included in off-balance sheet disclosures.

Loan commitments that cannot be canceled by UBS AG once the commitments are communicated to the beneficiary or that are revocable only due to automatic cancelation upon deterioration in a borrower's creditworthiness are considered irrevocable and are classified as (i) derivative loan commitments measured at fair value through profit or loss, (ii) loan commitments designated at fair value through profit or loss or (iii) other loan commitments.

UBS AG recognizes ECL on non-cancelable other loan commitments. In addition, UBS AG also recognizes ECL on loan commitments that can be canceled at any time if UBS AG is exposed to credit risk (refer to item g in this Note). Corresponding ECL are presented within *Provisions* on the UBS AG's balance sheet. ECL relating to these other loan commitments is recorded in the income statement in *Credit loss expense / recovery*.

When a client draws on a commitment, the resulting loan is presented within *Financial assets at fair value held for trading* or within *Financial assets at fair value not held for trading* when the associated loan commitments are measured at fair value through profit or loss, or within *Loans and advances to customers*, when the associated loan commitments are not measured at fair value through profit or loss.

p. Financial guarantee contracts

Financial guarantee contracts are contracts that require the issuer to make specified payments to reimburse the holder for an incurred loss because a specified debtor fails to make payments when due in accordance with the terms of a specified debt instrument. UBS AG issues such financial guarantees to banks, financial institutions and other parties on behalf of clients to secure loans, overdrafts and other banking facilities.

Certain issued financial guarantees that are managed on a fair value basis are designated at fair value through profit or loss. Financial guarantees that are not managed on a fair value basis are initially recognized in the financial statements at fair value and are subsequently measured at the higher of:

- the amount of ECL (refer to item g in this Note) and
- the amount initially recognized less the cumulative amount of income recognized as of the reporting date.

ECL resulting from guarantees is recorded in the income statement in *Credit loss expense / recovery*.

q. Other net income from fair value changes of financial instruments

The line item *Other net income from fair value changes of financial instruments* substantially includes fair value gains and losses on financial instruments at fair value through profit or loss, as well as the effects at derecognition, trading gains and losses and intermediation income arising from certain client-driven Global Wealth Management and Personal & Corporate Banking financial transactions. In addition, foreign currency translation effects and income and expenses from precious metals are presented under this income statement line item.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

18.2 Adoption of IFRS 9

18.2.1 Governance

The implementation of IFRS 9 has been a key strategic initiative for UBS implemented under the joint sponsorship of the Group Chief Financial Officer and the Group Chief Risk Officer. The incorporation of forward-looking information into the ECL calculation and the definition and assessment of what constitutes a significant increase in credit risk (SICR) are inherently subjective and involve the use of significant expert judgment. Therefore, UBS AG has developed a front-to-back governance framework over the ECL calculation process jointly owned by the Group Chief Financial Officer and the Group Chief Risk Officer and has designed controls to be in compliance with the requirements of the Sarbanes-Oxley Act. UBS AG has efficient credit risk management processes in place that continue to be applicable and aim to ensure the effects of economic developments are appropriately considered, mitigation actions are taken where required and risk appetite is reassessed and adjusted as needed.

→ **Refer to the "Risk management and control" section of the Annual Report 2017 for more information**

18.2.2 Retrospective amendments to UBS AG balance sheet presentation

Although the effect of IFRS 9 classification and measurement changes has been applied prospectively, UBS AG has made a series of changes to the presentation of its IFRS balance sheet to facilitate comparability and prior-period information is presented for periods ending before 1 January 2018 in this revised structure. The primary changes include:

- IAS 39-specific asset categories, such as "Financial assets held to maturity" and "Financial assets available for sale," have been superseded by the new categories "Financial assets measured at amortized cost" and "Financial assets measured at fair value through other comprehensive income."
- A new line, *Financial assets at fair value not held for trading*, has been created to accommodate in particular financial assets previously designated at fair value, all of which are mandatorily classified at fair value through profit or loss under IFRS 9.
- *Other assets* and *Other liabilities* have been split between measured at amortized cost, measured at fair value through profit or loss and other non-financial assets and liabilities.
- *Cash collateral on securities borrowed* and *Reverse repurchase agreements* have been combined into a single line, *Receivables from securities financing transactions.* Similarly, *Cash collateral on securities lent* and *Repurchase agreements* have been combined into a single line, *Payables from securities financing transactions.*
- Finance lease receivables, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
- Precious metal positions previously presented in *Trading portfolio assets* are now presented within the new line *Other non-financial assets.*
- *Financial liabilities designated at fair value* have been split into two lines: *Debt issued designated at fair value* and *Other financial liabilities designated at fair value.*
- Obligations of UBS AG from funding received from UBS Group AG or its subsidiaries, previously included within *Due to customers*, are now presented separately within *Funding from UBS Group AG and its subsidiaries.*

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

The table below illustrates the new balance sheet presentation of assets and liabilities as of 31 December 2017 in comparison with the presentation in the Annual Report 2017. The presentation of the components of equity has not changed, and therefore, for illustration purposes, total liabilities and equity are presented in a single line in the table. The table does not reflect any of the effects of adopting the classification and measurement requirements of IFRS 9, which are presented in section 18.2.3 under *Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9.*

Retrospective amendments to UBS AG's balance sheet presentation as of 31 December 2017

CHF million		31.12.17	31.12.17
Assets	References	Former presentation	Revised presentation
Cash and balances at central banks		87,775	87,775
Loans and advances to banks (formerly: Due from banks)		13,693	13,693
Receivables from securities financing transactions (new line)	1		89,633
Cash collateral on securities borrowed (newly included in Receivables from securities financing transactions)	1	12,393	
Reverse repurchase agreements (newly included in Receivables from securities financing transactions)	1	77,240	
Cash collateral receivables on derivative instruments		23,434	23,434
Loans and advances to customers (formerly: Loans)	2	321,718	320,659
Financial assets held to maturity (superseded)	3	9,166	
Other financial assets measured at amortized cost (new line)	2,3,7		36,935
Total financial assets measured at amortized cost			572,129
Financial assets at fair value held for trading (formerly: Trading portfolio assets)	4	130,807	126,244
of which: assets pledged as collateral that may be sold or repledged by counterparties		*35,363*	*35,363*
Derivative financial instruments (formerly: Positive replacement values)		118,229	118,229
Brokerage receivables (new line, formerly included within Other assets)		n/a	n/a
Financial assets at fair value not held for trading (new line)	5		58,556
Financial assets designated at fair value	5	58,556	
Total financial assets measured at fair value through profit or loss			303,028
Financial assets available for sale (superseded)	6	8,665	
Financial assets measured at fair value through other comprehensive income (new line)	**6**		8,665
Investments in associates		1,018	1,018
Property, equipment and software		7,985	7,985
Goodwill and intangible assets		6,398	6,398
Deferred tax assets		9,783	9,783
Other non-financial assets (new line)	4,7		7,358
Other assets (superseded)	7	29,505	
Total assets		916,363	916,363
Liabilities			
Amounts due to banks		7,533	7,533
Payables from securities financing transactions (new line)	8		17,044
Cash collateral on securities lent (newly included in Payables from securities financing transactions)	8	1,789	
Repurchase agreements (newly included in Payables from securities financing transactions)	8	15,255	
Cash collateral payables on derivative instruments		30,247	30,247
Customer deposits (formerly: Due to customers)	9	447,141	412,392
Funding from UBS Group AG and its subsidiaries (new line, formerly included within Due to customers)	9		34,749
Debt issued measured at amortized cost		104,749	104,749
Other financial liabilities measured at amortized cost (new line)	11		37,133
Total financial liabilities measured at amortized cost			643,847
Financial liabilities at fair value held for trading (formerly: Trading portfolio liabilities)		30,463	30,463
Derivative financial instruments (formerly: Negative replacement values)		116,134	116,134
Brokerage payables designated at fair value (new line, formerly included within Other liabilities)		n/a	n/a
Financial liabilities designated at fair value (superseded)	10	54,202	
Debt issued designated at fair value (new line)	10		49,502
Other financial liabilities designated at fair value (new line)	10,11		16,223
Total financial liabilities measured at fair value through profit or loss			212,323
Provisions		3,084	3,084
Other non-financial liabilities (new line)	11		6,335
Other liabilities (superseded)	11	54,990	
Total liabilities		865,588	865,588
Total liabilities and equity		916,363	916,363

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Retrospective amendments to UBS AG balance sheet presentation"

Table ref.	Description of presentation changes applied retrospectively to the balance sheet as of 31 December 2017
Balance sheet assets	
1	Cash collateral on securities borrowed of CHF 12,393 million and reverse repurchase agreements of CHF 77,240 million as of 31 December 2017 are now presented as a total of CHF 89,633 within a single line, *Receivables from securities financing transactions*.
2	Finance lease receivables of CHF 1,059 million as of 31 December 2017, previously presented within *Loans*, are now presented within *Other financial assets measured at amortized cost*.
3	*Financial assets held to maturity* measured at amortized cost of CHF 9,166 million as of 31 December 2017 are now presented within *Other financial assets measured at amortized cost*.
4	Precious metal positions of CHF 4,563 million as of 31 December 2017, previously presented in *Trading portfolio assets*, are now presented within *Other non-financial assets*.
5	Financial assets designated at fair value through profit or loss of CHF 58,556 million as of 31 December 2017, previously presented in a separate line, are now presented within *Financial assets at fair value not held for trading*.
6	Debt and equity instruments of CHF 8,665 million as of 31 December 2017, previously presented in *Financial assets available for sale,* are now presented within *Financial assets measured at fair value through other comprehensive income*.
7	The reporting line *Other assets* has been split into two new reporting lines, *Other financial assets measured at amortized cost* and *Other non-financial assets*. – Assets of CHF 29,505 million as of 31 December 2017, previously presented within *Other assets*, are now presented within *Other assets measured at amortized cost* (CHF 26,710 million) and *Other non-financial assets* (CHF 2,795 million). – Financial assets now presented within *Other financial assets measured at amortized cost* include brokerage receivables of CHF 19,080 million, debt securities of CHF 9,166 million, loans to financial advisors of CHF 3,118 million and other assets amounting to CHF 5,571 million. Refer to Note 11 a) for more information. – Refer to Note 11 b) for more information on assets now presented within *Other non-financial assets*.
Balance sheet liabilities	
8	Cash collateral on securities lent of CHF 1,789 million and repurchase agreements of CHF 15,255 million as of 31 December 2017 are now presented within a single line, *Payables from securities financing transactions*.
9	Obligations of UBS AG from funding received from UBS Group AG or its subsidiaries of CHF 34,749 million as of 31 December 2017, which were previously included within *Due to customers*, are now presented separately within *Funding from UBS Group AG and its subsidiaries*.
10	Financial liabilities designated at fair value through profit or loss of CHF 54,202 million as of 31 December 2017 are now presented within *Debt issued designated at fair value* (CHF 49,502 million) and *Other financial liabilities designated at fair value* (CHF 4,700 million).
11	The reporting line *Other liabilities* has been split into three new reporting lines, *Other financial liabilities measured at amortized cost*, *Other financial liabilities designated at fair value* and *Other non-financial liabilities*. – Liabilities amounting to CHF 54,990 million as of 31 December 2017, previously presented within *Other liabilities,* are now presented within *Other financial liabilities measured at amortized cost* (CHF 37,133 million, thereof CHF 29,646 million brokerage payables), within *Other financial liabilities designated at fair value* (amounts due under unit-linked investment contracts of CHF 11,523 million) and within *Other non-financial liabilities* (CHF 6,335 million). – Refer to note 11 c) for more information on financial liabilities now presented within *Other financial liabilities measured at amortized cost.* – Refer to note 11 d) for more information on financial liabilities now presented within *Other financial liabilities designated at fair value*. – Refer to note 11 e) for more information on liabilities now presented within *Other non-financial liabilities*.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

19.2.3 Transition to IFRS 9 as of 1 January 2018

Transition to Classification and measurement requirements

As set out in the amended accounting policies in section 18.1, IFRS 9 requires all financial assets, except equity instruments and derivatives, to be classified at amortized cost, at fair value through other comprehensive income (FVOCI) or at fair value through profit or loss (FVTPL), based on the business model for managing the respective assets and their contractual cash flow characteristics.

Changes resulting from the application of IFRS 9 classification and measurement requirements as of 1 January 2018 have been applied as follows:

- Determination of the business model was made based on facts and circumstances as of the 1 January 2018 transition date;
- De-designations and new designations of financial instruments at FVTPL, pursuant to transition requirements of IFRS 9, have been carried out as of 1 January 2018. These reassessments resulted in:
  i. the de-designation of certain financial assets designated at FVTPL, as they are managed on a fair value basis, and therefore are mandatorily measured at fair value, or no longer managed on a fair value basis but held to collect the contractual cash flows and therefore are measured at amortized cost;
  ii. newly designated financial liabilities at FVTPL (e.g., brokerage payables) in order to achieve measurement consistency with associated financial assets that are mandatorily measured at FVTPL (e.g., brokerage receivables).

For UBS AG, the most significant IFRS 9 classification and measurement changes on transition to IFRS 9 are as follows:

- financial assets that no longer qualify for amortized cost accounting under IFRS 9 have been classified at FVTPL because their cash flow characteristics do not satisfy the solely payments of principal and interest criteria (e.g., auction rate securities and certain brokerage receivables);
- lending arrangements that no longer qualify for amortized cost accounting under IFRS 9 are classified at FVTPL because the business model within which they are managed does not have an objective to hold financial assets in order to collect the contractual cash flows or to collect contractual cash flows and sell (e.g., certain Investment Bank lending arrangements);
- equity instruments classified as available for sale under IAS 39 are classified at FVTPL under IFRS 9; and
- financial liabilities are newly designated under IFRS 9 at FVTPL, from amortized cost accounting, to align with conclusions reached for associated financial assets that will be measured at FVTPL (e.g., brokerage payables).

Effect on UBS AG income statement presentation

Upon adoption of IFRS 9, the reclassification of auction rate securities, certain loans in the Investment Bank, certain repurchase agreements and brokerage balances from amortized cost to FVTPL has resulted in the interest income from these instruments moving from Interest income (expense) from financial instruments measured at amortized cost to interest income (expense) from financial instruments measured at fair value through profit or loss. These changes have been applied prospectively from 1 January 2018.

Effect on UBS AG Statement of cash flows

Following the adoption of IFRS 9, changes have been made to the Statement of cash flows to reflect the changes arising from financial instruments that have been reclassified on the balance sheet. In particular, cash flows from certain financial assets previously measured as available-for-sale assets at fair value through other comprehensive income have been reclassified from investing activities to operating activities as the assets are fair valued through profit or loss effective 1 January 2018.

Transition to expected credit loss requirements

As set out in UBS AG's amended accounting policies in section 18.1, IFRS 9 introduces a forward-looking ECL approach, which is intended to result in an earlier recognition of credit losses compared with the incurred-loss impairment approach for financial instruments under IAS 39 and the loss-provisioning approach for financial guarantees and loan commitments under IAS 37, *Provisions, Contingent Liabilities and Contingent Assets*.

The majority of ECL calculated as of the transition date relates to the private and commercial mortgage portfolio and corporate lending in Switzerland within Personal & Corporate Banking.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Models at transition

For the purpose of implementing ECL under IFRS 9, UBS AG has leveraged existing Pillar 1 internal ratings-based (IRB) models that are also used in determining expected loss (EL) and risk-weighted assets under the Basel III framework and Pillar 2 stress loss models.

Existing models have been adapted and 29 new models have been developed for the ECL calculation that consider the complexity, structure and risk profile of relevant portfolios and take account of the fact that PDs and LGDs used in the ECL calculation are PIT-based as opposed to the corresponding Basel III TTC parameters. Management adjustments have also been made. UBS AG has leveraged its existing model risk framework, including the key model validation control executed by Model Risk Management & Control. New and revised models have been approved by UBS's GMGB.

The assignment of internal counterparty rating grades and the determination of default probabilities for the purposes of Basel III remain unchanged.

→ **Refer to "Credit risk models" in the "Risk, treasury and capital management" section of our Annual Report 2017 for more information**

→ **Refer to "Significant accounting and financial reporting changes in 2018" in the "Operating environment and strategy" section of our Annual Report 2017 for more information**

Scenarios and scenario weights at transition

As outlined in section 18.1, UBS AG uses four different economic scenarios in the ECL calculation: an upside, a baseline, a mild downside and a severe downside scenario. ECL calculated on transition have been determined for each of the scenarios and subsequently weighted based on the probabilities in the table "Economic scenarios and weights applied."

Economic scenarios and weights applied

ECL scenario	Assigned weights in % (1.1.18)
Upside	20.0
Baseline	42.5
Mild downside	30.0
Severe downside	7.5

UBS AG has established IFRS 9 ECL Scenario and Operating Committees to propose and approve the selection of the scenarios and weights to be applied and to monitor whether appropriate governance exists.

Macroeconomic and other factors: For each of the economic scenarios, UBS AG forecasts a wide range of forward-looking macroeconomic, market and other factors. Historical information was used to support the identification of the key factors and to project their development under the different scenarios. As the forecast horizon increases, the availability of information decreases and judgment increases. For cycle-sensitive PD and LGD determination purposes, UBS AG projected those factors for a period of three years before reverting, over a specified period, to a cycle-neutral PD and LGD for longer-term projections.

Factors relevant for the ECL calculation vary by type of exposure and are determined during the credit cycle index model development process in close alignment with practitioner judgment. Regional and client segment characteristics are generally taken into account, with specific focus on Switzerland and the US considering UBS AG's key ECL-relevant portfolios.

The following represent the most significant macroeconomic factors for UBS AG and could substantially change the estimated ECL:

- GDP growth rates, given their significant effect on borrowers' performance
- House price indices, given their significant effect on mortgage collateral valuations
- Unemployment rates, given their significant effect on private clients' ability to meet contractual obligations
- Interest rates, given their significant effect on the counterparties' abilities to service their debt
- Equity indices, given their relevance for equity collateral valuation
- Consumer price indices, given their overall relevance for companies' performance, private clients' purchasing power and economic stability.

Macroeconomic and other factors at transition

Assumptions around the most important forward-looking economic factors for Switzerland, the US and other regions as applied in each of the economic scenarios to determine ECL at the date of transition can be summarized as follows:

In the upside scenario, which assumes GDP growth rising above trend in most countries with only a moderate rise in inflation and ongoing accommodative monetary policies, GDP growth in Switzerland peaks at around 5% annually. Strong growth leads to a decline in unemployment to very low levels (below 1%) by 2020. Asset prices grow at robust pace, with equity prices increasing by approximately 10% annually and house prices (single-family homes) rising by approximately 4% annually. Policy and short-term interest rates remain low over the entire scenario, while government bond yields experience a sustained increase.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

In the US and the rest of the world, the scenario shows broadly similar features, with growth accelerating in Year 1 before steadily returning toward trend by Year 3. Specifically in the US, GDP growth accelerates at a slightly faster pace than in Switzerland, although the US experiences a slightly less substantial improvement in the unemployment rate by Year 3. The degree of policy tightening is marginally greater over the scenario horizon and, as in Switzerland, long-term government bond yields rise more significantly than short-term rates, and to a greater degree.

For the baseline scenario, which is modeled along our business plan assumptions of a continuation of overall important global growth, Swiss GDP growth remains between 1% and 2% annually over the three years of the scenario. Moderate growth results in a very mild decrease of unemployment, which stabilizes at around 3.5%. Asset price growth is also moderate, with the Swiss equity price index rising by approximately 8% annually, while house prices grow by less than 1% annually. Policy rates, short-term interest rates and government bond yields increase very gradually over the three years of the scenario by approximately 50 basis points.

GDP growth in the US remains relatively stable, and faster than in Switzerland. Monetary policy tightens at a similar pace to Switzerland and, combined with a modest decline in the unemployment rate, helps to keep inflation in check. US equity prices slightly underperform their Swiss counterparts, while house prices outperform relatively stagnant Swiss house price growth. In the rest of the world, growth remains buoyant, with moderating growth in both Europe and China contrasting with accelerating growth in other emerging markets.

The mild downside scenario is based on a monetary policy tightening assumption, implemented to deflate a potential asset price bubble, causing Swiss GDP to decline by almost 1% in the first year of the scenario. The unemployment rate rises to roughly 5%. Equity prices fall by more than 20% over three years, while house prices decline by 15% over the same period. The fall of the nominal asking rent index, which is cushioned by higher interest rates, is more moderate than the decline in house prices. Short-term interest rates rise significantly due to monetary tightening, as well as government bond yields.

In this scenario, inflation in the US accelerates rapidly, leading to a sharp rise in short-term interest rates, similar to Switzerland. GDP growth and house prices decline at a similar rate in the US and Switzerland. In the rest of the world, growth is also weighed down, particularly in more vulnerable emerging markets such as Russia, Turkey and Brazil, as interest rates and credit spreads rise sharply.

The severe downside scenario is modeled to mimic a severe recession caused by an event affecting Switzerland's competitiveness in key export markets, with Swiss GDP shrinking almost 7% in the first year of the scenario. The severe recession results in a substantial increase in unemployment, which peaks at around 9%. Asset prices plummet, with the Swiss equity index falling more than 55% over three years, and house prices declining 27% over the same period. Policy and short-term interest rates remain low over the entire scenario horizon.

US GDP and unemployment deteriorate by a lesser degree than in Switzerland, and while house and equity prices decline sharply, the effects are also less severe than in Switzerland. With more scope to cut rates than the Swiss National Bank, short-term rates fall in the US. In the rest of the world, growth also slows sharply, particularly in the eurozone and neighboring emerging markets such as Turkey and Russia.

ECL measurement period at transition

As set out in section 18.1, for the majority of ECL-relevant instruments, the contractual maturity is used to calculate the measurement period, with this capped at 12 months when stage 1 ECL are required. In addition, for credit card limits and Swiss callable master credit facilities, judgment is required as UBS AG must determine the period over which it is exposed to credit risk. A seven-year period has been applied for credit cards and 12 months for master credit facilities. UBS AG's ECL-relevant financial instruments have relatively short average maturities, which significantly contribute to the level of ECL on transition.

SICR determination at transition

The identification of instruments for which an SICR has been determined since initial recognition and the corresponding allocation to stage 2 at transition generally follow the principles described in the relevant accounting policy provided in section 18.1. Furthermore, the following principles have been applied:

General: In estimating the retrospective lifetime PDs, we have considered the economic conditions over the relevant prior periods and the general significant uncertainty inherent in such approximation to determine the allocation of instruments to stage 2 at transition.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Real estate financing: The Basel III rating methodology applied to the majority of income-producing real estate financings within Personal & Corporate Banking, which is leveraged for IFRS 9 ECL calculations, was significantly changed in 2017. As a consequence, there is no comparable rating on origination to determine whether an SICR has arisen over time. As permitted by the IFRS 9 transition requirements, a lifetime ECL allowance has therefore been recognized for certain real estate financing positions and will continue to be recognized until the positions are derecognized.

Other portfolios, including private mortgages and commercial SME clients: The Basel III rating models for other key portfolios in Personal & Corporate Banking, in particular for private client mortgages and commercial clients in the small and medium-sized enterprise (SME) segment, have recently been subject to a major redesign. While the methodology remained essentially the same and the calibration to the portfolios' average TTC PD value unchanged, the effect on the stage allocation is significant. This is due to the fact that the introduction of new models has led to a broader and different distribution of borrowers across the rating spectrum; while there was no material effect on those counterparties with an uplift in their rating, some of those that had a downward shift in their rating triggered the SICR threshold and a reclassification into stage 2 at transition.

The table on the following pages provides a detailed overview of the IFRS 9 transition effects as of 1 January 2018. This includes:
– reclassification of IAS 39 carrying amounts to the new categories applicable under IFRS 9;
– remeasurement of carrying amounts due to reclassification (any remeasurement to fair value and / or reversal of IAS 39 allowances or IAS 37 provisions for assets moving from amortized cost to fair value); and
– recognition of IFRS 9 ECL for in-scope assets, off-balance sheet positions and other credit lines.

The following table also includes the effects recognized for deferred tax assets and therefore the total impact provided in *Retained earnings* in the table is net of tax effects. Explanatory footnotes provided after the table provide additional details on these changes.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Assets						
Cash and balances at central banks	Loans and receivables	87,775			0	87,775
Loans and advances to banks	Loans and receivables	13,693	(17)		(3)[12]	13,673
to: Brokerage receivables	*Loans and receivables*		*(17)*[1]			
Receivables from securities financing transactions	Loans and receivables	89,633	(4,957)		(2)[12]	84,674
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(4,957)*[2]			
Cash collateral receivables on derivative instruments	Loans and receivables	23,434			0	23,434
Loans and advances to customers	Loans and receivables	320,659	(7,822)	0	(235)[12]	312,602
to: Financial assets at fair value not held for trading	*Loans and receivables*		*(2,678)*[3]			
to: Brokerage receivables	*Loans and receivables*		*(4,691)*[1]			
to: Financial assets at fair value held for trading	*Loans and receivables*		*(468)*[4]			
from: Financial assets at fair value not held for trading	*FVTPL (designated)*		*8*[5]	*0*		
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*6*[5]			
Other financial assets measured at amortized cost	Loans and receivables, held to maturity	36,935	(18,525)	0	(35)[12]	18,375
to: Brokerage receivables	*Loans and receivables*		*(19,080)*[1]			
from: Financial assets measured at fair value through other comprehensive income	*Available for sale*		*555*[6]	*0*		
Total financial assets measured at amortized cost		572,129	(31,321)	0	(275)	540,533
Financial assets at fair value held for trading	FVTPL (held for trading)	126,244	(10,854)	(15)		115,375
to: Loans and advances to customers	*FVTPL (held for trading)*		*(6)*[5]			
to: Financial assets at fair value not held for trading	*FVTPL (held for trading)*		*(11,316)*[7]			
from: Loans and advances to customers	*Loans and receivables*		*468*[4]	*(15)*[4]		
of which: assets pledged as collateral that may be sold or repledged by counterparties	*FVTPL (held for trading)*	*35,363*				*35,363*
Derivative financial instruments	FVTPL (derivatives)	118,229				118,229
Brokerage receivables	Loans and receivables		23,787			23,787
from: Loans and advances to banks	*Loans and receivables*		*17*[1]			
from: Loans and advances to customers	*Loans and receivables*		*4,691*[1]			
from: Other financial assets measured at amortized cost	*Loans and receivables*		*19,080*[1]			
Financial assets at fair value not held for trading	FVTPL (designated)	58,556[9]	20,297	(287)		78,566
to: Loans and advances to customers	*FVTPL (designated)*		*(8)*[5]			
from: Financial assets at fair value held for trading	*FVTPL (held for trading)*		*11,316*[7]			
from: Receivables from securities financing transactions	*Loans and receivables*		*4,957*[2]	*(1)*		
from: Loans and advances to customers	*Loans and receivables*		*2,678*[3]	*(286)*[3]		
from: Financial assets measured at fair value through other comprehensive income	*Available for sale*		*1,356*[8]			
Total financial assets measured at fair value through profit or loss		303,028	33,231	(303)		335,957
Financial assets measured at fair value through other comprehensive income	**Available for sale**	8,665	(1,911)			6,755[10]
to: Other financial assets measured at amortized cost	*Available for sale*		*(555)*[6]			
to: Financial assets at fair value not held for trading	*Available for sale*		*(1,356)*[8]			
Investments in associates		1,018				1,018
Property, equipment and software		7,985				7,985
Goodwill and intangible assets		6,398				6,398
Deferred tax assets		9,783		58[11]	64[11]	9,905
Other non-financial assets		7,358				7,358
Total assets		916,363		(245)	(211)	915,908

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9 (continued)

	31.12.2017		1.1.2018			
CHF million	Classification under IAS 39	Carrying amount (IAS 39)	Reclassification (of IAS 39 carrying amounts)	Remeasurement due to reclassification incl. reversal of IAS 39 / IAS 37 allowances / provisions	Recognition of ECL (IFRS 9)	Carrying amount (IFRS 9)
Liabilities						
Amounts due to banks	Amortized cost	7,533				7,533
Payables from securities financing transactions	Amortized cost	17,044	(5,081)			11,963
to: Other financial liabilities designated at fair value	*Amortized cost*		*(5,081)*[13]			
Cash collateral payables on derivative instruments	Amortized cost	30,247				30,247
Customer deposits	Amortized cost	412,392	(5,268)			407,124
to: Brokerage payables designated at fair value	*Amortized cost*		*(5,268)*[14]			
Funding from UBS Group AG and its subsidiaries	Amortized cost	34,749				34,749
Debt issued measured at amortized cost	Amortized cost	104,749				104,749
Other financial liabilities measured at amortized cost	Amortized cost	37,133	(29,646)	(4)		7,482
to: Brokerage payables designated at fair value	*Amortized cost*		*(29,646)*[14]			
Derecognition: deferred fees on other loan commitments	*Amortized cost*			*(4)*[4]		
Total financial liabilities measured at amortized cost		643,847	(39,996)	(4)		603,848
Financial liabilities at fair value held for trading	FVTPL (held for trading)	30,463				30,463
Derivative financial instruments	FVTPL (derivatives)	116,134		57		116,192
Recognition: Loan commitments	*Amortized cost – off-balance sheet*			*60*[4]		
Derecognition: Loan commitments	*FVTPL (derivatives)*			*(2)*[5]		
Brokerage payables designated at fair value	Amortized cost		34,915			34,915
from: Customer deposits	*Amortized cost*		*5,268*[14]			
from: Other financial liabilities measured at amortized cost	*Amortized cost*		*29,646*[14]			
Debt issued designated at fair value	FVTPL (designated)	49,502				49,502
Other financial liabilities designated at fair value	FVTPL (designated)	16,223	5,081	(5)		21,300
from: Payables from securities financing transactions	*Amortized cost*		*5,081*[13]	*(5)*[13]		
Total financial liabilities measured at fair value through profit or loss		212,323	39,996	53		252,371
Provisions		3,084			74[12]	3,158
Other non-financial liabilities		6,335				6,335
Total liabilities		865,588		49	74	865,711
Equity						
Share capital		386				386
Share premium		26,966				26,966
Retained earnings		29,102	72[8,15]	(293)	(284)	28,597
Other comprehensive income recognized directly in equity, net of tax		(5,736)	(72)[8,15]			(5,808)
Equity attributable to shareholders		50,718	0	(293)[15]	(284)[15]	50,141
Equity attributable to non-controlling interests		57				57
Total equity		50,775	0	(293)	(284)	50,198
Total liabilities and equity		916,363	0	(245)	(211)	915,908

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Explanatory footnotes to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9"

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018
1	Certain customer and prime brokerage receivable balances, in the Investment Bank and Global Wealth Management, fail the solely payments of principal and interest (SPPI) criteria for measurement at amortized cost. These include CHF 4,691 million previously included within *Loans and advances to customers*, CHF 17 million from *Loans and advances to banks* and CHF 19,080 million previously included within *Other financial assets measured at amortized cost*. The receivables are managed under a business model whose objective is to hold the assets to collect contractual cash flows. However, the reported receivables represent an aggregation of cash receivable and payable balances that form a single unit of account at the client level and generate a return that does not constitute consideration for the time value of money, credit risk and other basic lending risks. The SPPI criterion is therefore not met and under IFRS 9 the receivables are mandatorily measured at FVTPL and separately presented as *Brokerage receivables*. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
2	Based on the business model assessment under IFRS 9, certain reverse repurchase agreements with a carrying amount of CHF 4,957 million as of 31 December 2017 were determined to be managed on a fair value basis and were therefore reclassified from amortized cost to FVTPL measurement under IFRS 9. The carrying value has been reclassified from *Receivables from securities financing transactions* to *Financial assets at fair value not held for trading* as of 1 January 2018. A remeasurement loss of CHF 1 million has been recorded in *Retained earnings*. CHF 11,490 million of forward starting reverse repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
3	Certain positions previously included within *Loans and advances to customers* with a carrying amount of CHF 2,678 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* upon adoption of IFRS 9. This includes: – auction rate securities (CHF 2,114 million) that are held in Corporate Center and that contain an embedded leverage feature triggering the failure of the SPPI criteria, and – certain loans in the Investment Bank (CHF 552 million) and in Corporate Center (CHF 12 million), which either fail the SPPI criteria or are held within a business model with an intent to sell or substantially hedge the primary risks. These assets are mandatorily measured at FVTPL under IFRS 9. A corresponding net remeasurement loss of CHF 286 million was recognized in *Retained earnings* related to these reclassifications. This remeasurement loss also included reversal of specific credit loss allowances (CHF 11 million).
4	Due to a change in the underlying business model, loans and advances to customers with a carrying amount of CHF 468 million as of 31 December 2017 have been reclassified to *Financial assets at fair value held for trading* as of 1 January 2018. A corresponding net remeasurement loss of CHF 15 million, which includes the reversal of specific IAS 39 credit loss allowances, was recognized in *Retained earnings* related to this reclassification. Irrevocable loan commitments that are contractually linked with these financial assets are now recognized as *Derivative financial instruments* (derivative liabilities) and are measured at FVTPL as of 1 January 2018. This reclassification resulted in a CHF 60 million loss with a corresponding entry to *Retained earnings*. Liabilities related to deferred fees of CHF 4 million related to these loan commitments recorded as *Other financial liabilities measured at amortized cost* at 31 December 2017 were derecognized with a corresponding entry to *Retained earnings*.
5	Financial assets with a carrying amount of CHF 14 million as of 31 December 2017 were reclassified to *Loans and advances to customers* from *Financial assets at fair value not held for trading* (CHF 8 million) and from *Financial assets at fair value held for trading* (CHF 6 million) given management's intent to hold these financial assets to collect contractual cash flows. Loan commitments related to these financial assets, which were recognized as derivative liabilities with a carrying value of CHF 2 million as of 31 December 2017, were accordingly derecognized on 1 January 2018 with a corresponding entry to *Retained earnings*.
6	Certain debt instruments with a carrying amount of CHF 555 million as of 31 December 2017 were formerly classified as available for sale and measured at FVOCI under IAS 39 but are measured at amortized cost under IFRS 9. Those positions, which are held to collect cash flows solely representing payment of principal and interest, are presented within *Other financial assets measured at amortized cost* as of 1 January 2018. The fair value of these assets was consistent with the amortized cost value as of 1 January 2018 and no remeasurement gain or loss has been recognized.
7	Upon adopting IFRS 9, UBS AG has elected to refine the assets classified within *Financial assets at fair value held for trading* to carve out those that are segregated from UBS AG's trading activities, where UBS AG's role is primarily to manage the assets on a fair value basis on behalf of others. Instead, such assets will be presented alongside others managed on a fair value basis within *Financial assets at fair value not held for trading*. As a consequence of this refinement, UBS AG has reclassified assets held to hedge unit-linked investment contracts of CHF 11,316 million from *Financial assets at fair value held for trading* to *Financial assets at fair value not held for trading* as of 1 January 2018. No remeasurement gain or loss has been recognized.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Table ref.	Description of classification or remeasurement changes on adoption of IFRS 9 as of 1 January 2018 (continued)
8	UBS AG holds certain global and local liquidity buffers that were determined to be managed on a fair value basis as management utilizes fair value information for reporting and decision making purposes. Therefore, assets previously classified as available for sale under IAS 39 with a carrying amount of CHF 620 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading*. An unrealized gain of CHF 5 million related to these positions was reclassified from *Other comprehensive income* to *Retained earnings*. Additionally, equity instruments and investment fund units previously classified as available for sale under IAS 39 with a carrying amount of CHF 736 million as of 31 December 2017 were reclassified to *Financial assets at fair value not held for trading* under the revised IFRS 9 measurement rules. A related unrealized gain in OCI of CHF 199 million has been reclassified to *Retained earnings*. Additionally, a net tax expense of CHF 131 million was transferred from OCI to *Retained earnings* related to the positions above which were reclassified out of the IAS 39 available-for-sale category.
9	Assets previously designated at FVTPL with a carrying amount of CHF 58,556 million as of 31 December 2017 are no longer designated as such under IFRS 9, as it was determined that these assets were either held in a business model that is managed on a fair value basis, did not meet the SPPI criteria, or did meet the SPPI criteria and are held in a hold to collect business model. Of the total, assets with a carrying amount of CHF 58,548 million are now mandatorily measured at FVTPL and included within *Financial assets at fair value not held for trading*. The remaining assets with a carrying amount of CHF 8 million have been de-designated and were reclassified to *Loans and advances to customers* given a change in business model to hold to collect (refer to footnote 5).
10	Certain debt instruments with a carrying amount of CHF 6,755 million as of 31 December 2017 were formerly classified as available for sale under IAS 39 and are measured at FVOCI under IFRS 9. These instruments include US government bonds and US government sponsored mortgage-backed securities and other debt that are held in a business model whose objective is achieved by both collecting contractual cash flows and selling, and that meet the SPPI criteria. These positions are now presented within *Financial assets measured at fair value through other comprehensive income*.
11	Deferred tax assets of CHF 122 million have been recognized in connection with the adoption of IFRS 9. Of the total effect, CHF 64 million relates to the recognition of ECL and CHF 58 million relates to classification and measurement changes upon adoption of IFRS 9.
12	Upon adoption of the ECL requirements of IFRS 9, a transition impact of CHF 348 million was recognized, consisting of CHF 144 million of stage 1 allowances, CHF 188 million of stage 2 allowances and an incremental increase in stage 3 allowances of CHF 16 million. The effect was mainly recognized within *Loans and advances to customers* (CHF 235 million), with effects also recognized in *Other financial assets measured at amortized cost* (CHF 35 million), *Loans and advances to banks* (CHF 3 million), *Receivables from securities financing transactions* (CHF 2 million) and *Provisions* (CHF 74 million).
13	Certain repurchase agreements with a carrying amount of CHF 5,081 million as of 31 December 2017 have been designated at FVTPL as they are managed in conjunction with reverse repurchase agreements that are mandatorily measured at FVTPL under IFRS 9. These amounts are included within *Other financial liabilities designated at fair value* as of 1 January 2018. A remeasurement gain of CHF 5 million has been recognized in *Retained earnings* as of 1 January 2018 related to this reclassification. CHF 7,730 million of forward starting repurchase agreements are newly accounted for as derivatives, prior to settlement, from 1 January 2018 as they are managed on a fair value basis. The fair value of the derivatives as of 1 January 2018 was immaterial.
14	To achieve measurement consistency with reclassified customer and prime brokerage receivables that are measured at FVTPL following adoption of IFRS 9, certain customer deposits with a carrying amount of CHF 5,268 million and prime brokerage payables with a carrying amount of CHF 29,646 million as of 31 December 2017 have been designated at FVTPL and are presented within *Brokerage payables designated at fair value* as of 1 January 2018. There was no difference between the amortized cost carrying amount and the fair value as of 1 January 2018 and therefore no remeasurement gain or loss has been recognized.
15	The adoption of IFRS 9 has resulted in a reduction to IFRS consolidated equity as of 1 January 2018 of CHF 577 million. This effect is comprised of classification and measurement changes of CHF 351 million on a pre-tax basis and CHF 293 million net of tax, as well as effects from the implementation of ECL credit loss methodology of CHF 348 million on a pre-tax basis and CHF 284 million net of tax. In addition, CHF 72 million has been reclassified from *Other comprehensive income* recognized directly in equity, net of tax, to *Retained earnings* (refer to footnote 8 above), with no overall impact on equity attributable to shareholders.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

Reconciliation of allowances and provisions on adoption of IFRS 9 as of 1 January 2018

The table below provides a reconciliation from the IAS 39 allowances / IAS 37 provisions to the IFRS 9 ECL allowances / provisions recognized as of 1 January 2018 upon adoption of IFRS 9.

Reconciliation of allowances and provisions on adoption of IFRS 9

	31.12.2017	1.1.2018		
CHF million	Loss allowances and provisions (IAS 39 / IAS 37)	Reversal of allowances (IAS 39)	Recognition of ECL (IFRS 9)[1]	Allowances for ECL / Provisions for ECL (IFRS 9)
On-balance sheet				
Cash and balances at central banks			0	0
Loans and advances to banks	(3)		(3)	(5)
Receivables from securities financing transactions			(2)	(2)
Cash collateral receivables on derivative instruments			0	0
Loans and advances to customers	(658)	26[2]	(235)[3]	(867)
Other financial assets measured at amortized cost	(101)[4]		(35)	(136)
Total on-balance sheet	(761)	26	(275)	(1,011)
Off-balance sheet financial instruments and other credit lines				
Guarantees	(29)		(8)	(37)
Loan commitments	(4)		(32)	(36)
Other credit lines			(34)	(34)
Total off-balance sheet financial instruments and other credit lines	(33)		(74)	(107)
Total	(794)	26	(348)	(1,117)
of which: stage 1			*(144)*	*(144)*
of which: stage 2			*(188)*	*(188)*
of which: stage 3			*(16)*[5]	*(785)*

1 Includes stage 1 and stage 2 expected credit losses and additional stage 3 expected credit losses. 2 The reversal of CHF 26 million of IAS 39 loss allowances relates to instruments reclassified from amortized cost to fair value through profit or loss on transition to IFRS 9. Refer also to footnotes 3 and 4 to the table "Reclassification and remeasurement of carrying amounts and recognition of ECL upon adoption of IFRS 9." 3 Includes the reversal of collective allowances of CHF 13 million. 4 Includes CHF 82 million related to loans to financial advisors for which an allowance was reported as a direct reduction of the carrying amount as of 31 December 2017. 5 The incremental increase in stage 3 allowances of CHF 16 million arises from additional consideration of forward looking scenarios under IFRS 9.

Note 18 Transition to IFRS 9 as of 1 January 2018 (continued)

IFRS 9 transition impact on other comprehensive income and retained earnings as of 1 January 2018

The table below presents the transition effects recognized in OCI and retained earnings upon adoption of IFRS 9.

IFRS 9 impact on other comprehensive income and retained earnings

CHF million	
Other comprehensive income recognized directly in equity, net of tax	
Reclassification of financial assets (available for sale to fair value through profit or loss) – equity instruments	(199)
Reclassification of financial assets (available for sale to fair value through profit or loss) – debt instruments	(5)
Tax (expense) / benefit	131
Total change in other comprehensive income	(72)
Retained earnings	
Remeasurement of financial assets (reclassified from amortized cost to fair value through profit or loss)	(303)
Reclassification of financial assets (reclassified from available for sale to fair value through profit or loss)	204
Recognition of ECL for on-balance sheet financial assets	(275)
Remeasurement of financial liabilities (reclassified from amortized cost to designated at fair value through profit or loss)	5
Recognition of derivative loan commitments measured at fair value through profit or loss	(60)
Derecognition of liabilities for deferred fees on other loan commitments	4
Derecognition of derivative loan commitments measured at fair value through profit or loss	2
Recognition of ECL for off-balance sheet positions	(74)
Tax (expense) / benefit	(9)
Total change in retained earnings	(505)
Total change in equity due to the adoption of IFRS 9	(577)