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STANDARD CHARTERED PLC

渣打集團有限公司

(Incorporated as a public limited company in England and Wales with registered number 966425)
(Stock Code: 02888)

Results for the Twelve Months Ended 31 December 2018 - Part 2

Standard Chartered PLC – Additional Financial information

Highlights

Standard Chartered PLC (the Group) today releases its results for the year ended 31 December 2018. The following pages provide additional information related to the announcement.

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Risk review and Capital review

Principal uncertainties

In addition to our Principal Risk Types that we manage through Risk Type Frameworks, policies and Risk Appetite, we also maintain an inventory of our principal uncertainties. Principal uncertainties refer to unpredictable and uncontrollable outcomes from certain events which may have the potential to impact our business materially

In 2018, we undertook a thorough review of our principal uncertainties, using the approach described in the Enterprise Risk Management Framework section. The key results of the review are detailed below.

Key changes to our principal uncertainties

The following item has been removed as a principal uncertainty:

- Korean peninsula geopolitical tensions – Due to the denuclearisation discussions relating to the Korean peninsula, we believe this risk has decreased; however, we continue to conduct regular stress tests and assess contagion risks arising from risk levels and associated contingency plans

The following items have been amended or added as new principal uncertainties:

- Extended trade tensions driven by geopolitics and trade imbalance – This risk was previously known as “Increase in trade protectionism driven by nationalist agenda” and has been renamed to cover increasing concerns on potential trade tensions and the adoption of protectionist policies
- China slowdown and impact on regional economies with close ties to China – This risk was previously known as “Moderation of growth in key footprint markets led by China” and has been renamed to monitor and assess the impact from slowdown in China and associated regional economies
- Emerging Markets – upcoming elections, interest rate rises and foreign exchange (FX) risks – This risk was previously known as “Sharp interest rate rises and asset price corrections” and has been broadened to cover Emerging Market (EM) risks
- New technologies and digitisation – This risk has been split into two to adequately capture the opportunity or business disruption and obsolescence risk from new technologies and increased data privacy and security risks respectively which could impact many elements of banking

Based on our current knowledge and assumptions, our list of principal uncertainties is set out below, with our subjective assessment of their impact, likelihood and velocity of change. This reflects the latest internal assessment of material risks that the Group faces as identified by senior management. This list is not designed to be exhaustive and there may be additional risks which could materialise or have an adverse effect on the Group. Our mitigation approach for these risks may not be successful in completely eliminating them, but rather shows the Group’s attempt to reduce or manage the risk. As certain risks develop and materialise over time, management will take appropriate incremental steps based on the materiality of the impact of the risk to the operations of the Group.

Geopolitical considerations (Risk ranked according to severity)

Principal uncertainties	Risk trend since 2017	Context	How these are mitigated/next steps
Extended trade tensions driven by geopolitics and trade imbalance Potential impact: High Likelihood: High Velocity of change: Moderate	↑	- Trade tensions between the United States and China continue to rise driven by trade imbalance as well as geopolitical tensions. The US imposed trade tariffs on a further \$200 billion of imports from China in late September 2018 (China retaliated with tariffs on \$60 billion of goods). A 25% tariff may be imposed if the two countries are unable to reach an agreement which could start another round of devaluation - A full-fledged and/or extended US–China trade tensions could destabilise the world economy. The adoption of protectionist policies driven by nationalist agendas could disrupt established supply chains and invoke retaliatory actions. Other countries could introduce tariffs on goods and services available domestically or from other economies. These would impact global trade - The Group has a significant revenue stream from supporting cross-border trade	A sharp slowdown in world trade and global growth is a feature of the Group stress scenarios including the Internal Capital Adequacy Assessment Process (ICAAP) and the annual Bank of England stress testing exercise. These stress tests provide visibility to key vulnerabilities so that management can implement timely interventions
Middle East political situation Potential impact: Medium Likelihood: Medium Velocity of change: Moderate	↔	- Qatar has adjusted to the trade and diplomatic embargo by the Gulf Cooperation Council (GCC). It is unlikely that the parties to the dispute will rush to pursue a diplomatic solution which may leave a lasting rift in the GCC - There is risk of escalation between Saudi Arabia and Turkey as events surrounding the death of journalist Jamal Kashoggi develop. The US congress is likely to sustain pressure on Saudi Arabia despite the efforts of the Trump administration and Saudi Arabia to de-escalate - With US sanctions against Iran having come into effect in November 2018, we anticipate that the stand-off between Iran and Saudi Arabia will continue - The Group has a material presence across the region	- The impact of the Qatar diplomatic crisis on our portfolio has been limited so far. Risk Appetite and underwriting standards have been adjusted to reflect current conditions - There is constant monitoring at regional and country level to detect horizon risks and analyse any potential adverse developments. This included a planned Strategy and Portfolio Review of Saudi Arabia in November 2018
Brexit implications Potential impact: Low Likelihood: High Velocity of change: Fast	↑	- The exit of the UK from the European Union (EU) (Brexit) could have implications on the economic outlook for the eurozone and the UK, which might in turn have global implications because of change in policy direction. The uncertainties linked to the Brexit negotiations process could delay corporate investment decisions until there is more clarity - There continues to be uncertainty on UK's exit from Europe - The first order impact of Brexit on the Group from a Credit Risk or portfolio perspective is limited given the nature of the Group's activities. However, as we have set up a new EU subsidiary, the operating environment and client migration to the new subsidiary are impacted given the uncertainty on Brexit negotiations	- We continue to assess and manage post-Brexit risk and the practical implications through the Brexit Executive Committee chaired by a Management Team member. We have also evaluated the potential implications from a transition and will continue monitoring the progress of the political negotiations - We have set up a new EU subsidiary and optimised our EU structure to mitigate any potential impact to our clients, our staff and the Group as a result of Brexit, including loss of EU passporting rights. Set-up activities are progressing well and we have obtained the full banking licence to commence operations in March 2019

Macroeconomic considerations

Principal uncertainties	Risk trend since 2017	Context	How these are mitigated/next steps
China slowdown and impact on regional economies with close ties to China Potential impact: High Likelihood: Medium Velocity of change: Steady	↔	- Asia remains the main driver of global growth supported by internal drivers, led by China - China's economy has performed strongly since the beginning of 2018. However key focus remains on the government-led deleveraging efforts, economic reforms, state owned enterprises, and recent monetary policy actions to cut the reserve requirements for most banks - Macroeconomic environment in the Greater China/North Asia region is threatened by US-China trade tensions - Highly trade oriented economies such as Hong Kong and Singapore with close ties to China would weaken in the event of an economic slowdown in China. Regional supply chain economies such as Korea, Taiwan and Malaysia would be impacted from a fall in economic activity - Greater China, North Asia and South-East Asian economies remain key strategic regions for the Group	- As part of our stress tests, severe stress in the global economy associated with a sharp slowdown in China was assessed in the ICAAP and Bank of England stress testing in 2018 - Exposures that result in material loan impairment charges and risk-weighted assets inflation under stress tests are regularly reviewed and actively managed - A global downturn with shocks concentrated on China and countries with close trade links with China is one of the regular run market and traded risk stress tests - We continue to monitor data from Greater China, North Asia and South-East Asia
Emerging Markets (EM) – upcoming elections, interest rate rises and FX risks Potential impact: Medium Likelihood: High Velocity of change: Moderate	↑	- EM equities officially entered a bear market in September 2018, following a 20 per cent decline from their peak in January 2018. Many EM currencies have weakened to multi-year lows against the US dollar (examples: Indian rupee and South African rand). South Africa also entered its first recession since the global financial crisis - Such increases in interest rates and weakening of local currencies in EMs could have an impact on the highly leveraged corporate sector, as well as countries with high current account deficits or high foreign currency share of domestic debt. Property, commodities and asset prices would also come under pressure - This could also adversely impact the credit quality of the Group's exposures, and our ability to reprice these exposures in response to changes in the interest rate environment - Of particular concern is the outlook for EMs, specifically the risk of capital outflows and weakening domestic currencies, with the associated increased domestic political volatility. We see increased political volatility, across EMs – like India, Nigeria, Thailand and Sri Lanka – with upcoming elections	- We continue to monitor countries deemed to have a negative outlook and heightened probability of a downgrade to their internal Sovereign Risk rating, based on vulnerability to recent economic, business, political and/or social developments over a 12-month horizon - We continue to monitor tightening of monetary policy conditions intended to support domestic currencies in the ASEAN & South Asia region and a potential slowdown in economic growth, with recent policy rate hikes from central banks in Indonesia and Philippines - We continue to adjust our outlook and ratings based on political events and volatility

Environmental and social considerations

Principal uncertainties	Risk trend since 2017	Context	How these are mitigated/next steps
Climate-related physical risks and transition risks¹ Potential impact: High Likelihood: High Velocity of change: Moderate	↑	- National governments have, through the UN Framework Convention on Climate Change (UNFCCC) process and Paris Agreement, made commitments to enact policies which support the transition to a lower-carbon economy, limiting global warming to less than 2°C and therefore mitigating the most severe physical effects of climate change - Such policies may, however, have significant impacts, for example, on energy infrastructure developed in our markets, and thus present 'transition' risks for our clients - Conversely, if governments fail to enact policies which limit global warming, the Group's markets are particularly susceptible to 'physical' risks of climate change such as droughts, floods, sea level change and average temperature change - In September 2018, the Bank of England published a report 'Transition in thinking' on practices in the UK banking sector, finding that only 10 per cent of banks were taking a strategic approach to climate change - This was followed by a PRA consultation paper and draft supervisory statement in October 2018, proposing significant measures to be taken by banks - When the Group was reviewing its power generation position statement in 2018, it received significant engagement on climate change from large investors and civil society	- We have participated, via a UN-led initiative, the United Nations Environment Programme Finance Initiative (UNEP-FI), in the development of pilot scenario analysis tools for physical and transition risks for energy utilities clients and other high-emitting sectors. We are using our experiences as we develop additional tools - We are also involved in a wide range of collaborative initiatives related to climate risk management, as well as opportunity identification - We are working to develop tools to measure, manage and ultimately reduce the emissions related to the financing of our clients - We have reduced our Risk Appetite to carbon-intensive sectors by introducing technical standards for coal-fired power plants, and restrictions on new coal mining clients and projects. These standards are reviewed on a regular basis, and in September 2018 we announced that we would no longer provide financing for new coal-fired power plants anywhere in the world - We are developing a climate risk management framework - We have made a public commitment to fund and facilitate \$4 billion toward clean technology between 2016 and 2020. In 2018, we funded \$2.9 billion taking us to a cumulative total of \$4.9 billion since January 2016

¹ Physical risk refers to the risk of increased extreme weather events while transition risk refers to the risk of changes to market dynamics due to governments' responses to climate change

Legal considerations

Principal uncertainties	Risk trend since 2017	Context	How these are mitigated/next steps
Regulatory reviews and investigations, legal proceedings Potential impact: High Likelihood: High Velocity of change: Moderate	↔	- The Group has been, and may continue to be, subject to regulatory actions, reviews, requests for information (including subpoenas and requests for documents) and investigations across our markets, the outcomes of which are generally difficult to predict and could be material to the Group - In recent years, authorities have exercised their discretion to impose increasingly severe penalties on financial institutions in connection with violation of laws and regulations, and there can be no assurance that future penalties will not be of increased severity - The Group is also party to legal proceedings from time to time, which may give rise to financial losses or adversely impact our reputation in the eyes of our customers, investors and other stakeholders	- We have invested in enhancing systems and controls, and implementing remediation programmes (where relevant) - We are cooperating with all relevant ongoing reviews, requests for information and investigations and actively managing legal proceedings with respect to legacy issues (refer to Note 26 – Legal and regulatory matters) - We continue to train and educate our people on conduct, conflicts of interest, information security and financial crime compliance in order to reduce our exposure to legal and regulatory proceedings
Regulatory changes Potential impact: Medium Likelihood: High Velocity of change: Fast	↔	- In July 2017, the CEO of the UK Financial Conduct Authority (FCA) announced that beyond 2021 the FCA would no longer encourage panel banks to submit quotes to LIBOR. While we do not submit to LIBOR, LIBOR is heavily relied upon by the Group as a reference rate, in various client products and for enterprise-level processes and funding. Regulators are trying to catalyse a voluntary transition to alternative risk-free rates (RFRs) - Rules have been defined in many key areas of regulation that could impact our business model and how we manage our capital and liquidity. In particular, the upcoming Basel III proposed changes to capital calculation methodology for Credit and Operational risk, revised framework for securitisation and Credit Valuation Adjustment risk, fundamental review of the trading book, large exposures and implementation of margin reforms, and bank recovery and resolution directive for total loss absorbing capacity - Ongoing regulatory scrutiny and emphasis on local responsibilities for remotely booked business. The degree of reliance on global controls is reducing, and the focus is on local controls and governance - Increased sanctions risk due to the US exiting the Joint Comprehensive Plan of Action (JCPOA, or commonly known as the Iran Nuclear Deal)	- We actively monitor regulatory initiatives across our footprint to identify any potential impact and change to our business model - A Group-wide programme is being established to manage the transition from LIBOR to alternate RFRs over the coming years - With respect to Basel III: - We are closely monitoring developments, and conducting sensitivity analyses on the potential headwinds and opportunities - We continuously review a menu of prospective capital accretive actions, along with impact to the Group strategy and financial performance - Relevant product areas have implemented project management or programme oversight to review and improve the end-to-end process, including oversight and accountability, policies and standards, transparency and management information, permission and controls, legal-entity level limits and training - We are monitoring the potential changes to the Iran sanctions regime and will take actions accordingly to ensure compliance

Technological considerations

Principal uncertainties	Risk trend since 2017	Context	How these are mitigated/next steps
New technologies and digitisation (including business disruption risk, responsible use of AI and obsolescence risk) Potential impact: High Likelihood: High Velocity of change: Moderate	↑	- New technologies have continued to gather speed with a growing number of use cases that address evolving customer expectations - In Retail Banking, we continue to observe significant shifts in customer value propositions as markets deepen. Fintechs and existing payment players are increasing digital-only banking offerings to provide consumers with the convenience of banking on-the-go. There is growing usage of AI and machine learning to personalise customer experiences, e.g. virtual chatbots to provide digital financial advice and predictive analytics to cross-sell products. - In Corporate Banking, we observe an increasing focus on process digitisation to boost cost efficiencies. There are growing use cases for blockchain technologies, e.g. to streamline cross-border payments, automate Know Your Customer compliance processes. AI and machine learning have also been increasingly used in predictive risk modelling, e.g. loan default forecasts - Regulators are increasing emphasis on the importance of resilient technology infrastructure in terms of elimination of cyber risk and improving reliability. The challenge is in renewing the estate to reduce the risks presented by obsolescence when the demands of ongoing technology investment delivering into this tech estate and its required performance levels continue to rise significantly.	- We continue to monitor emerging trends and new developments, opportunities and risks in the technology space, which may have implications on the banking sector - In 2017, the Group set up the SC Ventures unit to spearhead bank-wide digital advancement. The unit is gaining momentum to promote innovation, invest in disruptive technologies and deliver client digital solutions. SC Ventures focuses its activities in three key areas: - Catalysts: Internal consulting team to support the Group's business units in problem-solving and developing best practices in innovation - Investments: Professional investment team to manage the Group's minority investments in third-party fintechs - Ventures: Venture management unit to sponsor and oversee new wholly and partially owned ventures, with a focus on disrupting business models in the Group's operating markets - The Group has continued to make headway in harnessing new technologies to develop innovative solutions, e.g. blockchain-based cross-border wallet remittance service between Hong Kong and Philippines in partnership with Ant Financial. We have also invested in new machine learning technologies that rapidly analyse large datasets and fine-tune the accuracy of our financial crime surveillance tools - In addition, we are developing a framework to ensure Fairness, Ethics, Accountability and Transparency (FEAT) in the Group's usage of AI. We continue to deploy risk-minded controls to ensure that all cloud-based services adhere to a common governance model - We are actively targeting the reduction of obsolescent/end of support technology following a Technology & Innovation-led approach under the oversight of Risk Management and the Group's senior executives. The target is to address the Group's obsolescence risk, by evergreening and use of new technologies such as the Cloud. In addition, we also continue our client focus by delivering outage reductions, enhanced protection by raising cyber defences and efficiency by improvements to technology deployment
Increased data privacy and security risks from strategic and wider use of data Potential impact: High Likelihood: High Velocity of change: Fast	↑	- As digital technologies grow in sophistication and become further embedded across the banking and financial services industry, the potential impact profile with regards to data risk is changing. The cyber threat landscape is evolving in terms of scope and pace. Banks may become more susceptible to technology-related data security risks as well as customer privacy. The growing use of big data for analysis purposes and cloud computing solutions are examples of this - In addition, these risks represent an emerging and topical theme both from a regulatory and compliance perspective (i.e. the EU General Data Protection Regulation (GDPR) raises the profile of data protection compliance) - As the Group moves towards cloud computing solutions, the increasing use of big data for analysis purposes leads to increased susceptibility to data security and customer privacy risks	- We have existing governance and control frameworks for the deployment of new technologies and services - To manage the risks posed by rapidly evolving cyber security threats and technology adoption, we have designed a programme to focus on security improvements and build a sustainable plan that will secure its information and technology assets for the long term. The programme is progressing with capability being built out in multiple areas including governance, investment prioritisation and execution risk management - We maintain a vigilant watch on legal and regulatory developments in relation to data protection and customer privacy to identify any potential impact to the business and to implement appropriate mechanisms to control this risk - For the Group, GDPR principally impacts Group locations and client segments in the EU, functions such as Human Resources and downstream suppliers such as hubs and external vendors that process personal data caught by the GDPR (EU personal data). A GDPR programme has been established to review and remediate vendor contracts and intra-group agreements that involve the processing of EU personal data

Enterprise Risk Management Framework

Effective risk management is essential in providing consistent and sustainable performance for all of our stakeholders and is therefore a central part of the financial and operational management of the Group. The Group adds value to clients, and therefore the communities in which they operate, generating returns for shareholders by taking and managing risk.

The Enterprise Risk Management Framework (ERMF), launched in January 2018, enables the Group to manage enterprise-wide risks, with the objective of maximising risk-adjusted returns while remaining within our Risk Appetite. The ERMF has been designed with the explicit goal of improving the Group's risk management. Over the year, awareness of the ERMF has increased significantly and we have made good progress in delivering the key initiatives started in 2017 to embed the framework across the organisation.

We will carry this momentum into 2019 as we continue to roll out the ERMF and Risk Type Frameworks across the Group, including the branches and subsidiaries, as well as launching training programmes to ensure awareness and stakeholder engagement.

Risk culture

The Group's risk culture provides guiding principles for the behaviours expected from our people when managing risk. The Board has approved a risk culture statement that encourages the following behaviours and outcomes:

- An enterprise-level ability to identify and assess current and future risks, openly discuss these and take prompt actions
- The highest level of integrity by being transparent and proactive in disclosing and managing all types of risks
- A constructive and collaborative approach in providing oversight and challenge, and taking decisions in a timely manner
- Everyone to be accountable for their decisions and feel safe in using their judgement to make these considered decisions

We acknowledge that banking inherently involves risk-taking and undesired outcomes will occur from time to time; however, we shall take the opportunity to learn from our experience and formalise what we can do to improve. We expect managers to demonstrate a high awareness of risk and control by self-identifying issues and managing them in a manner that will deliver lasting change.

Strategic risk management

The Group approaches strategic risk management by:

- Including in the strategy review process, an impact analysis on the risk profile from growth plans, strategic initiatives and business model vulnerabilities with the aim of proactively identifying and managing new risks or existing risks that need to be reprioritised
- Including in the strategy review process, a confirmation that growth plans and strategic initiatives can be delivered within the approved Risk Appetite and/or proposing additional Risk Appetite for Board consideration
- Validating the Corporate Plan against the approved or proposed Risk Appetite Statement to the Board. The Board approves the strategy review and the five-year Corporate Plan with a confirmation from the Group Chief Risk Officer that it is aligned with the ERMF and the Group Risk Appetite Statement where projections allow

Roles and responsibilities

Three lines of defence model

Roles and responsibilities for risk management are defined under a three lines of defence model. Each line of defence has a specific set of responsibilities for risk management and control as shown in the table on the next page.

Senior Managers Regime

Roles and responsibilities under the ERMF are aligned to the objectives of the Senior Managers Regime. The Group Chief Risk Officer is responsible for the overall development and maintenance of the Group's ERMF and for identifying material risk types to which the Group may be potentially exposed. The Group Chief Risk Officer delegates effective implementation of the Risk Type Frameworks to Risk Framework Owners who provide second line of defence oversight for the Principal Risk Types.

Lines of defence	Definition	Key responsibilities include
1 st	The businesses and functions engaged in or supporting revenue-generating activities that own and manage risks	- Propose the risks required to undertake revenue-generating activities - Identify, monitor and escalate risks and issues to the second line and senior management¹ and promote a healthy risk culture and good conduct - Manage risks within Risk Appetite, set and execute remediation plans and ensure laws and regulations are being complied with - Ensure systems meet risk data aggregation, risk reporting and data quality requirements set by the second line
2 nd	The control functions independent of the first line that provide oversight and challenge of risk management to provide confidence to the Group Chief Risk Officer, the Management Team and the Board	- Identify, monitor and escalate risks and issues to the Group Chief Risk Officer, senior management¹ and the Board and promote a healthy risk culture and good conduct - Oversee and challenge first line risk-taking activities and review first line risk proposals - Propose Risk Appetite to the Board, monitor and report adherence to Risk Appetite and intervene to curtail business if it is not in line with existing or adjusted Risk Appetite - Set risk data aggregation, risk reporting and data quality requirements
3 rd	The independent assurance provided by the Group Internal Audit function on the effectiveness of controls that support the first line's risk management of business activities, and the processes maintained by the second line. Its role is defined and overseen by the Audit Committee of the Board	- Independently assess whether management has identified the key risks in the business and whether these are reported and governed in line with the established risk management processes - Independently assess the adequacy of the design of controls and their operating effectiveness

1 Senior management in this table refers to individuals designated as senior management functions under the FCA and PRA Senior Managers Regime (SMR)

The Risk function

The Risk function is responsible for the sustainability of our business through good management of risk across the Group, and ensuring that business is conducted in line with regulatory expectations.

The Group Chief Risk Officer directly manages the Risk function that is separate and independent from the origination, trading and sales functions of the businesses. The Risk function is responsible for:

- Maintaining the ERMF, ensuring it remains relevant and appropriate to the Group's business activities, is effectively communicated and implemented across the Group and administering related governance and reporting processes
- Upholding the overall integrity of the Group's risk and return decisions to ensure that risks are properly assessed, that these decisions are made transparently on the basis of this proper assessment and that risks are controlled in accordance with the Group's standards and Risk Appetite, and
- Overseeing and challenging the management of Principal Risk Types under the ERMF

The independence of the Risk function ensures that the necessary balance in making risk and return decisions is not compromised by short-term pressures to generate revenues.

In addition, the Risk function is a centre of excellence that provides specialist capabilities of relevance to risk management processes in the broader organisation.

The Risk function supports the Group's commitment to be Here for good by building a sustainable framework that places regulatory and compliance standards, and a culture of appropriate conduct at the forefront of the Group's agenda in a manner proportionate to the nature, scale and complexity of the Group's business.

As of 1st January 2019, we have rebranded the Compliance function as Conduct, Financial Crime and Compliance (CFCC), reflecting the integration of the different areas within the function, under the Management Team leadership of the Group Head CFCC. CFCC works alongside the Risk function, within the framework of the ERMF, to deliver an aligned Second Line of Defence.

Risk Appetite and profile

We recognise the following constraints which determine the risks that we are willing to take in pursuit of our strategy and the development of a sustainable business:

- Risk capacity is the maximum level of risk the Group can assume, given its current capabilities and resources, before breaching constraints determined by capital and liquidity requirements and internal operational capability (including but not limited to technical infrastructure, risk management capabilities, expertise), or otherwise failing to meet the expectations of regulators and law enforcement agencies.
- Risk Appetite is defined by the Group and approved by the Board. It is the maximum amount and type of risk the Group is willing to assume in pursuit of its strategy. Risk Appetite cannot exceed risk capacity.

The Board has approved a Risk Appetite Statement, which is underpinned by a set of financial and operational control parameters known as Risk Appetite metrics and their associated thresholds. These directly constrain the aggregate risk exposures that can be taken across the Group. The Risk Appetite Statement is supplemented by an overarching statement outlining the Group's Risk Appetite Principles.

Risk Appetite Principles

The Group Risk Appetite is defined in accordance with risk management principles that inform our overall approach to risk management and our risk culture. We follow the highest ethical standards required by our stakeholders and ensure a fair outcome for our clients, as well as facilitating the effective operation of financial markets, while at the same time meeting expectations of regulators and law enforcement agencies. We set our Risk Appetite to enable us to grow sustainably and to avoid shocks to earnings or our general financial health, as well as manage our Reputational Risk in a way that does not materially undermine the confidence of our investors and all internal and external stakeholders.

Risk Appetite Statement

The Group will not compromise adherence to its Risk Appetite in order to pursue revenue growth or higher returns.

To keep the Group's Risk profile within Risk Appetite (and therefore also risk capacity), we have cascaded critical Group Risk Appetite metrics across our Principal Risk Types to countries with significant business operations. These are supplemented by risk control tools such as granular level limits, policies, standards and other operational control parameters that are used to keep the Group's risk profile within Risk Appetite. The Group's risk profile is its overall exposure to risk at a given point in time, covering all applicable risk types. Status against Risk Appetite is reported to the Board Risk Committee and the Group Risk Committee, including the status of breaches and remediation plans where applicable. Country Risk Appetite is managed at a country level with Group and regional oversight.

The Group Risk Committee, the Group Financial Crime Risk Committee, the Group Non-Financial Risk Committee and the Group Asset and Liability Committee are responsible for ensuring that our risk profile is managed in compliance with the Risk Appetite set by the Board. The Board Risk Committee and the Board Financial Crime Risk Committee (for Financial Crime Compliance) advise the Board on the Risk Appetite Statement and monitor the Group's compliance with it.

Risk identification and assessment

Identification and assessment of potentially adverse risk events is an essential first step in managing the risks of any business or activity. To ensure consistency in communication we use Principal Risk Types to classify our risk exposures. Nevertheless, we also recognise the need to maintain an overall perspective since a single transaction or activity may give rise to multiple types of risk exposure, risk concentrations may arise from multiple exposures that are closely correlated, and a given risk exposure may change its form from one risk type to another.

To facilitate the above, the Group maintains a dynamic risk scanning process with inputs on the internal and external risk environment, as well as considering potential threats and opportunities from the business and client perspectives. The Group maintains an inventory of the Principal Risk Types and sub-types that are inherent to the strategy and business model, near-term emerging risks that can be measured and mitigated to some extent, and uncertainties that are longer-term matters that should be on the radar but are not yet fully measurable.

Stress testing

The objective of stress testing is to support the Group in assessing that it:

- Does not have a portfolio with excessive concentrations of risk that could produce unacceptably high losses under severe but plausible scenarios
- Has sufficient financial resources to withstand severe but plausible scenarios
- Has the financial flexibility to respond to extreme but plausible scenarios
- Understands the key business model risks, considers what kind of event might crystallise those risks – even if extreme with a low likelihood of occurring – and identifies, as required, actions to mitigate the likelihood or the impact

Enterprise stress tests include Capital and Liquidity Adequacy Stress Tests, including in the context of recovery and resolution, and stress tests that assess scenarios where our business model becomes unviable, such as reverse stress tests.

Stress tests are performed at Group, country, business and portfolio level. Bespoke scenarios are applied to our traded and liquidity positions as described in the sections on Traded Risk and Liquidity Risk. In addition to these, our stress tests also focus on the potential impact of macroeconomic, geopolitical and physical events on relevant regions, client segments and risk types.

The Board delegates approval of stress test submissions to the Bank of England to the Board Risk Committee who reviews the recommendations from the Stress Testing Committee. The Stress Testing Committee is appointed by the Group Risk Committee to review and challenge the stress test scenarios, assumptions and results.

Based on the stress test results, the Group Chief Risk Officer and Group Chief Financial Officer can implement strategic actions to ensure that the Group Strategy remains within the Board-approved Risk Appetite.

Principal Risk Types

Principal Risk Types are risks that are inherent in our strategy and our business model and have been formally defined in the Group's ERMF. These risks are managed through distinct Risk Type Frameworks (RTF) which are approved by the Group Chief Risk Officer. The Principal Risk Types and associated Risk Appetite Statements are approved by the Board.

In 2018, through the development of the RTFs, we have revised the definition of certain Principal Risk Types to describe the risks or failures more explicitly. In addition, Market Risk has been renamed to Traded Risk to encompass all sensitivities to traded price risk. Traded risk now includes Market Risk, Counterparty Credit Risk, Issuer Risk, Valuation Adjustments, Pension Risk and Algorithmic Trading as risk sub-types. The table below shows the Group's current Principal Risk Types.

Principal Risks Types	Definition
Credit Risk	• Potential for loss due to the failure of a counterparty to meet its agreed obligations to pay the Group
Country Risk	• Potential for losses due to political or economic events in a country
Traded Risk	• Potential for loss resulting from activities undertaken by the Group in financial markets
Capital and Liquidity Risk	• Capital: potential for insufficient level, composition or distribution of capital to support our normal activities • Liquidity: potential for loss where we may not have sufficient stable or diverse sources of funding or financial resources to meet our obligations as they fall due
Operational Risk	• Potential for loss resulting from inadequate or failed internal processes and systems, human error, or from the impact of external events (including legal risks)
Reputational Risk	• Potential for damage to the franchise, resulting in loss of earnings or adverse impact on market capitalisation because of stakeholders taking a negative view of the organisation, its actions or inactions – leading stakeholders to change their behaviour
Compliance Risk	• Potential for penalties or loss to the Group or for an adverse impact to our clients, stakeholders or to the integrity of the markets we operate in through a failure on our part to comply with laws or regulations
Conduct Risk	• Risk of detriment to the Group's customers and clients, investors, shareholders, market integrity, competition and counterparties or from the inappropriate supply of financial services, including instances of willful or negligent misconduct
Information and Cyber Security Risk	• Potential for loss from a breach of confidentiality, integrity and availability of the Group's information systems and assets through cyber attack, insider activity, error or control failure
Financial Crime Risk	• Potential for legal or regulatory penalties, material financial loss or reputational damage resulting from the failure to comply with applicable laws and regulations relating to international sanctions, anti-money laundering and anti-bribery and corruption

Further details of our principal risks and how these are being managed are set out in the Principal Risks section.

ERMF Effectiveness Reviews

The Group Chief Risk Officer is responsible for annually affirming the effectiveness of the ERMF to the Board Risk Committee. To facilitate this, an effectiveness review was carried out which follows the principle of evidence-based self-assessments, for all the Risk Type Frameworks and relevant policies.

The ERMF Effectiveness Review conducted in 2018 provides an objective baseline against which progress can be measured over the coming years. The 2018 Effectiveness Review has shown that:

- The ERMF has been effectively designed to improve the Group's risk management practices through mechanisms which enable management to consistently assess the risk management practices across all risk types, proactively self-identify gaps or improvement opportunities, and develop action plans
- Through the framework, the Group is now able to tangibly measure and monitor effectiveness of its risk management practices
- Financial risks are managed more effectively on a relative basis as compared with the non-financial risks reflecting the maturity of these risk type frameworks

Over the course of 2019, the Group aims to further strengthen its risk management practices and work is underway to fully embed the Risk Type Frameworks for the non-financial risks.

Executive and Board risk oversight

Overview

The Board has ultimate responsibility for risk management and is supported by the six Board-level committees. The Board approves the ERMF based on the recommendation from the Board Risk Committee, which also recommends the Group Risk Appetite Statement other than sections related to Financial Crime Risk. Financial Crime Risk Appetite is reviewed and recommended to the Board by the Board Financial Crime Risk Committee.

The Board appoints the Standard Chartered Bank Court to maintain a sound system of internal control and risk management. The Group Risk Committee, through its authority received from the Court, oversees effective implementation of the ERMF. The Group Chief Risk Officer, as Chair of the Group Risk Committee, approves the use of sub-committees to support the Group Risk Committee to ensure effective risk management across the Group.

The Board Risk Committee receives regular reports on risk management, including the Group's portfolio trends, policies and standards, stress testing, and liquidity and capital adequacy, and is authorised to investigate or seek any information relating to an activity within its terms of reference. The Board Risk Committee also conducts deep-dive reviews on a rolling basis of different sections of the consolidated risk information report that is provided at each scheduled committee meeting.

Group Risk Committee

The Group Risk Committee is responsible for ensuring the effective management of risk throughout the Group in support of the Group's strategy. The Group Chief Risk Officer chairs the Group Risk Committee, whose members are drawn from the Group's Management Team. The Committee determines the ERMF for the Group, including the delegation of any part of its authorities to appropriate individuals or properly constituted sub-committees.

The Committee requests and receives relevant information to fulfil its governance mandates relating to the risks to which the Group is exposed. As with the Board Risk Committee, the Group Risk Committee and Group Asset and Liability Committee receive reports that include information on risk measures, Risk Appetite metrics and thresholds, risk concentrations, forward-looking assessments, updates on specific risk situations and actions agreed by these committees to reduce or manage risk.

Group Risk Committee sub-committees

The Group Non-Financial Risk Committee, chaired by the Group Head, Operational Risk, was established in 2018 to replace the Group Operational Risk Committee and ensures effective management of inherent non-financial principal risks throughout the Group. The non-financial Principal Risk Types in scope governed under the Group Non-Financial Risk Committee are Operational Risk, Compliance Risk, Conduct Risk, Information and Cyber Security Risk and Reputational Risk that is consequential in nature arising from the failure of all other principal risks (secondary Reputational Risk). The Committee also reviews and challenges the adequacy of the internal control systems across all Principal Risk Types.

The Group Financial Crime Risk Committee, chaired by the Group Head, CFCC, provides oversight of the effectiveness of the Group's policies, procedures, systems, controls and assurance arrangements designed to identify, assess, manage, monitor, prevent and/or detect money laundering, non-compliance with sanctions, bribery, corruption and tax crime by third parties.

The Group Information Management Governance Committee, chaired by the Group Chief Information Officer, ensures that the Group has an effective strategy and approach for data quality management framework, and that priorities, standards and metrics are in place and maintained taking into account the information-related requirements of internal and external stakeholders.

The Stress Testing Committee, chaired by the Global Head, Enterprise Risk Management, ensures the effective management of capital and liquidity-related enterprise stress testing in line with the Group's enterprise stress testing policy and applicable regulatory requirements. In addition, the Committee approves and provides oversight over stress testing models pertaining to Credit Risk, Traded Risk, Liquidity Risk and valuation models.

The IFRS 9 Impairment Committee, chaired by the Global Head, Enterprise Risk Management, ensures the effective management of expected credit loss computation as well as stage allocation of financial assets for quarterly financial reporting within the authorities set by the Group Risk Committee.

The Model Risk Committee, chaired by the Global Head, Enterprise Risk Management, ensures the effective measurement and management of model risk in support of the Group's strategy. The Committee also defines and approves the Group's model Risk Appetite, approves the Group's most material models and monitors the Group's model landscape and risk profile against the model Risk Appetite.

The Group Reputational Risk Committee, chaired by the Group Head, CFCC, oversees the effective management of Reputational Risk across the Group, including risks arising from decisions related to clients, products, transactions or pursuit of strategy at the time of decision-making (primary Reputational risk) and secondary Reputational Risk. The Committee takes decisions on material and thematic Reputational Risk issues.

The Corporate, Commercial & Institutional Banking Risk Committee (CCIBRC) covers risks arising from the Group's activities in Corporate & Institutional Banking and Commercial Banking globally and in the Europe & Americas region as well as Group-wide Traded risk, including oversight for Treasury Markets. The CCIBRC is chaired by the Chief Risk Officer, Corporate & Institutional Banking.

The Private Banking Process Governance and Risk Committee covers risks arising from the Group's activities in Private Banking and Wealth Management globally. It is jointly chaired by the Chief Risk Officer, Commercial Banking and Private Banking and the Global Head, Private Banking and Wealth Management.

The three regional risk committees, chaired by the Chief Risk Officer for each respective region, cover risks arising from their respective regions.

Group Asset and Liability Committee

The Group Asset and Liability Committee is chaired by the Group Chief Financial Officer. Its members are drawn principally from the Management Team. The Committee is responsible for determining the Group's approach to balance sheet management and ensuring that, in executing the Group's strategy, the Group operates within internally approved Risk Appetite and external requirements relating to capital, liquidity and leverage risk. It is also responsible for policies relating to balance sheet management, including management of our liquidity and capital adequacy, structural foreign exchange, interest rate and tax exposure.

Combined United States Operations Risk Committee

The Combined United States Operations Risk Committee was established in 2016 to comply with the Dodd-Frank Act section 165 Enhanced Prudential Standards (EPS Rules). The EPS Rules legislated a number of enhanced obligations on the US operations commensurate with its structure, risk profile, complexity, activities and size. The Committee receives its authority from the Standard Chartered Bank Court and is chaired by the Group Chief Risk Officer with membership drawn from the Standard Chartered Bank Court and one Independent Non-Executive Director of Standard Chartered PLC. Its responsibilities are drawn from the EPS Rules and pertain to liquidity, risk governance and oversight.

Principal risks

We manage and control our Principal Risk Types through distinct Risk Type Frameworks, policies and Board-approved Risk Appetite.

Credit Risk

The Group defines Credit Risk as the potential for loss due to the failure of a counterparty to meet its agreed obligations to pay the Group

Risk Appetite Statement

The Group manages its credit exposures following the principle of diversification across products, geographies, client segments and industry sectors

Roles and responsibilities

The Credit Risk Type Frameworks for the Group are set and owned by the Chief Risk Officers for the Corporate & Institutional Banking, Commercial Banking, Private Banking, and Retail Banking segments. The Credit Risk function is the second line control function responsible for independent challenge, monitoring and oversight of the Credit risk management practices of the business and functions engaged in or supporting revenue-generating activities, which constitute the first line of defence. In addition, to ensure that credit risks are properly assessed and are transparent, credit decisions are controlled in accordance with the Group's Risk Appetite and credit policies and standards.

Credit policies and standards are established and approved by the Credit Risk Type Framework owners or by individuals with delegated authorities. Segment specific policies are in place for the management of Credit risk. For Corporate & Institutional Banking and Commercial Banking, policies address large exposures, credit initiation, approval, monitoring, credit grading and documentation. For Retail Banking, policies address management of retail and business banking lending, account and portfolio monitoring, collections management and forbearance programmes. In addition, there are other Group-wide policies integral to Credit Risk management such as those relating to stress testing, risk measurement and impairment provisioning.

Mitigation

The Group credit policies set out the key considerations for eligibility, enforceability and effectiveness of Credit Risk mitigation arrangements. Potential credit losses from any given account, client or portfolio are mitigated using a range of tools such as collateral, netting agreements, credit insurance, credit derivatives and guarantees. The reliance that can be placed on risk mitigants is carefully assessed in light of issues such as legal certainty and enforceability, market valuation, correlation and counterparty risk of the protection provider. The requirement for risk mitigation is not a substitute for the ability to pay, which is the primary consideration for any lending decision.

Collateral types that are eligible as risk mitigants include: cash; accounts receivable; residential, commercial and industrial property; fixed assets such as motor vehicles, aircraft, plant and machinery; marketable securities; commodities; risk participations; guarantees; derivatives; credit insurance; and standby letters of credit. Physical collateral, such as property, fixed assets and commodities, and financial collateral must be independently valued and an active secondary resale market must exist. The collateral must be valued prior to drawdown and regularly thereafter as required to reflect current market conditions, the probability of recovery and the period of time to realise the collateral in the event of liquidation. Stress tests are performed on changes in collateral values for key portfolios to assist senior management in managing the risks in those portfolios. The Group also seeks to diversify its collateral holdings across asset classes and markets.

Documentation must be held to enable the Group to realise the collateral without the cooperation of the obligor in the event that this is necessary. For certain types of lending, typically mortgages or asset financing where a first charge over the risk mitigant must be attained, the right to take charge over physical assets is significant in terms of determining appropriate pricing and recoverability in the event of default. Physical collateral is required to be insured at all times against risk of physical loss or damage.

Where guarantees, credit insurance, standby letters of credit or credit derivatives are used as Credit Risk mitigation, the creditworthiness of the protection provider is assessed and monitored using the same credit approval process applied to the obligor. The main types of guarantors include banks, insurance companies, parent companies, governments and export credit agencies.

Governance committee oversight

At the Board level, the Board Risk Committee oversees the effective management of Credit Risk.

At the executive level, the Group Risk Committee appoints sub-committees for the management of Credit Risk – in particular the CCIBRC, the Private Banking Process Governance and Risk Committee, and the regional risk committees for Greater China & North Asia, ASEAN & South Asia and Africa & Middle East. These committees are responsible for overseeing the Credit Risk profile of the Group within the respective business areas and regions. Meetings are held regularly and the committees monitor all material Credit Risk exposures, as well as key internal developments and external trends, and ensure that appropriate action is taken.

The Group Risk Committee appoints sub-committees for effective management of enterprise stress testing, model governance for Credit Risk, and approval of impairment provisions computed under the IFRS 9 expected credit loss model to the Stress Testing Committee, the Model Risk Committee and the IFRS 9 Impairment Committee respectively.

Decision-making authorities and delegation

The Credit Risk Type Frameworks are the formal mechanism which delegate Credit Risk authorities to individuals such as the Group Chief Risk Officer, the segments' Chief Risk Officers and Global Heads of Risks based on their abilities and management responsibilities. Named individuals further delegate credit authorities to individual credit officers by applying delegated credit authority matrices by customer type or portfolio. These matrices establish the maximum limits that the delegated credit officers are authorised to approve, based on risk-adjusted scales which take into account the estimated maximum expected loss from a given customer or portfolio. Credit Risk authorities are reviewed at least annually to ensure they remain appropriate. In Corporate & Institutional Banking, Commercial Banking and Private Banking, the individuals delegating the Credit Risk authorities perform oversight by reviewing a sample of the limit applications approved by the delegated credit officers on a monthly basis. In Retail Banking, credit decision systems and tools (e.g. application scorecards) are used for credit decisioning. Where manual credit decisions are applied, these are subject to periodic quality control assessment and assurance checks.

All credit proposals are subject to a robust Credit Risk assessment. It includes a comprehensive evaluation of the client's credit quality, including willingness, ability and capacity to repay. The primary lending consideration is based on the client's credit quality and the repayment capacity from operating cashflows for counterparties; and personal income or wealth for individual borrowers. The risk assessment gives due consideration to the client's liquidity and leverage position. Where applicable, the assessment includes a detailed analysis of the Credit Risk mitigation arrangements to determine the level of reliance on such arrangements as the secondary source of repayment in the event of a significant deterioration in a client's credit quality leading to default. Lending activities that are considered as higher risk or non-standard are subject to stricter minimum requirements and require escalation to a senior credit officer or authorised senior executives for approval.

Monitoring

We regularly monitor credit exposures, portfolio performance, and external trends that may impact risk management outcomes. Internal risk management reports that are presented to risk committees contain information on key political and economic trends across major portfolios and countries; portfolio delinquency and loan impairment performance.

Credit Risk committees meet regularly to assess the impact of external events and trends on the Group's Credit Risk portfolios and to define and implement our response in terms of the appropriate changes to portfolio shape, underwriting standards, risk policy and procedures.

In Corporate & Institutional Banking and Commercial Banking, clients or portfolios are subjected to additional review when they display signs of actual or potential weakness; for example, where there is a decline in the client's position within the industry, financial deterioration, a breach of covenants, non-performance of an obligation within the stipulated period, or there are concerns relating to ownership or management. Such accounts and portfolios are subjected to a dedicated process overseen by the Credit Issues Committees in the relevant countries where client account strategies and credit grades are re-evaluated. In addition, remedial actions are agreed and monitored. Remedial actions include, but are not limited to, exposure reduction, security enhancement, exiting the account or immediate movement of the account into the control of Group Special Assets Management (GSAM), which is our specialist recovery unit for Corporate & Institutional Banking, Commercial Banking and Private Banking that operates independently from our main business.

For Retail Banking exposures, portfolio delinquency trends are monitored on an ongoing basis. Account monitoring is based on behaviour scores and bureau performance (where available). Accounts that are past due (or perceived as high risk and not yet past due) are subject to a collections or recovery process managed by a specialist function independent from the origination function. In some countries, aspects of collections and recovery activities are outsourced.

Credit rating and measurement

Risk measurement plays a central role, along with judgement and experience, in informing risk-taking and portfolio management decisions. Since 1 January 2008, we have used the advanced internal ratings-based approach under the Basel regulatory framework to calculate Credit Risk capital requirements.

A standard alphanumeric Credit Risk grade system is used for Corporate & Institutional Banking and Commercial Banking. The numeric grades run from 1 to 14 and some of the grades are further sub-classified. Lower numeric credit grades are indicative of a lower likelihood of default. Credit Grades 1 to 12 are assigned to performing customers, while Credit Grades 13 and 14 are assigned to non-performing or defaulted customers.

Retail Banking internal ratings-based portfolios use application and behavioural credit scores that are calibrated to generate a probability of default and then mapped to the standard alphanumeric Credit Risk grade system. We refer to external ratings from credit bureaus (where these are available); however, we do not rely solely on these to determine Retail Banking credit grades.

Advanced internal ratings-based models cover a substantial majority of our exposures and are used in assessing risks at a customer and portfolio level, setting strategy and optimising our risk-return decisions. Material internal ratings-based risk measurement models are approved by the Model Risk Committee. Prior to review and approval, all internal ratings-based models are validated in detail by a model validation team which is separate from the teams that develop and maintain the models. Models undergo annual validation by the model validation team. Reviews are also triggered if the performance of a model deteriorates materially against predetermined thresholds during the ongoing model performance monitoring process which takes place between the annual validations.

Credit concentration risk

Credit concentration risk may arise from a single large exposure to a counterparty or a group of connected counterparties, or from multiple exposures across the portfolio that are closely correlated. Large exposure concentration risk is managed through concentration limits set for a counterparty or a group of connected counterparties based on control and economic dependence criteria. Risk Appetite metrics are set at portfolio level and monitored to control concentrations, where appropriate, by industry, specific products, tenor, collateralisation level, top 20 concentration and exposure to holding companies. Single name credit concentration thresholds are set by client group depending on credit grade, and by customer segment. For concentrations that are material at a Group level, breaches and potential breaches are monitored by the respective governance committees and reported to the Group Risk and Board Risk Committees.

Credit impairment

Effective from 1 January 2018, we have adopted the impairment requirements of IFRS 9 Financial Instruments, where expected credit losses are determined for all financial assets that are classified as amortised cost or fair value through other comprehensive income. Expected credit losses are computed as an unbiased, probability-weighted amount determined by evaluating a range of plausible outcomes, the time value of money, and considering all reasonable and supportable information including that which is forward-looking. When determining forward looking expected credit losses, the Group also considers a set of critical global or country-specific macroeconomic variables that influence Credit Risk. Global macroeconomic variables include commodity prices such as crude oil, commodity indices, bond indices and others such as aircraft prices. Country-specific macroeconomic variables include foreign exchange rates, interest rates, fiscal indicators like government spending and government debt, country economic indicators such as real GDP, unemployment rate and consumer price indices, and property indicators like residential property indices.

At the time of origination or purchase of a non-credit-impaired financial asset (stage 1), expected credit losses represent cash shortfalls arising from possible default events up to 12 months into the future from the balance sheet date. Expected credit losses continue to be determined on this basis until there is a significant increase in the Credit Risk of the asset (stage 2), in which case, an expected credit loss provision is recognised for default events that may occur over the lifetime of the asset. If there is observed objective evidence of credit impairment or default (stage 3), expected credit losses continue to be measured on a lifetime basis.

The Group's definition of default is aligned with the regulatory definition of default as set out in European Capital Requirements Regulation (CRR178) and related guidelines, where the obligor is at least 90 days past due in respect of principal and/or interest. A loan is considered past due (or delinquent), when the customer has failed to make a principal or interest payment in accordance with the loan contract. Financial assets are also considered to be credit-impaired where the obligors are unlikely to pay on the occurrence of one or more observable events that have a detrimental impact on the estimated future cash flows of the financial asset.

In Corporate & Institutional Banking, Commercial Banking and Private Banking, a loan is considered credit-impaired where analysis and review indicate that full payment of either interest or principal, including the timeliness of such payment, is questionable, or as soon as payment of interest or principal is 90 days overdue. These credit-impaired accounts are managed by our specialist recovery unit (GSAM).

In Retail Banking, a loan is considered credit-impaired as soon as payment of interest or principal is 90 days overdue or meets other objective evidence of impairment such as bankruptcy, debt restructuring, fraud or death.

Financial assets are written off when there is no realistic prospect of recovery and the amount of loss has been determined. For Retail Banking assets, a financial asset is written off when it meets certain threshold conditions which are set at the point where empirical evidence suggests that the client is unlikely to meet their contractual obligations, or a loss of principal is expected.

Estimating the amount and timing of future recoveries involves significant judgement, and considers the assessment of matters such as future economic conditions and the value of collateral, for which there may not be a readily accessible market. The total amount of the Group's impairment provision is inherently uncertain, being sensitive to changes in economic and credit conditions across the regions in which the Group operates. For more details on sensitivity analysis of expected credit losses under IFRS 9.

Stress testing

Stress testing is a forward-looking risk management tool that constitutes a key input into the identification, monitoring and mitigation of Credit Risk, as well as contributing to Risk Appetite calibration. Periodic stress tests are performed on the credit portfolio/segment to anticipate vulnerabilities from stressed conditions and initiate timely right-sizing and mitigation plans. Additionally, multiple enterprise-wide and country-level stress tests are mandated by regulators to assess the ability of the Group and its subsidiaries to continue to meet their capital requirements during a plausible, adverse shock to the business. These regulatory stress tests are conducted in line with the principles stated in the Enterprise Stress Testing Policy. The Group's enterprise stress testing programme adopted IFRS 9 in full in 2018 and all enterprise stress tests conducted during 2018 were performed on an IFRS 9 basis. Stress tests for key portfolios are reviewed by the Credit Risk Type Framework owners (or delegates) as part of portfolio oversight; and matters considered material to the Group are escalated to the Group Chief Risk Officer and respective regional risk committees.

Country Risk

The Group defines Country Risk as the potential for losses due to political or economic events in a country

Risk Appetite Statement

The Group manages its country cross-border exposures following the principle of diversification across geographies and controls business activities in line with the level of jurisdiction risk

Roles and responsibilities

The Country Risk Type Framework provides clear accountability and roles for managing risk through the three lines of defence model. The Global Head, Enterprise Risk Management is responsible for the management and control of Country Risk across the Group and is supported by the Regional Chief Risk Officers and Country Chief Risk Officers who provide second line oversight and challenge to the first line Country Risk management activities. The first line ownership of Country Risk resides with the country CEOs who are responsible for the implementation of policy and allocation of approved Country Risk limits across relevant businesses and product lines, as well as the identification and measurement of Country Risks and communication of these and any non-compliance with policy or standards to the second line.

Mitigation

Standards are developed and deployed to implement requirements and controls that all countries must follow to ensure effective management of Country Risk. The standards outline the process for Country Risk limit setting, monitoring and reporting exposures. In response to growing concerns over the Country Risk outlook for a particular country, sovereign ratings may be downgraded and country limits may also be reduced.

Governance committee oversight

At the Board level, the Board Risk Committee oversees the effective management of Country Risk. At the executive level, the Group Risk Committee is responsible for approving policies and control risk parameters, monitoring material risk exposures and directing appropriate action in response to material risk issues or themes that come to the Committee's attention that relate to Country Risk. At a country level, the Country Risk Committee (or Executive Risk Committee for subsidiaries) is responsible for monitoring all risk issues for the respective country, including Country Risk.

Decision-making authorities and delegation

The Country Risk Type Framework is the formal mechanism through which the delegation of Country Risk authorities is made. Decision-making and approval authorities are guided by country capacity levels, which are guidelines to set country limits in respect of Country Risk. The capacity levels are assessed by the Group Country Risk function and are derived from factors including: Group Tier 1 capital, transfer risk grade, Group strategy, portfolio composition (short and medium-term) and each country's total foreign currency earnings.

Monitoring

Monitoring and reporting of Country Risk is included in the standards and covers the monitoring of exposures relative to Risk Appetite thresholds and limits, as well as the reporting of material exposures to internal committees and externally where appropriate. The Group Risk Committee monitors Risk Appetite thresholds on a traffic-light indicator basis, and these provide an early warning signal of stress and concentration risk. An escalation process to the Board Risk Committee is in place based on the traffic-light indicators monitoring system. In addition, the Group Risk Committee and the Board Risk Committee receive regular reports on Country Risk exposures in excess of 1 per cent of total Group assets.

Stress testing

The Group Country Risk team produces stressed Sovereign ratings which are used by the relevant Credit and Traded Risk teams in calculating risk-weighted assets during described extreme but plausible stress scenarios.

Traded Risk

The Group defines Traded Risk as the potential for loss resulting from activities undertaken by the Group in financial markets

Risk Appetite Statement

The Group should control its trading portfolio and activities to ensure that Traded Risk losses (financial or reputational) do not cause material damage to the Group's franchise

Under the Enterprise Risk Management Framework, the introduction of the Traded Risk Type Framework (TRTF) in 2018 sought to bring together all risk types exhibiting risk features common to Traded Risk.

These risk types include Market Risk, Counterparty Credit Risk, Issuer Risk, XVA, Algorithmic Trading and Pension Risk. Traded Risk Management (TRM, formerly Market and Traded Credit Risk) is the core risk management function supporting market-facing businesses, specifically Financial Markets and Treasury Markets.

Roles and responsibilities

The TRTF, which sets the roles and responsibilities in respect of Traded Risk for the Group, is owned by the Global Head, Traded Risk Management. The front office, acting as first line of defence, are responsible for the effective management of risks within the scope of its direct organisational responsibilities set by the Board. The TRM function is the second line control function that performs independent challenge, monitoring and oversight of the Traded Risk management practices of the first line of defence. The first and second lines of defence are supported by the organisation structure, job descriptions and authorities delegated by Traded Risk control owners.

Mitigation

The Group controls its trading portfolio and activities to ensure that Traded Risk losses (financial or reputational) do not cause material damage to the Group's franchise by assessing the various Traded Risk factors. These are captured and analysed using proprietary and custom-built analytical tools, in addition to risk managers' specialist market and product knowledge.

TRM has a framework, policies and standards in place ensuring that appropriate Traded Risk limits are implemented. The Group's Traded Risk exposure is aligned with its appetite for Traded Risk, and assessment of potential losses that might be incurred by the Group as a consequence of extreme but plausible events.

Traded Risk limits are applied as required by the TRTF and related standards. All businesses incurring Traded risk must do so in compliance with the TRTF. The TRTF requires that Traded Risk limits are defined at a level appropriate to ensure that the Group remains within Traded Risk Appetite. All exposures throughout the Group that the TRM function is responsible for aggregate up to TRM's Group-level reporting. This aggregation approach ensures that the limits structure across the Group is consistent with the Group's Risk Appetite.

The TRTF and Enterprise Stress Testing Policy ensure that adherence to stress-related Risk Appetite metrics is achieved. Stress testing aims at supplementing other risk metrics used within the Group by providing a forward-looking view of positions and an assessment of their resilience to stressed market conditions. Stress testing is performed on all Group businesses with Traded risk exposures, either where the risk is actively traded or where material risk remains. This additional information is used to inform the management of the Traded risks taken within the Group. The outcome of stress tests is discussed across the various business lines and management levels so that existing and potential risks can be reviewed, and related management actions can be decided upon where appropriate.

Policies are reviewed and approved by the Global Head, TRM annually to ensure their ongoing effectiveness and sustainability.

Governance committee oversight

At the Board level, the Board Risk Committee oversees the effective management of Traded Risk. At the executive level, the Group Risk Committee delegates responsibilities to the CCIBRC to act as the primary risk governance body for Traded Risk, and to the Stress Testing Committee for stress testing and the Model Risk Committee for model risk.

Decision-making authorities and delegation

The Group's Risk Appetite Statement, along with the key associated Risk Appetite metrics, is approved by the Board with responsibility for Traded Risk limits, then tiered accordingly.

Subject to the Group's Risk Appetite for Traded Risk, the Group Risk Committee sets Group-level Traded Risk limits, via delegation to the GCRO. The GCRO delegates authority for the supervision of major business limits to the CRO, Corporate & Institutional Banking and for all other Traded Risk limits to the TRTF Owner (Global Head, TRM) who in turn delegates approval authorities to individual Traded Risk managers.

Additional limits are placed on specific instruments, positions, and portfolio concentrations where appropriate. Authorities are reviewed at least annually to ensure they remain appropriate and to assess the quality of decisions taken by the authorised person. Key risk-taking decisions are made only by certain individuals with the skills, judgement and perspective to ensure that the Group's control standards and risk-return objectives are met. Authority delegators are responsible for monitoring the quality of the risk decisions taken by their delegates and the ongoing suitability of their authorities.

Market Risk – Value at Risk

The Group applies VaR as a measure of the risk of losses arising from future potential adverse movements in market rates, prices and volatilities. VaR, in general, is a quantitative measure of Market Risk that applies recent historical market conditions to estimate the potential future loss in market value that will not be exceeded in a set time period at a set statistical confidence level. VaR provides a consistent measure that can be applied across trading businesses and products over time and can be set against actual daily trading profit and loss outcomes.

VaR is calculated for expected movements over a minimum of one business day and to a confidence level of 97.5 per cent. VaR is calculated on our exposure as at the close of business, generally UK time. Intra-day risk levels may vary from those reported at the end of the day.

The Group applies two VaR methodologies:

- Historical simulation: this involves the revaluation of all existing positions to reflect the effect of historically observed changes in Market Risk factors on the valuation of the current portfolio. This approach is applied for general Market Risk factors and the majority of specific (credit spread) risk VaRs
- Monte Carlo simulation: this methodology is similar to historical simulation but with considerably more input risk factor observations. These are generated by random sampling techniques, but the results retain the essential variability and correlations of historically observed risk factor changes. This approach is applied for some of the specific (credit spread) risk VaR in relation to idiosyncratic exposures in credit markets

In both methods, a historical observation period of one year is chosen and applied.

A small proportion of Market Risk generated by trading positions is not included in VaR or cannot be appropriately captured by VaR. This is recognised through a Risks-not-in-VaR Framework, which estimates these risks and applies capital add-ons.

To assess their ongoing performance, VaR models are backtested against actual results.

An analysis of VaR and backtesting results in 2018 is available in the Risk profile section.

Counterparty Credit Risk

Credit Risk from traded products derives from the positive mark-to market value of the underlying instruments, and an additional component to cater for potential future market movements. This Counterparty Credit Risk is managed within the Group's overall credit Risk Appetite for corporate and financial institutions. In addition to analysing potential future movements, the Group uses various single factor or multi-risk factor stress test scenarios to identify and manage Counterparty Credit Risk across derivatives and securities financing transactions.

Underwriting

The limits for the underwriting of securities to be held for sale are approved by the Underwriting Committee, under the authority of the CCIBRC. The limits include the overall size of the securities inventory, the maximum holding period, the daily VaR, and sensitivities to interest rate and credit spread moves. The Underwriting Committee approves individual proposals to underwrite new security issues for our clients.

Day-to-day Credit Risk management activities for traded securities are carried out by a specialist team within TRM whose activities include oversight and approval within the levels delegated by the Underwriting Committee. Issuer credit risk, including settlement and pre-settlement risk, and price risks are controlled by TRM. Where an underwritten security is held for a period longer than the target sell-down period, the final decision on whether to sell the position rests with TRM.

Monitoring

TRM monitors the overall portfolio risk and ensures that it is within specified limits and therefore Risk Appetite. The annual and mid-year limit review processes provide opportunities for the business and TRM to review risk in light of performance.

Traded Risk exposures are monitored daily against approved limits. Intra-day risk exposures may vary from those reported at the end of the day. Limit excess approval decisions are informed by factors such as an assessment of the returns that will result from an incremental increase to the business risk exposure. Limits and excesses can only be approved by a Traded Risk manager with the appropriate delegated authority. Financial Markets traders may adjust their Traded Risk exposures within approved limits and assess risk and reward trade-offs according to market conditions.

TRM reports and monitors limits applied to stressed exposures. Stress scenario analysis is performed on all Traded Risk exposures in Financial Markets and in portfolios outside Financial Markets such as syndicated loans and principal finance. Stress loss excesses are discussed with the business and approved where appropriate based on delegated authority levels.

Stress testing

The VaR measurement is complemented by weekly stress testing of Market Risk exposures to highlight the potential risk that may arise from extreme market events that are deemed rare but plausible.

Stress testing is an integral part of the Traded Risk management framework and considers both historical market events and forward-looking scenarios. A consistent stress testing methodology is applied to trading and non-trading books. The stress testing methodology assumes that scope for management action would be limited during a stress event, reflecting the decrease in market liquidity that often occurs.

Stress scenarios are regularly updated to reflect changes in risk profile and economic events. The TRM function reviews stress testing results and, where necessary, enforces reductions in overall Market Risk exposure. The Group Risk Committee considers the results of stress tests as part of its supervision of Risk Appetite.

Regular stress test scenarios are applied to interest rates, credit spreads, exchange rates, commodity prices and equity prices. This covers all asset classes in the Financial Markets banking and trading books, including XVA (CVA and FVA). Ad hoc scenarios are also prepared, reflecting specific market conditions and for particular concentrations of risk that arise within the business. Where required by local statute or regulation, TRM's Group and business-wide stress and scenario testing will be supplemented by entity stress testing at a country level. This stress testing is coordinated at the country level and subject to the relevant local governance.

Capital and Liquidity Risk

The Group defines Capital Risk as the potential for insufficient level, composition or distribution of capital to support our normal activities, and Liquidity Risk as the risk that we may not have sufficient stable or diverse sources of funding to meet our obligations as they fall due

Risk Appetite Statement

The Group should maintain a strong capital position including the maintenance of management buffers sufficient to support its strategic aims and hold an adequate buffer of high-quality liquid assets to survive extreme but plausible liquidity stress scenarios for at least 60 days without recourse to extraordinary central bank support

Roles and responsibilities

The Treasurer is responsible for developing a risk type framework for Capital and Liquidity Risk and for complying with regulatory requirements at a Group level. The Treasury and Finance functions, as the Second Line of Defence, provide independent challenge and oversight of the first line risk management activities relating to Capital and Liquidity Risk. In country, the Treasurer is supported by Treasury and Finance in implementing the Capital and Liquidity Risk Type Framework.

Mitigation

The Group develops policies to address material Capital and Liquidity risks and aims to maintain its risk profile within Risk Appetite. Risk Appetite is set for the Group and cascaded down to the countries in the form of limits and management action triggers. The Group also maintains a Recovery Plan which is a live document to be used by management in a liquidity or solvency stress. The Recovery Plan includes a set of Recovery Indicators, an escalation framework and a set of management actions capable of being implemented in a stress. A Recovery Plan is also maintained within each major country.

The approach to mitigation is detailed further below.

Capital planning

On an annual basis, strategic business and capital plans are drawn up covering a five-year horizon, and are approved by the Board. The capital plan ensures that adequate levels of capital, including loss absorbing capacity, and an efficient mix of the different components of capital are maintained to support our strategy and business plans. Treasury is responsible for the ongoing assessment of the demand for capital and the updating of the Group's capital plan.

Capital planning takes the following into account:

- Current regulatory capital requirements and our assessment of future standards and how these might change
- Demand for capital due to the business and loan impairment outlook and potential market shocks or stresses
- Available supply of capital and capital raising options, including ongoing capital accretion from the business

Structural FX risk

The Group's structural position results from the Group's non-US dollar investment in the share capital and reserves of subsidiaries and branches. The FX translation gains or losses are recorded in the Group's Translation Reserves with a direct impact on the Group's CET1 ratio.

The Group contracts hedges to manage its structural FX position in accordance with a Board-approved Risk Appetite, and as a result the Group has taken net investment hedges to partly cover its exposure to the Korean won, Chinese renminbi, Taiwanese dollar and Indian rupee to mitigate the FX impact of such positions on its capital ratios.

Liquidity Risk

At Group and country level we implement various business-as-usual and stress risk metrics and monitor these against limits and management action triggers. This ensures that the Group maintains an adequate and well-diversified liquidity buffer as well as a stable funding base. A funding plan is also developed for efficient liquidity projection to ensure that the Group is adequately funded, in the required currencies, to meet its obligations and client funding needs. The approach to managing the risks and the Board Risk Appetite is assessed annually through the Internal Liquidity Adequacy Assessment Process.

Interest rate risk in banking book

The Group defines interest rate risk in the banking book (IRRBB) as the potential for a reduction in future earnings or economic value due to changes in interest rates. This risk arises from differences in the re-pricing profile, interest rate basis, and optionality of banking book assets, liabilities and off-balance sheet items. The Group monitors IRRBB against a Board-approved Risk Appetite.

Governance committee oversight

At the Board level, the Board Risk Committee oversees the effective management of Capital and Liquidity Risk. At the executive level, the Group Asset and Liability Committee ensures the effective management of risk throughout the Group in support of the Group's strategy, and guides the Group's strategy on balance sheet optimisation and ensures that the Group operates within the internally approved Risk Appetite, as well as other external and internal capital and liquidity requirements. The Group Asset and Liability Committee delegates part of this responsibility to the Operational Balance Sheet Committee to ensure alignment with business objectives.

Country oversight under the capital and liquidity framework resides with country Asset and Liability Committees. Countries must ensure that they remain in compliance with Group capital and liquidity policies and practices, as well as local regulatory requirements.

The Stress Testing Committee ensures the effective management of capital and liquidity-related enterprise stress testing in line with the Group's Enterprise Stress Testing Policy and applicable regulatory requirements. The Stress Testing Committee reviews, challenges and approves stress scenarios, results and management actions for all enterprise stress tests. Insights gained from the stress tests are used to inform underwriting decisions, risk management, capital and liquidity planning and strategy.

Decision-making authorities and delegation

The Group Chief Financial Officer has responsibility for capital, funding and liquidity under the Senior Managers Regime. The Group Chief Financial Officer and Group Chief Risk Officer have delegated the Risk Framework Owner responsibilities associated with Capital and Liquidity Risk to the Treasurer. The Treasurer delegates second line oversight and challenge responsibilities to relevant and suitably qualified Treasury and Finance individuals.

Monitoring

On a day-to-day basis, the management of Capital and Liquidity Risk is performed by the country Chief Executive Officer and Treasury Markets respectively. The Group regularly reports and monitors capital and liquidity risks inherent in its business activities and those that arise from internal and external events. The management of capital and liquidity is monitored by Treasury and Finance with appropriate escalation processes in place.

Internal risk management reports covering the balance sheet and the capital and liquidity position of the Group are presented to the Operational Balance Sheet Committee and the Group Asset and Liability Committee. The reports contain key information on balance sheet trends, exposures against Risk Appetite and supporting risk measures which enable members to make informed decisions around the overall management of the Group's balance sheet. Oversight at a country level is provided by the country Asset and Liability Committee, with a focus on the local capital and liquidity risks, local prudential requirements and risks that arise from local internal and external events.

Stress testing

Stress testing and scenario analysis are an integral part of the capital and liquidity framework, and are used to ensure that the Group's internal assessment of capital and liquidity considers the impact of extreme but plausible scenarios on its risk profile. They provide an insight into the potential impact of significant adverse events on the Group's capital and liquidity position and how this could be mitigated through appropriate management actions to ensure the Group remains within the approved Risk Appetite and regulatory limits.

Operational Risk

The Group defines Operational Risk as the potential for loss resulting from inadequate or failed internal processes and systems, human error, or from the impact of external events (including legal risks)

Risk Appetite Statement

The Group aims to control operational risks to ensure that operational losses (financial or reputational), including any related to conduct of business matters, do not cause material damage to the Group's franchise

Roles and responsibilities

The Operational Risk Type Framework (ORTF) is set by the Group Head, Operational Risk and is applicable enterprise-wide. This Framework defines and collectively groups operational risks which have not been classified as Principal Risk Types into non-Principal Risk Types (non-PRTs) and sets standards for the identification, control, monitoring and treatment of risks. These standards are applicable across all PRTs and non-PRTs. The non-PRTs relate to execution capability, fraud, corporate governance, reporting and obligations, model, safety and security, legal enforceability, and operational resilience (including client service, third party vendor services, change management, and system availability).

The ORTF reinforces clear accountability for managing risk throughout the Group and delegates second line of defence responsibilities to identified subject matter experts. For each non-PRT, the expert sets policies for the organisation to comply with, and provides guidance, oversight and challenge over the activities of the Group. They ensure that key risk decisions are only taken by individuals with the requisite skills, judgement, and perspective to ensure that the Group's risk/return objectives are met.

Mitigation

The ORTF sets out the Group's overall approach to the management of Operational Risk in line with the Group's Operational Risk Appetite. This is supported by Control Assessment Standards (CAS) which define roles and responsibilities for the identification, control and monitoring of risks (applicable to all non-PRTs and PRTs).

The CAS are used to determine the design strength and reliability of each process, and require:

- The recording of processes run by client segments, products, and functions into a process universe
- The identification of potential breakdowns to these processes and the related risks of such breakdowns
- An assessment of the impact of the identified risks based on a consistent scale
- The design and monitoring of controls to mitigate prioritised risks
- Assessments of residual risk and prompt actions for elevated risks

Risks that exceed the Group's Operational Risk Appetite require treatment plans to address underlying causes.

Governance committee oversight

At the Board level, the Board Risk Committee oversees the effective management of Operational risk. At the executive level, the Group Risk Committee delegates authority primarily to the Group Non-Financial Risk Committee (GNFRC) to monitor the Group's Operational Risk Appetite and to oversee the Group's Operational risk profile. The GNFRC has the authority to challenge, constrain and, if required, stop business activities where risks are not aligned with the Group's Operational Risk Appetite.

Regional, business segments and functional-committees also provide enterprise oversight of their respective processes and related operational risks. In addition, Country Non-Financial Risk Committees (CNFRCs) oversee the management of Operational risks at the country (or entity) level. In smaller countries, the responsibilities of the CNFRC may be exercised directly by the Country Risk Committee (for Branches) or Executive Risk Committee (for Subsidiaries).

Monitoring

To deliver services to clients and to participate in the financial services sector, the Group runs processes which are exposed to operational risks. The Group prioritises and manages risks which are significant to clients and to the financial services sectors. Control indicators are regularly monitored to determine the residual risk the Group is exposed to. The residual risk assessments and reporting of events form the Group's Operational Risk profile. The completeness of the Operational Risk profile ensures appropriate prioritisation and timeliness of risk decisions, including risk acceptances with treatment plans for risks that exceed acceptable thresholds.

The Board is informed on adherence to Operational Risk Appetite through metrics reported for selected risks. These metrics are monitored and escalation thresholds are devised based on the materiality and significance of the risk. These Operational Risk Appetite metrics are consolidated on a regular basis and reported at relevant Group committees. This provides senior management with the relevant information to inform their risk decisions.

Stress testing

Stress testing and scenario analysis are used to assess capital requirements for operational risks. This approach considers the impact of extreme but plausible scenarios on the Group's Operational Risk profile. A number of scenarios have been identified to test the robustness of the Group's processes, and assess the potential impact on the Group. These scenarios include anti-money laundering, sanctions, information and cyber security and external fraud.

Reputational Risk

The Group defines Reputational Risk as the potential for damage to the franchise, resulting in loss of earnings or adverse impact on market capitalisation because of stakeholders taking a negative view of the organisation, its actions or inactions – leading stakeholders to change their behaviour

Risk Appetite Statement

The Group aims to protect the franchise from material damage to its reputation by ensuring that any business activity is satisfactorily assessed and managed by the appropriate level of management and governance oversight

Roles and responsibilities

The Global Head, Enterprise Risk Management is the Risk Framework Owner for Reputational Risk under the Group's Enterprise Risk Management Framework. For primary risks, the responsibility of Reputational Risk management at country level is delegated to Country Chief Risk Officers. Both the Global Head, Enterprise Risk Management and Country Chief Risk Officers constitute the second line of defence, overseeing and challenging the first line which resides with the Chief Executive Officers, Business Heads and Product Heads in respect of risk management activities of reputational-related risks. The Group recognises that there is also the potential for consequential Reputational Risk should it fail to control other Principal Risk Types. Such secondary reputational risks are managed by the Risk Framework Owners of each Principal Risk Type who are responsible for enhancing existing risk management frameworks to incorporate Reputational Risk management approaches.

Mitigation

The Group's Reputational Risk policy sets out the principal sources of Reputational Risk and the responsibilities and procedures for identifying, assessing and escalating primary and secondary reputational risks. The policy also defines the control and oversight standards to effectively manage Reputational Risk. The Group takes a structured approach to the assessment of risks associated with how individual client, transaction, product and strategic coverage decisions may affect perceptions of the organisation and its activities. Wherever a potential for stakeholder concerns is identified, issues are subject to prior approval by a management authority commensurate with the materiality of matters being considered. Such authorities may accept or decline the risk or impose conditions upon proposals, to protect the Group's reputation. Secondary Reputational Risk mitigation derives from the effective management of other Principal Risk Types.

Governance committee oversight

The Brand, Values and Conduct Committee retains Board-level oversight responsibility for Reputational Risk. Oversight from an operational perspective falls under the remit of the Group Risk Committee and the Board Risk Committee. The Group Reputational Risk Committee ensures the effective management of primary Reputational Risk across the Group.

The Group Reputational Risk Committee's remit is to:

- Challenge, constrain and, if required, stop business activities where risks are not aligned with the Group's Risk Appetite
- Make decisions on Reputational Risk matters assessed as high or very high based on the Group's primary Reputational Risk materiality assessment matrix, and matters escalated from the regions or client businesses
- Provide oversight of material Reputational Risk and/or thematic issues arising from the potential failure of other risk types

The Group Non-Financial Risk Committee has oversight of the effective management of secondary Reputational Risk.

Decision-making authorities and delegation

The Group Risk Committee provides Group-wide oversight on Reputational Risk, approves policy and monitors material risks. The Group Reputational Risk Committee is authorised to approve or decline Reputational Risk aspects of any business transaction, counterparty, client, product, line of business and market within the boundaries of the Group's Risk Appetite, and any limits and policies set by authorised bodies of the Group.

Monitoring

Reputational Risk policies and standards are applicable to all Group entities. However, local regulators in some markets may impose additional requirements on how banks manage and track Reputational Risk. In such cases, these are complied with in addition to Group policies and standards. Exposure to Reputational Risk is monitored through:

- A requirement that process owners establish triggers to prompt consideration of Reputational Risk and escalation where necessary
- The tracking of risk acceptance decisions
- The tracking of thematic trends in secondary risk arising from other Principal Risk Types
- The analysis of prevailing stakeholder concerns

Stress testing

Although Reputational Risk is not an explicit separate regulatory factor in enterprise stress tests, it is incorporated into the Group's stress testing scenarios. For example, the Group may consider what impact a hypothetical event leading to loss of confidence among liquidity providers in a particular market might have, or what the implications might be for supporting part of the organisation in order to protect the brand.

Compliance Risk

The Group defines Compliance Risk as potential for penalties or loss to the Group or for an adverse impact to our clients, stakeholders or to the integrity to markets we operate in through a failure on our part to comply with laws, or regulations

Risk Appetite Statement

The Group has no appetite for breaches in laws and regulations; while recognising that regulatory non-compliance cannot be entirely avoided, the Group strives to reduce this to an absolute minimum

Roles and responsibilities

The Group Head, Conduct, Financial Crime and Compliance (CFCC), as Risk Framework Owner for Compliance Risk provides support to senior management on regulatory and compliance matters by:

- Providing interpretation and advice on regulatory requirements and their impact on the Group;
- Setting enterprise-wide standards for compliance, through the establishment and maintenance of a risk-based compliance framework, the Compliance Risk Type Framework (Compliance RTF);
- Setting a programme for monitoring Compliance Risk

The Compliance RTF sets out the roles and responsibilities in respect of Compliance Risk for the Group. All activities that the Group engages in must be designed to comply with the applicable laws and regulations in the countries in which we operate. The CFCC function is the Second Line of Defence that ensures the overall operation of the framework and for significant areas of laws and regulations, provides oversight and challenge of the first line risk management activities that relate to Compliance Risk.

The Compliance RTF defines Compliance Risk sub-types and, where relevant, assigns responsibility for these to the most appropriate other Principal Risk Type Owner or control function. This ensures that effective oversight and challenge of the first line can be provided by the appropriate second line function. Each of these assigned second line functions sets policies for the organisation to comply with, and provides guidance, oversight, and challenge over the activities of the Bank. They ensure that key risk decisions are only taken by individuals with the requisite skills, judgement, and perspective to ensure that the Group's Compliance Risk is appropriately managed.

Mitigation

The Compliance RTF sets the Group's overall approach to the management of Compliance Risk. In support of this, the Compliance function develops and deploys relevant policies and standards setting out requirements and controls for adherence by the Group to ensure continued compliance with applicable laws and regulations. Through a combination of risk assessment, control standard setting, control monitoring and compliance review activities, the Compliance Risk Framework Owner seeks to ensure that all policies are operating as expected to mitigate the risk that they cover. The installation of appropriate processes and controls is the primary tool for the mitigation of Compliance Risk. In this, the requirements of the Operational Risk Type Framework are followed to ensure a consistent approach to the management of processes and controls.

Governance committee oversight

Compliance risk and the risk of non-compliance with laws and regulations resulting from failed processes and controls are overseen by Business, Product and Function Non-Financial Risk Committees. The Conduct and Compliance Non-Financial Risk Committee has a consolidated view of these risks, and ensures that appropriate governance is in place for these. In addition, the Committee ensures that elevated levels of Compliance risk are reported to the Group Non-Financial Risk Committee, Group Risk Committee and Board Audit Committee. Within each country, oversight of Compliance Risk is delegated through the Country Non-Financial Risk Committee where the Operational Risk Control Assessment Standards will form a primary part of the monitoring of Compliance Risk.

Decision-making authorities and delegation

Decision making and approval authorities follow the Enterprise Risk Management Framework approach and risk thresholds. The Group Head, CFCC has the authority to delegate second line responsibilities within the CFCC function to relevant and suitably qualified individuals. In addition, second line responsibilities, including policy development, implementation and validation, as well as oversight and challenge of first line processes and controls are delegated based on the most appropriate other Principal Risk Type or control function for certain compliance risk sub-types.

Monitoring

The monitoring of controls designed to mitigate the risk of regulatory non-compliance in processes are governed in line with the Operational Risk Type Framework. The Group has a monitoring and reporting process in place for Compliance Risk, which includes the aggregation of compliance exposures from across the Group and escalation and reporting to Conduct and Compliance Non-Financial Risk Committee, Group Risk Committee and Board Risk Committee as appropriate. In addition, there is a Group Regulatory Reform team set up to monitor regulatory reforms in key markets and establish a protocol of horizon scanning for emerging Compliance Risk. This protocol ensures that regulatory reforms with the potential to affect the Group in multiple markets are identified and steps taken in good time to ensure compliance with these.

Stress testing

Stress testing and scenario analysis are used to assess capital requirements for Compliance Risk and form part of the overall scenario analysis portfolio managed under the Operational Risk Type Framework. Specific scenarios are developed annually with collaboration between the business who own and manage the risk and the CFCC function who are second line to incorporate significant Compliance risk tail events. This approach considers the impact of extreme but plausible scenarios on the Group's Compliance Risk profile.

Conduct Risk

The Group defines Conduct Risk as the risk of detriment to the Group's customers and clients, investors, shareholders, market integrity, competition and counterparties or from the inappropriate supply of financial services, including instances of wilful or negligent misconduct

Risk Appetite Statement

The Group strives to maintain the standards in our Code of Conduct and outcomes of our Conduct Framework, by continuously demonstrating that we are doing the right thing in the way we do business

In addition to the Group's external stakeholders, Conduct Risk may also arise in respect to our behaviour towards each other as colleagues. The Group believes that everyone is entitled to a fair and safe working environment that is free from discrimination, exploitation, bullying, harassment or inappropriate language.

Roles and responsibilities

Conduct Risk management and abiding by the Group Code of Conduct is the responsibility of all employees across the organisation.

The first line of defence is required to ensure that potential conduct risks arising in the business, functions and countries are identified, assessed and managed appropriately. Senior management in the first line of defence are accountable for embedding the right culture relating to Conduct Risk. The CFCC function is the second line for Conduct Risk, and is responsible for providing independent guidance, oversight, and challenge to the first line, as well as setting the risk management standards that the first line must adhere to. The CFCC function owns the risk sub-types, and where relevant, they are delegated to other functions or Risk Framework Owners in the Group.

Conduct Plan

The Conduct Plan is a live document and must be kept regularly updated, including as and when there are potential or materialised conduct risks identified through other PRTs. Identified conduct risks and the corresponding mitigation should be monitored by relevant governance committees to ensure effective and timely resolution. The Conduct Plans should meet minimum standards as follows:

- Conduct Plans are owned by the management of each country, region, business and function within the Group. As the first line of defence, management is responsible to ensure that the Conduct Plans are regularly reviewed and updated
- The Compliance function as the second line of defence and Risk Framework Owner is responsible for challenging management on the quality and completeness of the plan, as well as the effectiveness and timeliness of the remediation strategy
- The Conduct Plans highlight the key conduct risks that are inherent to the processes and activities performed or impacted within a country, region, business or function
- The Group Conduct Management Principles, which highlight various conduct outcomes, should be used as a guide to help with the process of identifying relevant conduct risks
- For each of the risks identified, appropriate remediation action, enhancements to the control environment, responsible action owners and timeframes for resolution must be clearly recorded within the Conduct Plan
- Regular engagement should take place between owners of the Group and geographic Conduct Plans to ensure appropriate escalation and communications related to conduct risks and the mitigation strategy applied
- Conduct Plans also reflect Conduct Risks based on one-off projects, adverse trends from conduct management information, internal conduct incidents, deficiencies identified through internal assurance activities across the three lines of defence, emerging risks/trends and external developments

Governance committee oversight

The Board Risk Committee, Brand Values and Conduct Committee, Group Risk Committee, Group Non-Financial Risk Committee and the Compliance Regulatory Risk Committee are responsible for ensuring that the Group effectively manages its Conduct risk. As Risk Framework Owner for Conduct Risk, Group Head, CFCC sets reporting thresholds for escalation of Conduct Risk to the Conduct and Compliance Risk Committee, Group Non-Financial Risk Committee and Group Risk Committee. The Board Risk Committee and the Brand Values and Conduct Committee receive periodic reports on Conduct Risk assurance against businesses and functions.

Decision-making authorities and delegation

Conduct Risk challenge and acceptance authority is exercised by the Group Head, CFCC and delegated within the CFCC function as second line.

Monitoring and mitigation

The Compliance Assurance team perform assurance reviews to monitor Conduct Risk outcomes. In limited or special circumstances, a specific thematic conduct review may be performed. This may be considered in scenarios where countries or businesses have significant and potentially systemic Conduct Risk issues, which may warrant a more focused assessment of the end-to-end controls.

These reviews supplement other compliance activities from a Second Line of Defence perspective. These activities include compliance stakeholder representation and challenge at first line governance committees and conduct forums; surveillance activity – such as trade surveillance, e-communication surveillance, and sales and suitability surveillance; Control Room management – such as outside business interests, personal account dealing, and information walls; and validating or challenging the Group performance scorecard for conduct.

Stress testing

The assessment of Conduct Risk vulnerabilities under stressed conditions or extreme events with a low likelihood of occurring are carried out through enterprise stress testing. This is currently covered primarily through Operational Risk and Financial Crime driven stress scenarios.

Information and Cyber Security Risk

The Group defines Information and Cyber Security Risk as the potential for loss from a breach of confidentiality, integrity or availability of the Group's information systems and assets through cyber attack, insider activity, error or control failure

Risk Appetite Statement

The Group seeks to avoid risk and uncertainty for our critical information assets and systems and has a low appetite for material incidents affecting these or the wider operations and reputation of the Group

Roles and responsibilities

In 2018, the Group approved a Risk Type Framework (RTF) to formally set out the Group-wide strategy for managing Information and Cyber Security (ICS) Risk. The RTF has strengthened the role of the business for managing ICS Risk. As a result, through 2018 there has been significant expansion of first line responsibilities to ensure in-depth ownership and understanding of ICS Risk by the first line of defence.

The RTF defines the first line roles of Information Asset Owners, Information System Owners, and Information Custodians. Information asset owners and Information System Owners are named individuals within each business who have accountability for classifying and managing risks to the information assets and systems they own respectively. Information Custodians are named individuals, typically within the Technology and Innovation (T&I) function, responsible for providing secure processing of information commensurate to the level specified by the Information Asset or Information System Owner. In addition, each business and region has recruited Heads of ICS to provide Information Asset and System Owners a centralised first line point of contact to ensure controls are embedded effectively and consistently across the Group. The business, alongside T&I Security Technology Services, is responsible for remediation activities to strengthen the Group's ICS Risk controls to protect against any new threats in an evolving environment.

The Chief Information Security Officer (CISO) has overall responsibility for strategy, governance and oversight of ICS Risk across the Group and operates as the second line of defence. The CISO defines policy for ICS Risk, overseeing and challenging the operational implementation of controls at the first line.

Mitigation

ICS Risk is managed through a structured ICS Policy Framework comprised of a risk assessment methodology and supporting policies, procedures and standards which are aligned to industry best practice models.

Information Asset Owners, Information System Owners, and Information Custodians are responsible for compliance with the ICS Policy Framework. This requires the first line to embed applicable ICS policy controls, and measure the performance of these controls with key indicators against thresholds set by the Board. Additional controls may be added by the business area to reflect any specific characteristics of the reporting area which may be relevant, depending on concurrence from the CISO.

The CISO function monitors compliance to the ICS Policy Framework through an assessment of each key control domain defined by the ICS RTF through the Risk profile report. Within the risk profile view, appropriate mitigating activity for each key control domain is identified, undertaken and reported against by the business.

All business units, group functions, countries and regions (Information Asset/System Owner and Information Custodians) complete a risk assessment of each relevant key control domain for their operational environment by completing a risk profile. These are submitted to the CISO and to relevant governance committees for continuous oversight and challenge against Risk Appetite requirements.

Governance committee oversight

The ICS Risk within the Group is currently governed via the Board Risk Committee who has responsibility for approving the definition of ICS Risk and the Group Risk Appetite. In addition, the Group Risk Committee has delegated authority to the Group Non-Financial Risk Committee (GNFRC) to ensure effective implementation of the ICS RTF. The GRC, and GNFRC retain responsibility for oversight of ICS Risk control domains rated very high and high respectively. Sub-committees of the GNFRC have oversight of the management of ICS risks arising from business and functional areas.

These governance committees have responsibility for providing oversight of ICS risks against Risk Appetite and measuring performance of ICS Risk management activities across the first line. Chairs of governance committees ensure adequate representation for all business units and countries across the Group who are responsible for managing ICS Risk. Escalation of risks which fall outside the defined appetite for the Group are overseen by these committees to ensure effective mitigation.

Decision-making authorities and delegation

The ICS RTF is the formal mechanism through which the delegation of ICS Risk authorities is made. The GCRO has delegated Risk Framework Owner authority to the CISO. The CISO has, where appropriate, delegated second line authority to information security officers to assume the responsibilities for approval for business, functions, and countries.

Approval of ICS Risk ratings follow an approval matrix defined by the ICS RTF where the GCRO and CISO sign off very high and high risks respectively.

Information Asset Owners, Information System Owners, and Information Custodians are responsible for the identification, creation and implementation of processes as required to comply with the ICS Policy Framework.

Monitoring

Monitoring and reporting on the Risk Appetite profile ensures that performance which falls outside the approved Risk Appetite is highlighted and reviewed at the appropriate governance committee or authority levels, and ensures that adequate remediation actions are in place where necessary. Identification of ICS risks are performed through the following processes:

- Scanning of external environment: The dynamic risk identification process includes scanning of the external environment through industry and specialist activities; inputs from legal, regulatory, and mandatory bodies; changes to information and technology use in society, opportunities or incidents; and identifying emerging threats to our information assets and systems

- ICS Risk profile assessment exercise: Risks to information assets and systems must be identified using the approach defined within the RTF and a risk rating ascertained. Risks identified within the key control domains defined in the RTF are documented within risk profiles and reviewed monthly as part of risk governance to ensure effective mitigation against the approved appetite. During these reviews, the status of each risk is assessed to identify any changes to materiality and likelihood, which in turn affect the overall risk score and rating. Risks which exceed defined thresholds are escalated to appropriate governance bodies. The CISO performs a consolidation of completed risk profiles for the Group and produces a holistic aggregated risk position with appropriate key control and risk indicators, which are used to govern the overall ICS Risk
- Threat identification: During the risk identification process, the CISO works with the T&I function to ensure an accurate threat profile definition. Business areas report on their threat profile each month to the Business, Product and Functional level Non-Financial Risk Committees ensuring continuous monitoring of threat identification. This is then reported to the GNFRFC, who reviews the reports at an enterprise level. Improvements to the Group's threat intelligence capability are being implemented through 2019.

Stress testing

The CISO will determine ICS Risk controls to be subjected to scenario-based resiliency stress testing and sensitivity analysis, which is aimed to either ensure robustness of control or ability to respond should a control fail. The Group's stress testing approach entails:

- The CISO oversees all ICS Risk-related stress testing the Group carries out to meet regulatory requirements
- Incident scenarios affecting information assets and systems are periodically tested to assess the incident management capability in the Group
- Penetration testing and vulnerability scanning are performed against the Group's internet-facing services and critical information assets/systems

Financial Crime Risk

The Group defines Financial Crime Risk as the potential for legal or regulatory penalties, material financial loss or reputational damage resulting from the failure to comply with applicable laws and regulations relating to international sanctions, anti-money laundering and anti-bribery

Risk Appetite Statement

The Group has no appetite for breaches in laws and regulations related to financial crime, recognising that while incidents are unwanted, they cannot be entirely avoided

Roles and responsibilities

The Global Head, Conduct, Financial Crime and Compliance (CFCC) has overall responsibility for Financial Crime Risk and is responsible for the establishment and maintenance of effective systems and controls to meet legal and regulatory obligations in respect of Financial Crime Risk. The Global Head, CFCC is the Group's Money-Laundering Reporting Officer and performs the Financial Conduct Authority controlled function and senior management function in accordance with the requirements set out by the Financial Conduct Authority, including those set out in their handbook on systems and controls.

As the first line, the business unit process owners have responsibility for the application of policy controls and the identification and measurement of risks relating to financial crime. Business units must communicate risks and any policy non-compliance to the second line for review and approval following the model for delegation of authority.

Mitigation

There are three Group policies in support of the Financial Crime Risk Type Framework:

- Anti-bribery and corruption as set out in the Group Anti-Bribery and Corruption Policy
- Anti-money laundering and countering terrorists financing as set out in the Group Anti-Money Laundering and Counter Terrorist Financing Policy
- Sanctions as set out in the Group Sanctions Policy

The Group operates risk-based controls in support of its Financial Crime Risk programme, including (but not limited to):

- Client due diligence, to meet Know Your Customer requirement
- Surveillance, including transaction screening, name screening and transaction monitoring
- Global risk assessment, to understand and quantify the inherent and residual Financial Crime Risk across the organisation

The strength of these controls are tested and assessed through the Group's Operational Risk Type Framework, in addition to oversight by the Financial Crime Compliance Assurance and Group Internal Audit.

Governance committee oversight

Financial Crime Risk within the Group is governed by the Group Financial Crime Risk Committee which is appointed by and reports into the Group Risk Committee. The Group Financial Crime Risk Committee is responsible for ensuring the effective management of Operational Risk relating to Financial Crime Risk compliance throughout the Group in support of the Group's strategy and in line with the Group's Risk Appetite, Enterprise Risk Management Framework and Financial Crime Risk Type Framework.

The Board Financial Crime Risk Committee is appointed by the Board, to provide oversight of the effectiveness of the Group's policies, procedures, systems, controls and assurance mechanism designed to identify, assess, manage, monitor, detect or prevent money laundering, non-compliance with sanctions, bribery, corruption, and tax crime by third parties.

Decision-making authorities and delegation

The Global Head, CFCC is the Risk Framework Owner for Financial Crime Risk under the Group's Enterprise Risk Management Framework, and has delegated authorities to effectively implement the Financial Crime Risk Type Framework, to the Co-Heads, Financial Crime Compliance.

Certain aspects of Financial Crime Compliance, second line oversight and challenge, are further delegated within the CFCC function. Approval frameworks are in place to allow for risk-based decisions on client on-boarding, potential breaches of sanctions regulation or policy, and situations of potential anti-money laundering and anti-bribery and corruption.

Monitoring

The Group monitors Financial Crime Risk compliance against a set of Risk Appetite metrics that are approved by the Board. These metrics are reviewed periodically and reported regularly to both the Group Financial Crime Risk Committee and Board Financial Crime Risk Committee.

Stress testing

The assessment of Financial Crime vulnerabilities under stressed conditions or extreme events with a low likelihood of occurring is carried out through Enterprise Stress Testing.

Risk profile

Our risk profile in 2018

Through our well-established risk governance structure and Enterprise Risk Management Framework (ERMF), we closely manage our risks with the objective of maximising risk-adjusted returns while remaining in compliance with the Risk Appetite Statement. We manage uncertainties through a dynamic risk scanning process that provides a forward-looking view of the economic, business and credit conditions across the Group's key markets, enabling us to proactively manage our portfolio.

We continue to reposition the Group's corporate portfolio, exiting weaker credit or lower-returning clients and adding new clients selectively. We remain alert to broader geopolitical uncertainties that have affected sentiment in some of our markets, and we continue to focus on early identification of emerging risks across all our portfolios to manage any areas of potential weakness on a proactive basis. The Group's portfolio is well diversified across dimensions such as industries, geographies and products.

The table below highlights the Group's overall risk profile associated with our business strategy.

Our risk profile in 2018

Stronger risk culture across the Three Lines of Defence from increased awareness of the ERMF

- In 2018, we developed consistent and integrated Risk Type Frameworks for our ten Principal Risk Types
- We formalised links between our Strategy, Risk Appetite and risk identification to integrate risk considerations into strategic decision-making
- We enhanced our Risk Appetite coverage on non-financial Principal Risk Types
- We established clear individual accountability for risk management across the three lines of defence
- We aligned our risk committees to the ERMF
- We augmented our risk scanning processes to enable more dynamic and forward-looking assessments of risk
- We rolled out an ERMF Effectiveness Review process to measure progress in an objective manner

Corporate portfolios remain well diversified and exhibit improving credit quality

- Credit impairment for the total ongoing business reduced by 38 per cent on 2017
- We further reduced our liquidation portfolio by 39 per cent in the year through active management
- Within the Corporate & Institutional Banking and Commercial Banking portfolios:
 - Exposure to investment grade clients has increased to 62 per cent of the total corporate book in 2018 (2017: 57 per cent)
 - The largest sector concentration are manufacturing at 17 per cent of loans and advances to customers, and financing, insurance and non-banking financial counterparties at 15 per cent. All other industry concentrations are at 12 per cent or lower of the total customer portfolio
- Over 50 per cent of long-term sub-investment grade exposures within the corporate portfolio remain collateralised
- Within the Retail Banking portfolio, secured lending remains our primary focus, with 84 per cent of the book continuing to be fully secured. Our overall loan-to-value ratio is low at 45 per cent

Robust capital and liquidity position

- We remain well capitalised and our balance sheet remains highly liquid
- We have a strong advances-to-deposits ratio
- We remain a net provider of liquidity to interbank markets and our customer deposit base is diversified by type and maturity
- We have a substantial portfolio of marketable securities which can be realised in the event of a liquidity stress situation

Further details on the Enterprise Risk Management Framework can be found in the Risk management approach.

Credit Risk

Basis of preparation

Unless otherwise stated, the balance sheet and income statement information presented within this section is based on the Group's management view. This is principally the location from which a client relationship is managed, which may differ from where it is financially booked and may be shared between businesses and/or regions. This view reflects how the client segments and regions are managed internally.

Loans and advances to customers comprise the ongoing portfolio and liquidation portfolio in this section unless otherwise separately identified.

Loans and advances to customers and banks held at amortised cost in this Risk profile section include reverse repurchase agreement balances held at amortised cost, per Note 16 Reverse repurchase and repurchase agreements including other similar secured lending and borrowing.

Credit risk overview

Credit risk is the potential for loss due to the failure of a counterparty to meet its obligations to pay the Group. Credit exposures arise from both the banking and trading books.

IFRS 9 changes and methodology

IFRS 9 came into effect on 1 January 2018. As a summary the primary changes for the Group are as follows:

New impairment model

IFRS 9 introduces a new impairment model that requires the recognition of expected credit losses (ECL) rather than incurred losses under IAS 39 on all financial debt instruments held at amortised cost, fair value through other comprehensive income (FVOCI), undrawn loan commitments and financial guarantees.

Staging of financial instruments

Financial instruments that are not already credit-impaired are originated into stage 1 and a 12-month expected credit loss provision is recognised.

Instruments will remain in stage 1 until they are repaid, unless they experience significant credit deterioration (stage 2) or they become credit-impaired (stage 3).

Instruments will transfer to stage 2 and a lifetime expected credit loss provision recognised when there has been a significant change in the credit risk compared with what was expected at origination.

The framework used to determine a significant increase in credit risk is set out below.

Instruments are classified as stage 3 when they become credit-impaired.

The Group has not restated comparative information. Accordingly, amounts prior to 1 January 2018 are prepared and disclosed on an IAS 39 basis. This primarily impacts the credit risk disclosures, where loan loss provisioning is determined on an expected credit loss basis under IFRS 9 compared with an incurred credit loss basis under IAS 39.

Where relevant, the 1 January 2018 balance sheet has been used for comparative purposes. The Group's initial estimate of credit impairment on adoption of IFRS 9 was \$6,720 million. Following refinement of the Group's expected loss models, the estimate of the opening credit impairment was revised down by \$222 million to \$6,498 million, and the net expected credit loss of \$(1,296) million adjusted against retained earnings was similarly decreased by \$222 million to \$(1,074) million. This was presented as part of the Group's 2018 interim financial statements.

A summary of the differences between IFRS 9 and IAS 39 is disclosed in Note 41 IFRS 9 Financial instruments.

IFRS 9 changes and methodology

The accounting policies under IFRS 9 are set out in Note 8 Credit impairment and Note 13 Financial instruments. The impact upon adoption of IFRS 9 as at 1 January 2018 is set out in Note 41 IFRS 9 Financial instruments. The main methodology principles and approach adopted by the Group are set out in the following table with cross references to other sections.

Title	Description	Supplementary information
Approach to determining expected credit losses	For material loan portfolios, the Group has adopted a statistical modelling approach for determining expected credit losses that makes extensive use of credit modelling. Where available, the Group has leveraged existing advanced Internal Ratings Based (IRB) regulatory models that have been used to determine regulatory expected loss. For portfolios that follow a standardised regulatory approach, the Group has developed new models where these are material.	Credit risk methodology Key differences between regulatory IFRS expected credit loss models Determining lifetime expected credit loss for revolving products
Incorporation of forward-looking information	The determination of expected credit loss includes various assumptions and judgements in respect of forward-looking macroeconomic information.	Incorporation of forward-looking information and impact of non-linearity Forecast of key macroeconomic variables underlying the expected credit loss calculation
Significant increase in credit risk (SICR)	Expected credit loss for financial assets will transfer from a 12-month basis to a lifetime basis when there is a significant increase in credit risk (SICR) relative to that which was expected at the time of origination, or when the asset becomes credit-impaired. On transfer to a lifetime basis, the expected credit loss for those assets will reflect the impact of a default event expected to occur over the remaining lifetime of the instrument rather than just over the 12 months from the reporting date. SICR is assessed by comparing the risk of default of an exposure at the reporting date with the risk of default at origination (after considering the passage of time). 'Significant' does not mean statistically significant nor is it reflective of the extent of the impact on the Group's financial statements. Whether a change in the risk of default is significant or not is assessed using quantitative and qualitative criteria, the weight of which will depend on the type of product and counterparty.	Quantitative criteria Significant increase in credit risk thresholds Specific qualitative and quantitative criteria per segment: Corporate & Institutional and Commercial Banking clients Retail Banking clients Private Banking clients Debt securities
Assessment of credit-impaired financial assets	Credit-impaired financial assets comprise those assets that have experienced an observed credit event and are in default. Default represents those assets that are at least 90 days past due in respect of principal and interest payments and/or where the assets are otherwise considered unlikely to pay. This definition is consistent with internal credit risk management and the regulatory definition of default. Unlikely to pay factors include objective conditions such as bankruptcy, debt restructuring, fraud or death. It also includes credit-related modifications of contractual cash flows due to significant financial difficulty (forbearance) where the Group has granted concessions that it would not ordinarily consider.	Retail Banking clients Corporate & Institutional Banking clients Commercial Banking and Private Banking clients
Modified financial assets	Where the contractual terms of a financial instrument have been modified, and this does not result in the instrument being derecognised, a modification gain or loss is recognised in the income statement representing the difference between the original cashflows and the modified cash flows, discounted at the effective interest rate. The modification gain/loss is directly applied to the gross carrying amount of the instrument. If the modification is credit-related, such as forbearance or where the Group has granted concessions that it would not ordinarily consider, then it will be considered credit-impaired. Modifications that are not credit related will be subject to an assessment of whether the asset's credit risk has increased significantly since origination by comparing the remaining lifetime probability of default (PD) based on the modified terms to the remaining lifetime PD based on the original contractual terms.	Forbearance and other modified loans

Transfers between stages	Assets will transfer from stage 3 to stage 2 when they are no longer considered to be credit-impaired. Assets will not be considered credit-impaired only if the customer makes payments such that they are paid to current in line with the original contractual terms. In addition: • Loans that were subject to forbearance measures must remain current for 12 months before they can be transferred to stage 2 • Retail loans that were not subject to forbearance measures must remain current for 180 days before they can be transferred to stage 2 or stage 1 Assets may transfer to stage 1 if they are no longer considered to have experienced a significant increase in credit risk. This will be immediate when the original PD based transfer criteria are no longer met (and as long as none of the other transfer criteria apply). Where assets were transferred using other measures, the assets will only transfer back to stage 1 when the condition that caused the significant increase in credit risk no longer applies (and as long as none of the other transfer criteria apply).	Movement in loan exposures and expected credit losses	156
Governance and application of expert credit judgement in respect of expected credit losses	The determination of expected credit losses requires a significant degree of management judgement which had an impact on governance processes, with the output of the expected credit models assessed by the IFRS 9 Impairment Committee.	Group Credit Model Assessment Committee IFRS 9 Impairment Committee	179 179

Maximum exposure to credit risk

The table below presents the Group's maximum exposure to credit risk for its on-balance sheet and off-balance sheet financial instruments as at 31 December 2018, before and after taking into account any collateral held or other credit risk mitigation.

The Group's on-balance sheet maximum exposure to credit risk increased by \$27 billion to \$667 billion (1 January 2018: \$640 billion). This was driven by a \$10 billion increase in investment securities as the Group further strengthened its portfolio of high-quality liquid assets, as well as a \$9 billion increase in reverse repos held at fair value through profit or loss primarily in the UK. Investment securities held at fair value through profit or loss increased by \$1.8 billion as a result of deployment of funds in better quality assets. Further, other assets increased by \$2.8 billion mainly driven by cash collateral and unsettled trades due to settlement timing differences.

Off-balance sheet credit risk exposures increased by \$2 billion compared with 1 January 2018, primarily within contingent liabilities, offset by a decrease in documentary credits and short-term trade-related transactions.

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	Credit risk management				Credit risk management			
	Maximum exposure \$million	Collateral \$million	Master netting agreements \$million	Net exposure \$million	Maximum exposure \$million	Collateral \$million	Master netting agreements \$million	Net exposure \$million
On-balance sheet								
Cash and balances at central banks	57,511			57,511	58,864			58,864
Loans and advances to banks ^{1,8}	61,414	3,815		57,599	62,295	5,101		57,194
of which – reverse repurchase agreements and other similar secured lending ⁷	3,815	3,815		–	5,101	5,101		–
Loans and advances to customers ^{1,8}	256,557	109,326		147,231	251,507	118,132		133,375
of which – reverse repurchase agreements and other similar secured lending ⁷	3,151	3,151		–	4,566	4,566		–
Investment securities – debt securities and other eligible bills ²	125,638			125,638	115,599			115,599
Fair value through profit or loss ^{3,7}	85,441	54,769	–	30,672	72,505	45,518	–	26,987
Loans and advances to banks	3,768			3,768	2,865			2,865
Loans and advances to customers	4,928			4,928	3,907			3,907
Reverse repurchase agreements and other similar lending ⁷	54,769	54,769		–	45,518	45,518		–
Investment securities – debt securities and other eligible bills ²	21,976			21,976	20,215			20,215
Derivative financial instruments ^{4,7}	45,621	9,259	32,283	4,079	47,031	9,825	29,135	8,071
Accrued income	2,228			2,228	1,947			1,947
Assets held for sale	23			23	2			2
Other assets ⁵	32,678			32,678	29,922			29,922
Total balance sheet	667,111	177,169	32,283	457,659	639,672	178,576	29,135	431,961
Off-balance sheet								
Contingent liabilities ⁶	41,952	–	–	41,952	37,639	–	–	37,639
Undrawn irrevocable standby facilities, credit lines and other commitments to lend ⁶	147,728	–	–	147,728	147,978	–	–	147,978
Documentary credits and short-term trade-related transactions ⁶	3,982	–	–	3,982	5,808	–	–	5,808
Total off-balance sheet	193,662	–	–	193,662	191,425 ⁹	–	–	191,425
Total	860,773	177,169	32,283	651,321	831,097	178,576	29,135	623,386

1 An analysis of credit quality is set out in the credit quality analysis section. Further details of collateral held by client segment and stage are set out in the collateral analysis section

2 Excludes equity and other investments \$263 million (1 January 2018: \$214 million)

3 Excludes equity and other investments \$1,691 million (1 January 2018: \$2,135 million)

4 The Group enters into master netting agreements, which in the event of default result in a single amount owed by or to the counterparty through netting the sum of the positive and negative mark-to-market values of applicable derivative transactions

5 Other assets include Hong Kong certificates of indebtedness, cash collateral, and acceptances, in addition to unsettled trades and other financial assets

6 Excludes ECL allowances which are reported under Provisions for liabilities and charges

7 Collateral capped at maximum exposure (over-collateralised)

8 Covered exposure at default (EAD), being the collateral considered to mitigate (cover) credit risk in the EAD calculation, has been used to understand the effect of collateral and other credit enhancements on the amounts arising from expected credit losses in accordance with IFRS 7 – Financial instrument disclosures

9 Contingent liabilities and commitments have been restated, as a result of the availability of more reliable, centralised information following the implementation of IFRS 9. The ageing of commitments is now based on residual rather than original maturity

	31.12.17 (IAS 39)			
	Credit risk management			Net exposure \$million
	Maximum exposure \$million	Collateral \$million	Master netting agreements \$million	
On-balance sheet				
Cash and balances at central banks	58,864	–	–	58,864
Loans and advances to banks ¹	78,188	20,694		57,494
of which – reverse repurchase agreements and other similar secured lending	20,694	20,694		
Loans and advances to customers ¹	282,288	146,641		135,647
of which – reverse repurchase agreements and other similar secured lending	33,581	33,581		
Investment securities – debt securities and other eligible bills ²	116,131	–	–	116,131
Fair value through profit or loss ³	26,113	912		25,201
Loans and advances to banks	2,572			2,572
Loans and advances to customers	2,918			2,918
Reverse repurchase agreements and other similar secured lending	912	912	–	–
Investment securities – debt securities and other eligible bills ²	19,711			19,711
Derivative financial instruments ⁴	47,031	9,825	29,135	8,071
Accrued income	1,947	–	–	1,947
Assets held for sale	2	–	–	2
Other assets ⁵	29,922	–	–	29,922
Total balance sheet	640,486	178,072	29,135	433,279
Off-balance sheet				–
Contingent liabilities ⁶	37,639	–	–	37,639
Undrawn irrevocable standby facilities, credit lines and other commitments to lend ⁶	147,978	–	–	147,978
Documentary credits and short-term trade-related transactions ⁶	5,808	–	–	5,808
Total off-balance sheet	191,425	–	–	191,425
Total	831,911	178,072	29,135	624,704

1 An analysis of credit quality is set out in the credit quality analysis section. Further details of collateral held by client segment and stage are set out in the collateral analysis section

2 Excludes equity and other investments \$894 million

3 Excludes equity and other investments \$1,451 million

4 The Group enters into master netting agreements, which in the event of default result in a single amount owed by or to the counterparty through netting the sum of the positive and negative mark-to-market values of applicable derivative transactions

5 Other assets include Hong Kong certificates of indebtedness, cash collateral, and acceptances, in addition to unsettled trades and other financial assets

6 Contingent liabilities and commitments have been restated, as a result of the availability of more reliable, centralised information following the implementation of IFRS 9

Analysis of financial instrument by stage

This table shows financial instruments and off-balance sheet commitments by stage, along with total credit impairment loss provision against each class of financial instrument.

The proportion of financial instruments held within stage 1 increased to 92 per cent, compared with 90 per cent at 1 January 2018. This increase was primarily within Corporate & Institutional Banking loans and advances where the proportion of stage 1 loans rated as 'Strong' has increased from 58 per cent to 62 per cent.

The proportion of stage 2 financial instruments decreased to 7 per cent from 8 per cent at 1 January 2018, primarily from reductions in loans and advances and undrawn commitments. This was largely due to an improvement in the credit quality of the Corporate & Institutional Banking portfolio. Loans held on non-purely precautionary early alert in the Corporate & Institutional Banking and Commercial Banking portfolios declined by \$3.9 billion as accounts repaid or regularised. Loans classed as 'Higher risk' increased by 4 per cent primarily within the Commercial Banking segment. The stage 2 cover ratio declined to 2.4 per cent from 2.8 per cent at 1 January 2018 primarily due to improved credit quality together with more high-quality collateral.

The proportion of instruments classified as stage 3 declined by \$1.6 billion. This was driven by a combination of repayments, debt sales, write-offs and upgrades within loans and advances to customers. The stage 3 cover ratio (excluding collateral) declined from 60 per cent to 59 per cent over the same period but remained stable including collateral.

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	Stage 1			Stage 2			Stage 3			Total		
	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million
Loans and advances to banks (amortised cost)	60,350	(5)	60,345	1,070	(1)	1,069	–	–	–	61,420	(6)	61,414
Loans and advances to customers (amortised cost)	237,103	(426)	236,677	17,428	(416)	17,012	6,924	(4,056)	2,868	261,455	(4,898)	256,557
Debt securities and other eligible bills	118,713	(27)		6,909	(31)		232	(206)		125,854	(264)	
Amortised cost	8,225	(7)	8,218	1,062	(3)	1,059	232	(206)	26	9,519	(216)	9,303
FVOCI ²	110,488	(20)		5,847	(28)		–	–		116,335	(48)	
Undrawn commitments ³	137,783	(69)		13,864	(39)		63	–		151,710	(108)	
Financial guarantees ³	38,532	(4)		3,053	(13)		367	(156)		41,952	(173)	
Total	592,481	(531)		42,324	(500)		7,586	(4,418)		642,391	(5,449)	

1 Gross carrying amount for off-balance sheet refers to notional values

2 These instruments are held at fair value on the balance sheet. The ECL provision in respect of debt securities measured at FVOCI is held within reserves

3 These are off-balance sheet instruments. Only the ECL is recorded on-balance sheet as a financial liability and therefore there is no "net carrying amount". ECL allowances on off-balance sheet instruments are held as liability provisions to the extent that the drawn and undrawn components of loan exposures can be separately identified. Otherwise, they will be reported against the drawn component

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	Stage 1			Stage 2			Stage 3			Total		
	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million	Gross balance ¹ \$million	Total credit impairment \$million	Net carrying value \$million
Loans and advances to banks (amortised cost)	59,926	(6)	59,920	2,372	(2)	2,370	9	(4)	5	62,307	(12)	62,295
Loans and advances to customers (amortised cost)	228,485	(472)	228,013	20,583	(576)	20,007	8,769	(5,282)	3,487	257,837	(6,330)	251,507
Debt securities and other eligible bills	107,308	(26)		8,302	(58)		221	(213)		115,831	(297)	
Amortised cost ²	6,204	(3)	6,201	995	(16)	979	221	(213)	8	7,420	(232)	7,188
FVOCI ³	101,104	(23)		7,307	(42)		–	–		108,411	(65)	
Undrawn commitments ⁴	138,804	(66)		14,982	(90)		–	–		153,786	(156)	
Financial guarantees ⁴	31,292	(6)		6,148	(16)		199	(77)		37,639	(99)	
Total	565,815	(576)		52,387	(742)		9,198	(5,576)		627,400	(6,894)	

1 Gross carrying amount for off-balance sheet refers to notional values

2 Stage 3 gross balance and total credit impairment of debt securities and other eligible bills – amortised cost has increased by \$208 million, with no impact on net carrying value. The balances have been restated to present securities with zero carrying value previously classified as available-for-sale under IAS 39 on a gross basis as required under IFRS 9

3 These instruments are held at fair value on the balance sheet. The ECL provision in respect of debt securities measured at fair value through other comprehensive income is held within reserves

4 These are off-balance sheet instruments. Only the ECL is recorded on-balance sheet as a financial liability and therefore there is no "net carrying amount". ECL allowances on off-balance sheet instruments are held as liability provisions to the extent that the drawn and undrawn components of loan exposures can be separately identified. Otherwise they will be reported against the drawn component. Contingent liabilities and commitments gross balances have been restated, as a result of the availability of more reliable, centralised information following the implementation of IFRS 9

Credit quality analysis

Credit quality by client segment

For Corporate & Institutional Banking and Commercial Banking portfolios, exposures are analysed by credit grade (CG), which plays a central role in the quality assessment and monitoring of risk. All loans are assigned a CG, which is reviewed periodically and amended in light of changes in the borrower's circumstances or behaviour. CGs 1 to 12 are assigned to stage 1 and stage 2 (performing) clients or accounts, while CGs 13 and 14 are assigned to stage 3 (non-performing or defaulted) clients. The mapping of credit quality is as follows.

Mapping of credit quality

The Group uses the following internal risk mapping to determine the credit quality for loans.

Credit quality description	Corporate & Institutional Banking and Commercial Banking			Private Banking ¹	Retail Banking
	Default grade mapping	S&P external ratings equivalent	Regulatory PD range (%)	Internal ratings	Number of days past due
Strong	Grades 1–5	AAA/AA+ to BB+/BBB-	0.000–0.425	Class I and Class IV	Current loans (no past dues nor impaired)
Satisfactory	Grades 6–8	BB+ to BB-/B+	0.426–2.350	Class II and Class III	Loans past due till 29 days
	Grades 9–11	B+/B to B-/CCC	2.351–15.750		
Higher Risk	Grade 12	B-/CCC	15.751–50.000	GSAM managed	Past due loans 30 days and over till 90 days

¹ For Private Banking, classes of risk represent the type of collateral held. Class I represents facilities with liquid collateral, such as cash and marketable securities. Class II represents unsecured/partially secured facilities and those with illiquid collateral, such as equity in private enterprises. Class III represents facilities with residential or commercial real estate collateral. Class IV covers margin trading facilities

The table overleaf sets out the gross loans and advances held at amortised cost, expected credit loss provisions and expected credit loss coverage by business segment and stage. Expected credit loss coverage represents the expected credit loss reported for each segment and stage as a proportion of the gross loan balance for each segment and stage.

Stage 1 loans increased by 4 per cent compared with 1 January 2018 and represent 91 per cent of total loans and advances to customers as of 31 December 2018. The largest increase of stage 1 loans in any region was \$4.1 billion in Europe & Americas. Stage 1 loans in Greater China & North Asia increased by \$3.4 billion while ASEAN & South Asia and Africa & Middle East were broadly stable over the year.

The proportion of Corporate & Institutional Banking loans held within stage 1 improved to 87 per cent from 81 per cent at 1 January 2018. This was concentrated in the 'Strong' category which increased from 58 per cent of stage 1 loans at 1 January 2018 to 62 per cent at 31 December 2018, as the Group continued to focus on the origination of investment grade lending.

In Commercial Banking, the proportion of stage 1 loans declined from 79 per cent to 78 per cent due to a small number of downgrades to stage 2. However, the proportion of stage 1 loans categorised as 'Strong' increased from 24 per cent to 25 per cent in line with the Group's strategy to increase the proportion of new loans to higher credit quality clients. Across Corporate & Institutional Banking and Commercial Banking, the largest industry contributors to the growth in stage 1 lending were the manufacturing sector, up \$2.8 billion, and loans to governments, up \$4.0 billion.

The proportion of Retail Banking stage 1 loans was slightly lower at 96 per cent of the total portfolio compared with 97 per cent at 1 January 2018, with the proportion rated as 'Strong' decreasing from 99 per cent to 98 per cent of total stage 1 loans mainly due to the decrease of the mortgage portfolio and the staging methodology change in the Korea Mortgage portfolio. Stage 1 mortgage loans declined by \$4.4 billion, mainly due to tightened regulations in Korea and price competition in Hong Kong which resulted in a reduction in new booking. This was offset by growth of \$3.8 billion in secured wealth products and \$0.7 billion in credit cards and personal loans (CCPL) and other unsecured lending.

Stage 2 loans fell by \$3.2 billion, or 15 per cent, compared with 1 January 2018, primarily driven by a decline in Corporate & Institutional Banking and Commercial Banking non-purely precautionary early alert balances.

In Corporate & Institutional Banking, 73 per cent of stage 2 loans were rated as 'Satisfactory' compared with 59 per cent at 1 January 2018. This does not represent a decline in overall credit quality as it is primarily driven by improvements in stage 2 investment grade loans which repaid or transferred back into stage 1. The majority of stage 2 loans within Commercial Banking continue to be classified as 'Satisfactory' (31 December 2018: 84 per cent; 1 January 2018: 82 per cent). Within Corporate & Institutional Banking and Commercial Banking, overall stage 2 loans decreased by \$3.9 billion. The reduction spread across a number of sectors, with the manufacturing and financing and non-banking sectors seeing the largest decreases, \$1.3 billion and \$1.0 billion respectively, as early alert balances declined.

Retail Banking stage 2 loans increased by \$0.7 billion, mainly driven by a change in the staging methodology in the Korea mortgage portfolio. 69 per cent are within the 'Strong' category, and the proportion of past due loans reduced from 34 per cent at 1 January 2018 to 31 per cent at 31 December 2018. Driven by an increase in the proportion of Mortgages held in Stage 2 and the rundown of the high-risk segments in the personal loans portfolio for ASEAN & South Asia, the requirement for ECL coverage has dropped from 7.8 per cent to 4.7 per cent.

Stage 3 loans fell by \$1.8 billion, or 21 per cent, compared with 1 January 2018, with overall stage 3 provisions declining by \$1.2 billion to \$4.1 billion. The stage 3 cover ratio declined to 59 per cent from 60 per cent largely driven by the impact of write-offs and settlements in the liquidation portfolio.

All regions were lower compared with 1 January 2018, with the decline primarily in ASEAN & South Asia.

In Corporate & Institutional Banking and Commercial Banking, stage 3 loans fell by \$1.9 billion compared with 1 January 2018 due to repayments, debt sales, write-offs and upgrades in Corporate & Institutional Banking. Provisions against Corporate & Institutional Banking and Commercial Banking loans also fell by \$1.2 billion from \$4.8 billion to \$3.6 billion.

Inflows into stage 3 for Corporate & Institutional Banking were 65 per cent lower than 2017 reflecting the continued improvement in the Corporate & Institutional Banking portfolio. Stage 3 inflows increased for Commercial Banking, driven by exposures in Greater China & North Asia and Africa & Middle East with no specific industry concentration. The majority of new stage 3 counterparties in Corporate and Institutional Banking and Commercial Banking in 2018 had been on early alert for a period and do not indicate new areas of stress.

Retail stage 3 loans were broadly stable at \$0.8 billion.

Loans and advances by client segment

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	Customers						Customers total \$million
	Banks \$million	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	
Amortised cost							
Stage 1	60,350	93,848	98,393	21,913	12,705	10,244	237,103
– Strong	47,860	58,167	96,506	5,527	9,447	10,193	179,840
– Satisfactory	12,490	35,681	1,887	16,386	3,258	51	57,263
Stage 2	1,070	9,357	2,837	4,423	785	26	17,428
– Strong	403	1,430	1,956	270	713	–	4,369
– Satisfactory	665	6,827	500	3,732	–	26	11,085
– Higher risk	2	1,100	381	421	72	–	1,974
<i>Of which (stage 2):</i>							
– Less than 30 days past due	27	232	500	198	–	–	930
– More than 30 days past due	–	190	381	99	3	–	673
Stage 3, credit-impaired financial assets	–	4,084	832	1,773	235	–	6,924
Gross balance ¹	61,420	107,289	102,062	28,109	13,725	10,270	261,455
Stage 1	(5)	(94)	(299)	(24)	(9)	–	(426)
– Strong	(2)	(32)	(149)	(1)	(9)	–	(191)
– Satisfactory	(3)	(62)	(150)	(23)	–	–	(235)
Stage 2	(1)	(192)	(132)	(92)	–	–	(416)
– Strong	–	(11)	(42)	(5)	–	–	(58)
– Satisfactory	(1)	(66)	(50)	(45)	–	–	(161)
– Higher risk	–	(115)	(40)	(42)	–	–	(197)
<i>Of which (stage 2):</i>							
– Less than 30 days past due	–	(34)	(50)	(9)	–	–	(93)
– More than 30 days past due	–	(2)	(40)	(4)	–	–	(46)
Stage 3, credit-impaired financial assets	–	(2,326)	(396)	(1,234)	(100)	–	(4,056)
Total credit impairment	(6)	(2,612)	(827)	(1,350)	(109)	–	(4,898)
Net carrying value	61,414	104,677	101,235	26,759	13,616	10,270	256,557
Stage 1	0.0%	0.1%	0.3%	0.1%	0.1%	0.0%	0.2%
– Strong	0.0%	0.1%	0.2%	0.0%	0.1%	0.0%	0.1%
– Satisfactory	0.0%	0.2%	7.9%	0.1%	0.0%	0.0%	0.4%
Stage 2	0.1%	2.1%	4.7%	2.1%	0.0%	0.0%	2.4%
– Strong	0.0%	0.8%	2.1%	1.9%	0.0%	–	1.3%
– Satisfactory	0.2%	1.0%	10.0%	1.2%	–	0.0%	1.5%
– Higher risk	0.0%	10.5%	10.5%	10.0%	0.0%	–	10.0%
<i>Of which (stage 2):</i>							
– Less than 30 days past due	0.0%	14.7%	10.0%	4.5%	–	–	10.0%
– More than 30 days past due	–	1.1%	10.5%	4.0%	0.0%	–	6.8%
Stage 3, credit-impaired financial assets	–	57.0%	47.6%	69.6%	42.6%	0.0%	58.6%
Cover ratio	0.0%	2.4%	0.8%	4.8%	0.8%	0.0%	1.9%
Fair value through profit or loss							
Performing	20,651	41,886	400	479	–	4	42,769
– Strong	19,515	33,178	395	247	–	3	33,823
– Satisfactory	1,136	8,700	4	232	–	1	8,937
– Higher risk	–	8	1	–	–	–	9
Impaired	–	12	–	33	–	–	45
Gross balance ²	20,651	41,898	400	512	–	4	42,814
Net carrying value (incl FVTPL)	82,065	146,575	101,635	27,271	13,616	10,274	299,371

1 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$3,151 million under Customers and of \$3,815 million under Banks, held at amortised cost

2 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$37,886 million under Customers and of \$16,883 million under Banks, held at fair value through profit or loss

	Customers						
	Banks \$million	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Customers total \$million
Amortised cost							
Stage 1	59,926	83,575	99,971	23,130	12,481	9,328	228,485
– Strong	50,820	48,638	98,721	5,573	8,527	9,240	170,699
– Satisfactory	9,106	34,937	1,250	17,557	3,954	88	57,786
Stage 2	2,372	13,639	2,186	4,023	735	–	20,583
– Strong	1,942	4,398	1,432	394	693	–	6,917
– Satisfactory	376	8,113	349	3,306	–	–	11,768
– Higher risk	54	1,128	405	323	42	–	1,898
<i>Of which (stage 2):</i>							
– Less than 30 days past due	246	493	349	153	–	–	993
– More than 30 days past due	25	232	405	123	5	–	767
Stage 3, credit-impaired financial assets	9	5,788	818	1,956	207	–	8,769
Gross balance ¹	62,307	103,002	102,975	29,109	13,423	9,328	257,837
Stage 1	(6)	(65)	(370)	(25)	(8)	(4)	(472)
– Strong	(4)	(12)	(324)	(5)	(8)	(4)	(353)
– Satisfactory	(2)	(53)	(46)	(20)	–	–	(119)
Stage 2	(2)	(326)	(170)	(79)	(1)	–	(576)
– Strong	(2)	(14)	(84)	–	(1)	–	(99)
– Satisfactory	–	(165)	(25)	(59)	–	–	(249)
– Higher risk	–	(147)	(61)	(20)	–	–	(228)
<i>Of which (stage 2):</i>							
– Less than 30 days past due	–	(65)	(25)	(28)	–	–	(117)
– More than 30 days past due	–	(71)	(61)	(14)	–	–	(146)
Stage 3, credit-impaired financial assets	(4)	(3,433)	(389)	(1,369)	(91)	–	(5,282)
Total credit impairment	(12)	(3,824)	(929)	(1,473)	(100)	(4)	(6,330)
Net carrying value	62,295	99,178	102,046	27,636	13,323	9,324	251,507
ECL coverage							
Stage 1	0.0%	0.1%	0.4%	0.1%	0.1%	0.0%	0.2%
– Strong	0.0%	0.0%	0.3%	0.1%	0.1%	0.0%	0.2%
– Satisfactory	0.0%	0.2%	3.7%	0.1%	0.0%	0.0%	0.2%
Stage 2	0.1%	2.4%	7.8%	2.0%	0.1%	–	2.8%
– Strong	0.1%	0.3%	5.9%	0.0%	0.1%	–	1.4%
– Satisfactory	0.0%	2.0%	7.2%	1.8%	–	–	2.1%
– Higher risk	0.0%	13.0%	15.1%	6.2%	0.0%	–	12.0%
<i>Of which (stage 2):</i>							
– Less than 30 days past due	0.0%	13.2%	6.9%	18.3%	–	–	11.8%
– More than 30 days past due	0.0%	30.6%	15.0%	11.4%	0.0%	–	19.0%
Stage 3, credit-impaired financial assets	44.4%	59.3%	47.6%	70.0%	44.0%	–	60.2%
Cover ratio	0.0%	3.7%	0.9%	5.1%	0.7%	0.0%	2.5%
Fair value through profit or loss							
Performing	19,022	32,209	539	457	–	–	33,205
– Strong	16,199	22,647	539	100	–	–	23,286
– Satisfactory	2,823	9,555	–	357	–	–	9,912
– Higher risk	–	7	–	–	–	–	7
Impaired	–	59	–	4	–	–	63
Gross balance ²	19,022	32,268	539	461	–	–	33,268
Net carrying value (incl FVTPL)	81,317	131,446	102,585	28,097	13,323	9,324	284,775

1 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$4,566 million under Customers and of \$5,101 million under Banks, held at amortised cost

2 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$29,361 million under Customers and of \$16,157 million under Banks, held at fair value through profit or loss

	Banks ¹ \$million	Customers					Customers total ¹ \$million
		Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	
Performing loans							
– Strong	68,958	75,672	100,687	6,072	9,220	9,253	200,904
– Satisfactory	12,309	52,610	1,586	21,216	3,951	90	79,453
– Higher risk	54	1,128	405	323	42	–	1,898
	81,321	129,410	102,678	27,611	13,213	9,343	282,255
Impaired forborne loans, net of provisions	–	–	269	–	–	–	269
Non-performing loans, net of provisions	5	2,484	274	596	140	–	3,494
Total loans	81,326	131,894	103,221	28,207	13,353	9,343	286,018
Portfolio impairment provision	(1)	(156)	(208)	(99)	(2)	–	(465)
Total net loans	81,325	131,738	103,013	28,108	13,351	9,343	285,553

The following table further analyses total loans included within the table above.

Included in performing loans

Neither past due nor impaired

– Strong	68,740	75,482	100,687	6,058	9,220	9,251	200,698
– Satisfactory	12,255	51,846	–	20,831	3,866	90	76,633
– Higher risk	54	899	–	239	42	–	1,180
	81,049	128,227	100,687	27,128	13,128	9,341	278,511

Past due but not impaired

– Up to 30 days past due	247	951	1,586	360	69	–	2,966
– 31–60 days past due	25	32	278	49	16	–	375
– 61–90 days past due	–	200	127	74	–	2	403
	272	1,183	1,991	483	85	2	3,744

Total performing loans	81,321	129,410	102,678	27,611	13,213	9,343	282,255
of which, forborne loans amounting to	2	480	84	31	–	–	595

Included in non-performing loans

Past due but not impaired

– 91–120 days past due	–	–	67	–	–	–	67
– 121–150 days past due	–	–	56	–	–	–	56
	–	–	123	–	–	–	123

Individually impaired loans, net of provisions	5	2,484	151	596	140	–	3,371
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Total non-performing loans	5	2,484	274	596	140	–	3,494
of the above, forborne loans	4	861	268	186	–	–	1,315

The following table sets out loans held at fair value through profit or loss which are included within the table above.

Neither past due nor impaired

– Strong	2,081	1,451	–	30	–	–	1,481
– Satisfactory	1,056	1,572	–	186	–	–	1,758
– Higher risk	–	7	–	–	–	–	7
	3,137	3,030	–	216	–	–	3,246

Individually impaired loans	–	19	–	–	–	–	19
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Total loans held at fair value through profit or loss	3,137	3,049	–	216	–	–	3,265
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1 Loans and advances includes reverse repurchase agreements and other similar secured lending of \$55,187 million

Credit quality by geographic region (unaudited)

The following table sets out the credit quality for gross loans and advances to customers and banks, held at amortised cost, by geographic region and stage.

Loans and advances to customers

	31.12.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Stage 1	118,422	71,169	23,598	23,914	237,103
Stage 2	4,139	7,628	5,112	549	17,428
Gross stage 1 & stage 2 balance	122,561	78,797	28,710	24,463	254,531
Stage 3, credit-impaired financial assets	777	2,730	2,573	844	6,924
Gross loans ¹	123,338	81,527	31,283	25,307	261,455

	01.01.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Stage 1	114,990	70,594	23,120	19,781	228,485
Stage 2	5,796	7,578	4,762	2,447	20,583
Gross stage 1 & stage 2 balance	120,786	78,172	27,882	22,228	249,068
Stage 3, credit-impaired financial assets ²	806	4,248	2,657	1,058	8,769
Gross loans ¹	121,592	82,420	30,539	23,286	257,837

1 Amounts gross of expected credit losses. Includes reverse repurchase agreements and other similar secured lending

2 Amounts do not include those purchased or originated credit-impaired financial assets

	31.12.17 (IAS 39)				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Neither past due nor individually impaired	125,565	79,175	27,774	45,997	278,511
Past due but not individually impaired	809	1,711	1,153	194	3,867
Individually impaired	806	4,233	2,654	1,184	8,877
Individual impairment provision	(312)	(2,361)	(1,858)	(706)	(5,237)
Portfolio impairment provisions	(129)	(179)	(121)	(36)	(465)
Net carrying value ¹	126,739	82,579	29,602	46,633	285,553

1 Excludes impairment charges relating to debt securities classified as loans and receivables, refer to Note 8 to the financial statements for details

Loans and advances to banks

	31.12.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Stage 1	27,801	11,095	5,374	16,080	60,350
Stage 2	59	582	199	230	1,070
Gross stage 1 & stage 2 balance	27,860	11,677	5,573	16,310	61,420
Stage 3, credit-impaired financial assets	—	—	—	—	—
Gross loans ¹	27,860	11,677	5,573	16,310	61,420

	01.01.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Stage 1	28,792	11,853	4,425	14,856	59,926
Stage 2	1,212	557	169	434	2,372
Gross stage 1 & stage 2 balance	30,004	12,410	4,594	15,290	62,298
Stage 3, credit-impaired financial assets ²	—	—	—	9	9
Gross loans ¹	30,004	12,410	4,594	15,299	62,307

1 Amounts gross of expected credit losses. Includes reverse repurchase agreements and other similar secured lending

2 Amounts do not include those purchased or originated credit-impaired financial assets

	31.12.17 (IAS 39)				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost and FVTPL					
Neither past due nor individually impaired	33,096	16,482	7,328	24,143	81,049
Past due but not individually impaired	130	41	101	—	272
Individually impaired	—	—	—	9	9
Individual impairment provision	—	—	—	(4)	(4)
Portfolio impairment provision	—	—	(1)	—	(1)
Net carrying value ¹	33,226	16,523	7,428	24,148	81,325

1 Excludes impairment charges relating to debt securities classified as loans and receivables, refer to Note 8 to the financial statements for details

Credit quality by industry (unaudited)

Loans and advances

This section provides an analysis of the Group's amortised cost portfolio by industry on a gross, total credit impairment and net basis.

The Group has reduced exposures across the energy and construction sectors primarily within stage 2 and stage 3, while increasing exposures in stage 1 across manufacturing, government and financing, insurance and non-banking.

Amortised cost	31.12.18											
	Stage 1			Stage 2			Stage 3			Total		
	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million
Industry:												
Energy	14,530	(18)	14,512	2,198	(46)	2,152	890	(554)	336	17,618	(618)	17,000
Manufacturing	21,627	(23)	21,604	1,932	(86)	1,846	719	(530)	189	24,278	(639)	23,639
Financing, insurance and non-banking	20,419	(7)	20,412	379	(10)	369	225	(119)	106	21,023	(136)	20,887
Transport, telecom and utilities	12,977	(21)	12,956	2,495	(25)	2,470	818	(474)	344	16,290	(520)	15,770
Food and household products	7,558	(7)	7,551	1,851	(15)	1,836	718	(376)	342	10,127	(398)	9,729
Commercial real estate	13,516	(16)	13,500	1,299	(27)	1,272	342	(79)	263	15,157	(122)	15,035
Mining and quarrying	4,845	(7)	4,838	1,047	(29)	1,018	439	(309)	130	6,331	(345)	5,986
Consumer durables	7,328	(5)	7,323	906	(13)	893	534	(348)	186	8,768	(366)	8,402
Construction	2,565	(4)	2,561	512	(22)	490	636	(385)	251	3,713	(411)	3,302
Trading companies and distributors	2,512	(2)	2,510	385	(2)	383	353	(239)	114	3,250	(243)	3,007
Government	13,488	(1)	13,487	250	—	250	—	—	—	13,738	(1)	13,737
Other	4,639	(7)	4,632	552	(8)	544	183	(147)	36	5,374	(162)	5,212
Retail Products:												
Mortgage	73,437	(9)	73,428	1,936	(9)	1,927	343	(98)	245	75,716	(116)	75,600
CCPL and other unsecured lending	16,622	(277)	16,345	560	(117)	443	437	(263)	174	17,619	(657)	16,962
Auto	670	(2)	668	4	—	4	1	—	1	675	(2)	673
Secured wealth products	17,074	(18)	17,056	825	(5)	820	236	(112)	124	18,135	(135)	18,000
Other	3,296	(2)	3,294	297	(2)	295	50	(23)	27	3,643	(27)	3,616
Net carrying value (customers) ¹	237,103	(426)	236,677	17,428	(416)	17,012	6,924	(4,056)	2,868	261,455	(4,898)	256,557

1 Includes reverse repurchase agreements and other similar secured lending held at amortised cost of \$3,151 million

01.01.18

Amortised cost	Stage 1			Stage 2			Stage 3			Total		
	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million	Gross balance \$million	Total credit impairment \$million	Net carrying amount \$million
Industry:												
Energy	14,679	(15)	14,664	3,050	(78)	2,972	1,442	(913)	529	19,171	(1,006)	18,165
Manufacturing	18,848	(9)	18,839	3,254	(77)	3,177	801	(614)	187	22,903	(700)	22,203
Financing, insurance and non- banking	18,275	(17)	18,258	1,341	(9)	1,332	403	(179)	224	20,019	(205)	19,814
Transport, telecom and utilities	12,482	(11)	12,471	3,031	(89)	2,942	753	(397)	356	16,266	(497)	15,769
Food and household products	7,707	(7)	7,700	1,933	(41)	1,892	757	(423)	334	10,397	(471)	9,926
Commercial real estate	13,452	(16)	13,436	919	(41)	878	385	(44)	341	14,756	(101)	14,655
Mining and quarrying	5,046	(3)	5,043	1,038	(11)	1,027	952	(674)	278	7,036	(688)	6,348
Consumer durables	7,108	(4)	7,104	1,155	(18)	1,137	728	(553)	175	8,991	(575)	8,416
Construction	2,546	(3)	2,543	792	(31)	761	786	(493)	293	4,124	(527)	3,597
Trading companies and distributors	1,862	(1)	1,861	290	2	292	463	(336)	127	2,615	(335)	2,280
Government	9,521	(1)	9,520	78	(1)	77	6	(1)	5	9,605	(3)	9,602
Other	4,507	(7)	4,500	781	(11)	770	268	(175)	93	5,556	(193)	5,363
Retail Products:												
Mortgage	77,858	(8)	77,850	758	–	758	280	(131)	149	78,896	(139)	78,757
CCPL and other unsecured lending	15,959	(337)	15,622	685	(163)	522	505	(234)	271	17,149	(734)	16,415
Auto	626	(3)	623	6	(1)	5	1	–	1	633	(4)	629
Secured wealth products	13,301	(14)	13,287	720	(1)	719	197	(93)	104	14,218	(108)	14,110
Other	4,708	(16)	4,692	752	(6)	746	42	(22)	20	5,502	(44)	5,458
Net carrying value (customers) ¹	228,485	(472)	228,013	20,583	(576)	20,007	8,769	(5,282)	3,487	257,837	(6,330)	251,507

1 Includes reverse repurchase agreements and other similar secured lending held at amortised cost of \$4,566 million

Amortised cost and FVTPL	Neither past due nor individually impaired \$million	Past due but not individually impaired \$million	Individually impaired \$million	Individual impairment provision \$million	Total \$million	Movements in impairment			
						Individual impairment provision held as at 1 Jan 2017 \$million	Net impairment charge/(release) \$million	Amounts written off/other movements \$million	Individual impairment provision held as at 31 Dec 2017 \$million
Industry:									
Energy	18,090	116	1,217	(879)	18,544	814	208	(143)	879
Manufacturing	22,085	397	860	(611)	22,731	644	250	(283)	611
Financing, insurance and non-banking	44,439	314	444	(213)	44,984	409	79	(275)	213
Transport, telecom and utilities	15,640	123	777	(376)	16,164	218	230	(72)	376
Food and household products	9,543	179	756	(422)	10,056	561	75	(214)	422
Commercial real estate	14,574	199	400	(34)	15,139	33	9	(8)	34
Mining and quarrying	6,063	64	1,297	(783)	6,641	1,140	26	(383)	783
Consumer durables	8,792	132	725	(583)	9,066	523	124	(64)	583
Construction	3,346	60	781	(484)	3,703	553	59	(128)	484
Trading companies and distributors	2,155	43	458	(331)	2,325	310	46	(25)	331
Government	14,390	25	6	(1)	14,420	–	(1)	2	1
Other	5,579	16	252	(176)	5,671	195	37	(54)	178
Retail Products:									
Mortgage	77,279	1,340	276	(117)	78,778	104	34	(21)	117
CCPL and other unsecured lending	16,700	610	360	(135)	17,535	140	398	(405)	133
Auto	588	45	–	–	633	–	1	(1)	–
Secured wealth products	13,969	57	198	(70)	14,154	4	28	38	70
Other	5,279	147	70	(22)	5,474	19	19	(16)	22
Gross carrying value (customers) ¹	278,511	3,867	8,877	(5,237)	286,018				
Individual impairment provision						5,667	1,622	(2,052)	5,237
Portfolio impairment provision					(465)	687	(239)	17	465
Net carrying value (customers)					285,553	6,354	1,383	(2,035)	5,702

1 Includes loans held at fair value through profit or loss \$2,918 million and reverse repurchase agreements held at amortised cost \$33,581 million and fair value through profit or loss \$347 million

Movement in gross exposures and credit impairment for loans and advances, debt securities, undrawn commitments and financial guarantees

The tables overleaf set out the movement in gross exposures and credit impairment by stage in respect of amortised cost loans to banks and customers, undrawn committed facilities, undrawn cancellable facilities, debt securities classified at amortised cost and FVOCI and financial guarantees. The tables are presented for the Group, and the Corporate & Institutional Banking, Commercial Banking and Retail Banking segments.

Methodology

The movement lines within the tables are an aggregation of monthly movements over the year and will therefore reflect the accumulation of multiple trades during the year. The credit impairment charge in the income statement comprises the amounts within the boxes in the table below less recoveries of amounts previously written off.

The approach for determining the key line items in the tables is set out below.

- **Transfers** – transfers between stages are deemed to occur at the beginning of a month based on prior month closing balances
- **Net remeasurement from stage changes** – the remeasurement of credit impairment provisions arising from a change in stage is reported within the stage that the assets are transferred to. For example, assets transferred into stage 2 are remeasured from a 12 month to a lifetime expected credit loss, with the effect of remeasurement reported in stage 2. For stage 3, this represents the initial remeasurement from specific provisions recognised on individual assets transferred into stage 3 in the year

- **Net changes in exposures** – comprises new business written less repayments in the year. Within stage 1, new business written will attract up to 12 months of expected credit loss charges. Repayments of non-amortising loans (primarily within Corporate & Institutional Banking and Commercial Banking) will have low amounts of expected credit loss provisions attributed to them, due to the release of provisions over the term to maturity. In stages 2 and 3, the amounts principally reflect repayments although stage 2 may include new business written where clients are on non-purely precautionary early alert, are a credit grade 12, or when non-investment grade debt securities are acquired
- **Changes in risk parameters** – for stages 1 and 2, this reflects changes in the probability of default (PD), loss given default (LGD) and exposure at default (EAD) of assets during the year, which includes the impact of releasing provisions over the term to maturity. It also includes the effect of changes in forecasts of macroeconomic variables during the year. In stage 3, this line represents additional specific provisions recognised on exposures held within stage 3

Movements during the year

For Corporate & Institutional Banking and Commercial Banking businesses, the gross exposures in stage 1 increased from \$292 billion at 1 January 2018 to \$305 billion at 31 December 2018, primarily due to new business written within Corporate & Institutional Banking. This contributed to the increase in stage 1 provisions from \$154 million to \$181 million offset by improvements in credit quality across the portfolio. Within stage 2 gross exposures and credit impairment provisions declined compared with 1 January 2018, largely driven by a lower level of exposures within Corporate & Institutional Banking on non-purely precautionary early alert, which either repaid or transferred back to stage 1.

Retail Banking stage 1 exposures increased by \$2 billion to \$133 billion at 31 December 2018, driven by increased lending of secured wealth products, which along with portfolio quality improvements resulted in stage 1 provisions reducing from \$381 million to \$313 million. Stage 2 exposures increased from \$8 billion at 1 January 2018 to \$8.9 billion at 31 December 2018, largely due to increased inflows of mortgages, which contributed to a reduction in stage 2 provisions from \$178 million at 1 January 2018 to \$132 million at 31 December 2018. The increase in provisions from 'Changes in risk parameters' within stage 2 reflects the normal flow of accounts and is not in itself an indicator that there is a significant weakness in the portfolio.

Across both stage 1 and stage 2 for all segments, the improvement in macroeconomic forecasts during the year reduced stage 1 and 2 provisions by \$42 million within an overall benign environment.

Across all segments, at 31 December 2018 approximately 35 per cent of gross exposures held in stage 2 are as a result of meeting the PD significant increase in credit risk thresholds, 24 per cent as a result of having 'higher risk' credit quality, 13 per cent due to being on non-purely precautionary early alert, 11 per cent being more than 30 days past due with the remainder primarily relating to Private Banking and other factors.

Stage 3 exposures fell from \$9.2 billion at 1 January 2018 to \$7.6 billion at 31 December, primarily due to repayments and write-offs within Corporate & Institutional Banking and Commercial Banking, and this was also reflected in lower stage 3 provisions, which fell from \$5.6 billion at 1 January 2018 to \$4.4 billion at 31 December 2018.

All segments

Amortised cost and FVOCI	Stage 1			Stage 2			Stage 3			Total		
	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million
As at 1 January 2018	565,815	(576)	565,239	52,387	(742)	51,645	9,198	(5,576)	3,622	627,400	(6,894)	620,506
Transfers to stage 1	59,776	(627)	59,149	(59,776)	627	(59,149)	–	–	–	–	–	–
Transfers to stage 2	(73,589)	136	(73,453)	73,809	(136)	73,673	(220)	–	(220)	–	–	–
Transfers to stage 3	(293)	7	(286)	(2,338)	264	(2,074)	2,631	(271)	2,360	–	–	–
Net change in exposures	50,249	(282)	49,967	(20,341)	94	(20,247)	(1,836)	527	(1,309)	28,072	339	28,411
Net remeasurement from stage changes	–	139	139	–	(136)	(136)	–	(529)	(529)	–	(526)	(526)
Changes in risk parameters	–	468	468	–	(275)	(275)	–	971	(971)	–	(778)	(778)
Write-offs	–	–	–	–	–	–	(2,075)	2,075	–	(2,075)	2,075	–
Exchange translation differences and other movements ¹	(9,477)	204	(9,273)	(1,417)	(196)	(1,613)	(112)	327	215	(11,006)	335	(10,671)
As at 31 December 2018	592,481	(531)	591,950	42,324	(500)	41,824	7,586	(4,418)	3,168	642,391	(5,449)	636,942
Income statement ECL (charge)/release		325			(317)			(973)			(965)	
Recoveries of amounts previously written off								312			312	
Total credit impairment (charge)/release		325			(317)			(661)			(653)	

1 Includes fair value adjustments and amortisation on debt securities

Corporate & Institutional Banking

Amortised cost and FVOCI	Stage 1			Stage 2			Stage 3			Total		
	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million
As at 1 January 2018	263,079	(114)	262,965	29,576	(409)	29,167	5,951	(3,504)	2,447	298,606	(4,027)	294,579
Transfers to stage 1	40,196	(156)	40,040	(40,196)	156	(40,040)	–	–	–	–	–	–
Transfers to stage 2	(39,490)	30	(39,460)	39,692	(30)	39,662	(202)	–	(202)	–	–	–
Transfers to stage 3	–	–	–	(1,129)	85	(1,044)	1,129	(85)	1,044	–	–	–
Net change in exposures	12,869	(183)	12,686	(8,639)	10	(8,629)	(1,064)	377	(687)	3,166	204	3,370
Net remeasurement from stage changes	–	46	46	–	(30)	(30)	–	(277)	(277)	–	(261)	(261)
Changes in risk parameters	–	101	101	–	140	140	–	(394)	(394)	–	(153)	(153)
Write-offs	–	–	–	–	–	–	(1,208)	1,208	–	(1,208)	1,208	–
Exchange translation differences and other movements	(3,418)	131	(3,287)	(252)	(157)	(409)	(133)	209	76	(3,803)	183	(3,620)
As at 31 December 2018	273,236	(145)	273,091	19,052	(235)	18,817	4,473	(2,466)	2,007	296,761	(2,846)	293,915
Income statement ECL (charge)/release		(36)			120			(294)			(210)	
Recoveries of amounts previously written off								77			77	
Total credit impairment (charge)/release		(36)			120			(217)			(133)	

Commercial Banking

	Stage 1			Stage 2			Stage 3			Total		
	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million
Amortised cost and FVOCI												
As at 1 January 2018	28,792	(40)	28,752	5,382	(95)	5,287	2,000	(1,379)	621	36,174	(1,514)	34,660
Transfers to stage 1	12,675	(64)	12,611	(12,675)	64	(12,611)	–	–	–	–	–	–
Transfers to stage 2	(11,152)	26	(11,126)	11,171	(26)	11,145	(19)	–	(19)	–	–	–
Transfers to stage 3	(11)	–	(11)	(606)	14	(592)	617	(14)	603	–	–	–
Net change in exposures	2,163	(65)	(2,098)	3,660	9	3,669	(337)	138	(199)	5,486	82	5,568
Net remeasurement from stage changes	–	12	12	–	(13)	(13)	–	(217)	(217)	–	(218)	(218)
Changes in risk parameters	–	67	67	–	(33)	(33)	–	(162)	(162)	–	(128)	(128)
Write-offs	–	–	–	–	–	–	(293)	293	–	(293)	293	–
Exchange translation differences and other movements	(1,047)	29	(1,018)	(223)	(20)	(243)	(155)	93	(62)	(1,425)	102	(1,323)
As at 31 December 2018	31,420	(35)	31,385	6,709	(100)	6,609	1,813	(1,248)	565	39,942	(1,383)	38,559
Income statement ECL (charge)/release		14			(37)			(241)			(264)	
Recoveries of amounts previously written off								21			21	
Total credit impairment (charge)/release		14			(37)			(220)			(243)	

Retail Banking

	Stage 1			Stage 2			Stage 3			Total		
	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million	Gross exposure \$million	Total credit impairment \$million	Net \$million
Amortised cost and FVOCI												
As at 1 January 2018	131,280	(381)	130,899	7,964	(178)	7,786	818	(389)	429	140,062	(948)	139,114
Transfers to stage 1	5,570	(388)	5,182	(5,570)	388	(5,182)	–	–	–	–	–	–
Transfers to stage 2	(9,954)	74	(9,880)	9,954	(74)	9,880	–	–	–	–	–	–
Transfers to stage 3	(281)	8	(273)	(511)	164	(347)	792	(172)	620	–	–	–
Net change in exposures	9,858	(17)	9,841	(2,628)	78	(2,550)	(398)	–	(398)	6,832	61	6,893
Net remeasurement from stage changes	–	72	72	–	(90)	(90)	–	(12)	(12)	–	(30)	(30)
Changes in risk parameters	–	264	264	–	(373)	(373)	–	(402)	(402)	–	(511)	(511)
Write-offs	–	–	–	–	–	–	(575)	575	–	(575)	575	–
Exchange translation differences and other movements	(2,989)	55	(2,934)	(322)	(47)	(369)	195	6	201	(3,116)	14	(3,102)
As at 31 December 2018	133,484	(313)	133,171	8,887	(132)	8,755	832	(394)	438	143,203	(839)	142,364
Income statement ECL (charge)/release		319			(385)			(414)			(480)	
Recoveries of amounts previously written off								214			214	
Total credit impairment (charge)/release		319			(385)			(200)			(266)	

Credit impairment charge

The total ongoing credit impairment charge decreased significantly to \$740 million in 2018 (2017: \$1.2 billion), down 38 per cent primarily due to improvements in portfolio quality driven by significant actions taken since 2016 to improve the Group's credit quality.

The ongoing business credit impairment charge in Corporate & Institutional Banking of \$229 million for 2018 is 65 per cent lower than 2017. This was due to lower stage 3 impairment which was driven by lower losses particularly in ASEAN & South Asia and recoveries from a small number of major exposures in India and the Middle East.

Commercial Banking ongoing business credit impairment charge increased by 45 per cent (2018: \$244 million, 2017: \$168 million) compared to 2017, which saw a release of \$63 million of portfolio impairment provisions held against certain sectors of the portfolios that were no longer required. Africa & Middle East contributed 60 per cent of the full-year 2018 charge.

Retail Banking credit impairment reduced 29 per cent (2018: \$267 million, 2017: \$374 million), mainly driven by continued improvement in portfolio shape and performance, particularly within the unsecured portfolios, as well as one-off provision releases in Korea and Indonesia.

Stage 3 reductions were partly offset by lower releases of \$12 million in stage 1 and 2 compared to Portfolio Impairment Provisions (PIP under IAS 39) as 2017 benefited from material releases of PIP specific risk adjustments of \$190 million.

In the liquidation portfolio, there was a net release of \$79 million due to loan disposals and repayments.

	31.12.18 \$million (IFRS 9)	31.12.17 \$million (IAS 39)
Ongoing business portfolio		
Corporate & Institutional Banking	229 ¹	657
Retail Banking	267	374
Commercial Banking	244	168
Private Banking	–	1
Credit impairment charge	740	1,200
Restructuring business portfolio		
Liquidation portfolio	(79)	120
Others	(8)	42
Credit impairment charge	(87)	162
Total credit impairment charge	653	1,362

1 Credit impairment recovery of \$13 million in Central & other items is included in Corporate & Institutional Banking

Problem credit management and provisioning

Forborne and other modified loans by client segment

A forborne loan arises when a concession has been made to the contractual terms of a loan in response to a customer's financial difficulties.

The table below presents stage 2 and stage 3 loans with forbearance measures by segment.

31.12.18							
	Loans to banks \$million	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Amortised cost							
All loans with forbearance measures	–	1,445	376	709	–	–	2,530
Credit impairment (stage 3)	–	(517)	(174)	(427)	–	–	(1,118)
Net carrying value	–	928	202	282	–	–	1,412
<i>Included within the above table</i>							
Gross performing forborne loans	–	286	23	71	–	–	380
Modification of terms and conditions ¹	–	273	23	64	–	–	360
Refinancing ²	–	13	–	7	–	–	20
Collateral	–	16	23	28	–	–	67
Gross non-performing forborne loans	–	1,159	353	638	–	–	2,150
Modification of terms and conditions ¹	–	1,092	353	610	–	–	2,055
Refinancing ²	–	67	–	28	–	–	95
Impairment provisions	–	(517)	(174)	(427)	–	–	(1,118)
Modification of terms and conditions ¹	–	(489)	(174)	(409)	–	–	(1,072)
Refinancing ²	–	(28)	–	(18)	–	–	(46)
Net non-performing forborne loans	–	642	179	211	–	–	1,032
Collateral	–	225	163	107	–	–	495

1 Modification of terms is any contractual change apart from refinancing, as a result of credit stress of the counterparty, i.e. interest reductions, loan covenant waivers

2 Refinancing is a new contract to a lender in credit stress, such that they are refinanced and can pay other debt contracts that they were unable to honour

01.01.18							
	Loans to banks \$million	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Amortised cost							
All loans with forbearance measures	6	2,143	797	612	–	–	3,558
Credit impairment (stage 3)	–	(802)	(176)	(394)	–	–	(1,372)
Net balance	6	1,341	621	218	–	–	2,186
<i>Included within the above table</i>							
Gross performing forborne loans	2	480	353	31	–	–	866
Modification of terms and conditions ¹	2	480	353	28	–	–	863
Refinancing ²	–	–	–	3	–	–	3
Collateral	–	4	2	–	–	–	6
Gross non-performing forborne loans	4	1,663	384	581	–	–	2,632
Modification of terms and conditions ¹	4	1,314	384	524	–	–	2,226
Refinancing ²	–	349	–	57	–	–	406
Impairment provisions	–	(802)	(116)	(394)	–	–	(1,312)
Modification of terms and conditions ¹	–	(554)	(116)	(364)	–	–	(1,034)
Refinancing ²	–	(248)	–	(30)	–	–	(278)
Net non-performing forborne loans	4	861	268	187	–	–	1,320
Collateral	–	52	20	34	–	–	106

1 Modification of terms is any contractual change apart from refinancing, as a result of credit stress of the counterparty, i.e. interest reductions, loan covenant waivers

2 Refinancing is a new contract to a lender in credit stress, such that they are refinanced and can pay other debt contracts that they were unable to honour

31.12.17 (IAS 39)

	Loans to banks \$million	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
All loans with forbearance measures	6	2,143	797	647	–	–	3,593
Accumulated impairment	–	(802)	(176)	(430)	–	–	(1,408)
Net balance	6	1,341	621	217	–	–	2,185
<i>Included within the above table</i>							
Gross performing forbore loans	2	480	353	31	–	–	866
Modification of terms and conditions ¹	2	480	353	28	–	–	863
Refinancing ²	–	–	–	3	–	–	3
Collateral	–	4	2	–	–	–	6
Gross non-performing forbore loans	4	1,663	384	616	–	–	2,667
Modification of terms and conditions ¹	4	1,314	384	559	–	–	2,261
Refinancing ²	–	349	–	57	–	–	406
Impairment provisions	–	(802)	(116)	(430)	–	–	(1,348)
Modification of terms and conditions ¹	–	(554)	(116)	(400)	–	–	(1,070)
Refinancing ²	–	(248)	–	(30)	–	–	(278)
Net non-performing forbore loans	4	861	268	186	–	–	1,319
Collateral	–	52	20	34	–	–	106

1 Modification of terms is any contractual change apart from refinancing, as a result of credit stress of the counterparty, i.e. interest reductions, loan covenant waivers

2 Refinancing is a new contract to a lender in credit stress, such that they are refinanced and can pay other debt contracts that they were unable to honour

Forborne and other modified loans by region (unaudited)

31.12.18

	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Not impaired	114	109	113	44	380
Impaired	233	344	179	276	1,032
Total forbore loans	347	453	292	320	1,412

31.12.17 (IAS 39)

	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Not impaired	56	40	395	106	597
Impaired	353	778	202	255	1,588
Total forbore loans	409	818	597	361	2,185

Credit-impaired (stage 3) loans and advances by client segment

Gross credit-impaired (stage 3) loans for the Group are down 21 per cent in the year, to \$6.9 billion (1 January 2018: \$8.8 billion) with significant reductions in the liquidation portfolio as we continued to exit these exposures. Gross stage 3 loans in the ongoing business decreased to \$5.6 billion (1 January 2018: \$6.5 billion), driven by repayments, debt sales, write-offs and transfers to stage 2 in Corporate & Institutional Banking.

The inflows of stage 3 loans in Corporate & Institutional Banking were also significantly lower, at around 35 per cent of the level seen in 2017 (2018: \$0.8 billion; 2017: \$2.3 billion), reflecting the continued improvement in the Corporate & Institutional Banking portfolio. Stage 3 inflows in Commercial Banking were higher (2018: \$0.6 billion; 2017: \$0.4 billion), driven by exposures in Greater China & North Asia and Africa & Middle East. Stage 3 loans in Retail Banking were broadly stable (31 December 2018: \$0.8 billion; 1 January 2018: \$0.8 billion).

Stage 3 cover ratio

The stage 3 cover ratio measures the proportion of stage 3 impairment provisions to gross stage 3 loans, and is a metric commonly used in considering impairment trends. This metric does not allow for variations in the composition of stage 3 loans and should be used in conjunction with other credit risk information provided, including the level of collateral cover.

The cover ratio before collateral for Corporate & Institutional Banking reduced from 59 per cent to 57 per cent due to debt sales and write-offs on clients who had a high level of provisions. The cover ratio for Retail Banking remained stable at 48 per cent and cover ratio including collateral improved to 87 per cent (1 January 2018: 74 per cent).

The Private Banking segment remains fully covered taking into account the collateral held.

The balance of stage 3 loans not covered by stage 3 impairment provisions represents the adjusted value of collateral held and the net outcome of any workout or recovery strategies.

Collateral provides risk mitigation to some degree in all client segments and supports the credit quality and cover ratio assessments post impairment provisions. Further information on collateral is provided in the credit risk mitigation section.

The table below presents the balance of the gross stage 3 loans to banks and customers, together with the provisions held, for all segments and the respective cover ratios. For the reconciliation between the non-performing loans under IAS 39 and under IFRS 9, refer to Note 41.

	31.12.18				
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Total \$million
Amortised cost					
Gross credit-impaired	4,084	832	1,773	235	6,924
Credit impairment provisions	(2,326)	(396)	(1,234)	(100)	(4,056)
Net credit-impaired	1,758	436	539	135	2,868
Cover ratio	57%	48%	70%	43%	59%
Collateral (\$ million)	802	324	302	135	1,563
Cover ratio (after collateral)	77%	87%	87%	100%	81%

Of the above, included in the liquidation portfolio:

Gross credit-impaired	1,029	—	89	157	1,275
Credit impairment provisions	(780)	—	(89)	(93)	(962)
Net credit-impaired	249	—	—	64	313
Cover ratio	76%	—	100%	59%	75%
Collateral (\$ million)	159	—	—	64	223
Cover ratio (after collateral)	91%	—	100%	100%	93%

	01.01.18				
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Total \$million
Amortised cost					
Gross credit-impaired	5,797	818	1,956	207	8,778
Credit impairment provisions	(3,437)	(389)	(1,369)	(91)	(5,286)
Net credit-impaired	2,360	429	587	116	3,492
Cover ratio	59%	48%	70%	44%	60%
Collateral (\$ million)	1,111	218	277	203	1,809
Cover ratio (after collateral)	78%	74%	84%	100%	81%

Of the above, included in the liquidation portfolio:

Gross credit-impaired	1,945	—	125	156	2,226
Credit impairment provisions	(1,417)	—	(123)	(86)	(1,626)
Net credit-impaired	528	—	2	70	600
Cover ratio	73%	—	98%	55%	73%
Collateral (\$ million)	237	—	—	96	333
Cover ratio (after collateral)	85%	—	98%	100%	88%

	31.12.17 (IAS 39)				
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Total \$million
Amortised cost and FVTPL					
Gross non-performing loans	5,957	489	2,026	207	8,679
Individual impairment provisions ¹	(3,468)	(215)	(1,430)	(67)	(5,180)
Net non-performing loans	2,489	274	596	140	3,499
Portfolio impairment provision	(157)	(208)	(99)	(2)	(466)
Total	2,332	66	497	138	3,033
Cover ratio	61%	87%	75%	33%	65%
Cover ratio (excluding PIP)	58%	44%	71%	32%	60%
Collateral (\$ million)	1,111	218	277	203	1,809
Cover ratio (after collateral)	77%	89%	84%	100%	81%

Of the above, included in the liquidation portfolio:

Gross credit-impaired	1,945	–	125	156	2,226
Credit impairment provisions	(1,388)	–	(123)	(62)	(1,573)
Net credit-impaired	557	–	2	94	653
Cover ratio	71%	–	98%	40%	71%
Collateral (\$ million)	237	–	–	96	333
Cover ratio (after collateral)	84%	–	98%	100%	86%

1 The difference to total individual impairment provision reflects provisions against forbore loans that are not included within non-performing loans as they have been performing for 180 days

Credit-impaired (stage 3) loans and advances by geographic region (unaudited)

Stage 3 loans decreased by \$1.9 billion or 21 per cent compared with 1 January 2018. The largest decrease was in the ASEAN & South Asia region (\$1.5 billion), primarily due to settlement and write-offs.

	31.12.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Gross credit-impaired	777	2,730	2,573	844	6,924
Credit impairment provisions	(282)	(1,705)	(1,726)	(343)	(4,056)
Net credit-impaired	495	1,025	847	501	2,868
Cover ratio	36%	62%	67%	41%	59%

	01.01.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Gross credit-impaired	806	4,248	2,657	1,067	8,778
Credit impairment provisions	(308)	(2,500)	(1,846)	(632)	(5,286)
Net credit-impaired	498	1,748	811	435	3,492
Cover ratio	38%	59%	69%	59%	60%

	31.12.17 (IAS 39)				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost and FVTPL					
Gross non-performing	895	3,948	2,692	1,144	8,679
Individual impairment provision	(396)	(2,389)	(1,675)	(720)	(5,180)
Non-performing loans net of individual impairment provision	499	1,559	1,017	424	3,499
Portfolio impairment provision	(129)	(180)	(121)	(36)	(466)
Net non-performing loans and advances	370	1,379	896	388	3,033
Cover ratio	59%	65%	67%	66%	65%
Cover ratio (excluding portfolio impairment provision)					60%

Movement of credit-impaired (stage 3) loans and advances provisions by client segment

Credit impairment provisions as at 31 December 2018 were \$4,056 million, compared with \$5,286 million as at 1 January 2018, with the decrease largely due to material reductions in Corporate & Institutional Banking.

The Corporate & Institutional Banking credit impairment provisions as at 31 December 2018 decreased by 32 per cent (\$1,111 million) compared with 1 January 2018 driven by write-offs and lower new provisions taken in 2018.

The following table shows the movement of credit-impaired (stage 3) provisions for each client segment:

	31.12.18				
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Total ¹ \$million
Amortised cost					
Gross credit-impaired loans at 31 December	4,084	832	1,773	235	6,924
Credit impairment allowances at 1 January	3,437	389	1,369	91	5,286
Exchange translation difference	(188)	16	(86)	3	(255)
Amounts written off	(1,179)	(575)	(291)	–	(2,045)
Discount unwind	(39)	(20)	(16)	(5)	(80)
New provisions charge	189	12	218	3	422
Repayment	(379)	–	(136)	(5)	(520)
Net transfers into and out of stage 3	85	172	14	–	271
Changes due to risk parameters	400	402	162	13	977
Credit impairment allowances at 31 December	2,326	396	1,234	100	4,056
Net credit impairment	1,758	436	539	135	2,868

1 Excludes credit impairment relating to loan commitments and financial guarantees

	31.12.17 (IAS 39)				
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Total ¹ \$million
Amortised cost					
Gross impaired loans at 31 December	5,957	695	2,027	207	8,886
Provisions held at 1 January	3,961	262	1,602	5	5,830
Exchange translation differences	55	15	31	1	102
Amounts written off	(1,139)	(577)	(444)	–	(2,160)
Releases of acquisition fair values	(1)	–	–	–	(1)
Recoveries of amounts previously written off	27	153	22	32	234
Discount unwind	(41)	(23)	(19)	–	(83)
Transfer to assets held for sale	–	(6)	–	–	(6)
New provisions	1,197	669	327	63	2,256
Recoveries/provisions no longer required	(314)	(218)	(86)	(34)	(652)
Net individual impairment charge against profit	883	451	241	29	1,604
Other movements ²	(277)	–	(2)	–	(279)
Individual impairment provisions held at 31 December	3,468	275	1,431	67	5,241
Net individually impaired loans	2,489	420	596	140	3,645

1 Excludes credit impairment relating to loan commitments and financial guarantees

2 Other movements include provisions for liabilities and charges that have been drawn down and are now part of loan impairment

Credit risk mitigation

Potential credit losses from any given account, customer or portfolio are mitigated using a range of tools such as collateral, netting arrangements, credit insurance and credit derivatives, taking into account expected volatility and guarantees.

The reliance that can be placed on these mitigants is carefully assessed in light of issues such as legal certainty and enforceability, market valuation correlation and counterparty risk of the guarantor.

Collateral

The requirement for collateral is not a substitute for the ability to pay, which is the primary consideration for any lending decisions.

The unadjusted market value of collateral across all asset types, in respect of Corporate & Institutional Banking and Commercial Banking, without adjusting for over-collateralisation, was \$265 billion (2017: \$247 billion).

The collateral values in the table below are adjusted where appropriate in accordance with our risk mitigation policy and for the effect of over-collateralisation. Following the adoption of IFRS 9 on 1 January 2018, the extent of over-collateralisation has been determined with reference to both the drawn and undrawn components of exposure as this best reflects the effect of collateral and other credit enhancements on the amounts arising from expected credit losses. The 2017 comparatives have not been restated, as the effect of collateral on IAS 39 impairment provisions was based on the drawn component only.

We have remained prudent in the way we assess the value of collateral, which is calibrated for a severe downturn and backtested against our prior experience. On average, across all types of non-cash collateral, the value ascribed is approximately half of its current market value. Collateral held against Corporate & Institutional Banking and Commercial Banking exposures amounted to \$23 billion.

In the Retail Banking and Private Banking segments, a secured loan is one where the borrower pledges an asset as collateral of which the Group is able to take possession in the event that the borrower defaults. The collateral level for Retail Banking has decreased by \$2 billion in 2018. This is in line with the overall movement of the secured portfolio.

For loans and advances to customers and banks (including those held at fair value through profit or loss), the table below sets out the fair value of collateral held by the Group, adjusted where appropriate in accordance with the risk mitigation policy and for the effect of over-collateralisation.

Collateral held on loans and advances

The table below details collateral held against exposures, separately disclosing stage 3 exposure and corresponding collateral.

	31.12.18								
	Amount outstanding			Collateral			Net exposure		
	Total \$million	Stage 2 financial assets \$million	Credit- impaired financial assets (\$3) \$million	Total ³ \$million	Stage 2 financial assets \$million	Credit- impaired financial assets (\$3) \$million	Total \$million	Stage 2 financial assets \$million	Credit- impaired financial assets (\$3) \$million
Amortised cost									
Corporate & Institutional Banking ¹	166,091	10,234	1,758	15,882	1,314	802	147,622	8,920	956
Retail Banking	101,235	2,705	436	74,485	2,092	324	26,735	613	112
Commercial Banking	26,759	4,331	539	6,767	3,966	302	19,946	365	237
Private Banking	13,616	785	135	9,729	783	135	3,887	2	–
Central & other items	10,270	26	–	6,278	–	–	3,992	26	–
Total²	317,971	18,081	2,868	113,141	8,155	1,563	202,182	9,926	1,305

1 Includes loans and advances to banks

2 Excludes FVTPL

3 Excludes collateral held against FVTPL exposures, and is adjusted for over-collateralisation based on the drawn and undrawn components of exposures

	31.12.17 (IAS 39)								
	Maximum exposure			Collateral			Net exposure		
	Total \$million	Past due but not individually impaired loans \$million	Individually impaired loans \$million	Total ² \$million	Past due but not individually impaired loans \$million	Individually impaired loans \$million	Total \$million	Past due but not individually impaired loans \$million	Individually impaired loans \$million
Amortised cost and FVTPL									
Corporate & Institutional Banking ¹	193,442	1,455	5,957	70,499	160	1,111	122,943	1,295	4,846
Retail Banking	103,371	2,114	695	76,543	1,514	218	26,828	600	477
Commercial Banking	29,602	483	2,027	6,570	247	277	23,032	236	1,750
Private Banking	13,359	85	207	9,296	82	203	4,063	3	4
Central & other items	27,570	2	–	5,339	–	–	22,231	2	–
Total	367,344	4,139	8,886	168,247	2,003	1,809	199,097	2,136	7,077

1 Includes loans and advances to banks

2 Includes collateral held against FVTPL exposures, and is adjusted for over-collateralisation based on the drawn component of exposures

Collateral – Corporate & Institutional Banking and Commercial Banking

Collateral held against Corporate & Institutional Banking and Commercial Banking exposures amounted to \$23 billion. Following the adoption of IFRS 9, on 1 January 2018 \$44.6 billion of reverse repurchase loans, with associated collateral, was classified and measured at fair value through profit and loss. 2017 comparatives have not been restated.

Collateral taken for longer-term and sub-investment grade corporate loans continues to be high at 51 per cent.

Our underwriting standards encourage taking specific charges on assets and we consistently seek high-quality, investment grade collateral. 83 per cent of tangible collateral held comprises physical assets or is property based, with the remainder largely in cash and investment securities.

Non-tangible collateral such as guarantees and standby letters of credit is also held against corporate exposures, although the financial effect of this type of collateral is less significant in terms of recoveries. However, this type of collateral is considered when determining probability of default and other credit-related factors. Collateral is also held against off-balance sheet exposures, including undrawn commitments and trade-related instruments.

The following table provides an analysis of the types of collateral held against Corporate & Institutional Banking and Commercial Banking loan exposures.

Corporate & Institutional Banking

	31.12.18 ¹ \$million	31.12.17 ² (IAS 39) \$million
Amortised cost		
Maximum exposure	166,091	193,442
Property	5,557	7,014
Plant, machinery and other stock	1,067	3,612
Cash	2,019	5,742
Reverse repos	528	49,736
AAA	–	1,027
A- to AA+	321	40,421
BBB- to BBB+	207	6,448
Lower than BBB-	–	915
Unrated	–	925
Financial guarantees and insurance ³	3,697	–
Commodities	90	162
Ships and aircraft	2,924	4,233
Total value of collateral	15,882	70,499
Net exposure	150,209	122,943

1 Excludes collateral held against FVTPL exposures, and is adjusted for over-collateralisation based on the drawn and undrawn components of exposures

2 Includes collateral held against FVTPL exposures, and is adjusted for over-collateralisation based on the drawn component of exposures

3 Included in 2018 as it is taken into account when determining expected credit losses

Commercial Banking

	31.12.18 ¹ \$million	31.12.17 ² (IAS 39) \$million
Amortised cost		
Maximum exposure	26,759	29,602
Property	4,557	4,642
Plant, machinery and other stock	992	767
Cash	486	923
Reverse repos	72	–
A- to AA+	1	–
BBB- to BBB+	71	–
Financial guarantees and insurance ³	502	–
Commodities	11	4
Ships and aircraft	147	234
Total value of collateral	6,767	6,570
Net exposure	19,992	23,032

1 Excludes collateral held against FVTPL exposures, and is adjusted for over-collateralisation based on the drawn and undrawn components of exposures

2 Includes collateral held against FVTPL exposures, and is adjusted for over-collateralisation based on the drawn component of exposures

3 Included in 2018 as it is taken into account when determining expected credit losses

Collateral – Retail Banking and Private Banking

In Retail Banking and Private Banking, 84 per cent of the portfolio is fully secured. The proportion of unsecured loans remains broadly stable at 15 per cent and the remaining 1 per cent is partially secured.

The following table presents an analysis of loans to individuals by product; split between fully secured, partially secured and unsecured:

	31.12.18				31.12.17 (IAS 39)			
	Fully secured \$million	Partially secured \$million	Unsecured \$million	Total ¹ \$million	Fully secured \$million	Partially secured \$million	Unsecured \$million	Total ² \$million
Amortised cost								
Maximum exposure	96,534	1,383	16,934	114,851	97,523	1,301	17,750	116,574
Loans to individuals								
Mortgages	75,386	191	23	75,600	78,755	23	–	78,778
CCPL	168	102	16,692	16,962	240	86	17,209	17,535
Auto	671	–	2	673	630	–	3	633
Secured wealth products	17,721	107	172	18,000	13,903	156	95	14,154
Other	2,588	983	45	3,616	3,995	1,036	443	5,474
Total collateral ³				84,214				85,839
Net exposure				30,637				30,735
Percentage of total loans	84%	1%	15%		84%	1%	15%	

1 Amounts net of ECL / individual impairment provisions and excludes FVTPL

2 Includes FVTPL

3 Collateral values are adjusted where appropriate in accordance with our risk mitigation policy and for the effect of over-collateralisation

Mortgage loan-to-value ratios by geography

Loan-to-value (LTV) ratios measure the ratio of the current mortgage outstanding to the current fair value of the properties on which they are secured.

In Mortgages, the value of property held as security significantly exceeds the value of mortgage loans. The average LTV of the overall mortgage portfolio is low at 45 per cent. Hong Kong, which represents 37 per cent of the Retail Banking mortgage portfolio has an average LTV of 39.2 per cent. All of our other key markets continue to have low portfolio LTVs, (Korea, Singapore and Taiwan at 43.5 per cent, 54.7 per cent and 51.6 per cent respectively).

An analysis of LTV ratios by geography for the mortgage portfolio is presented in the mortgage LTV ratios by geography table below.

	31.12.18				
	Greater China & North Asia %	ASEAN & South Asia %	Africa & Middle East %	Europe & Americas %	Total %
Amortised cost					
Less than 50 per cent	67.7	41.5	20.9	19.6	58.5
50 per cent to 59 per cent	14.9	18.8	15.3	21.0	16.0
60 per cent to 69 per cent	10.7	22.0	21.8	30.2	14.4
70 per cent to 79 per cent	5.0	16.0	21.6	26.8	8.8
80 per cent to 89 per cent	1.3	1.5	12.0	2.4	1.7
90 per cent to 99 per cent	0.3	0.1	4.7	–	0.3
100 per cent and greater	0.1	0.1	3.8	–	0.2
Average portfolio loan-to-value	42.0	51.5	65.2	54.2	44.8
Loans to individuals – mortgages (\$ million)	52,434	19,156	2,126	1,884	75,600

	31.12.17 (IAS 39)				
	Greater China & North Asia %	ASEAN & South Asia %	Africa & Middle East %	Europe & Americas %	Total %
Amortised cost					
Less than 50 per cent	62.9	36.1	21.6	28.4	54.7
50 per cent to 59 per cent	16.4	17.5	16.9	23.4	16.8
60 per cent to 69 per cent	15.3	18.7	22.6	31.4	16.6
70 per cent to 79 per cent	4.5	22.8	20.8	13.7	9.5
80 per cent to 89 per cent	0.7	4.3	11.2	2.0	1.9
90 per cent to 99 per cent	0.1	0.3	3.9	0.4	0.3
100 per cent and greater	0.1	0.3	3.0	0.8	0.2
Average portfolio loan-to-value	43.5	55.0	63.9	52.1	46.8
Loans to individuals – mortgages (\$ million)	54,609	20,105	2,279	1,785	78,778

Collateral and other credit enhancements possessed or called upon

The Group obtains assets by taking possession of collateral or calling upon other credit enhancements (such as guarantees). Repossessed properties are sold in an orderly fashion. Where the proceeds are in excess of the outstanding loan balance the excess is returned to the borrower. Certain equity securities acquired may be held by the Group for investment purposes and are classified as fair value through other comprehensive income, and the related loan written off.

The carrying value of collateral possessed and held by the Group as at 31 December 2018 is \$18.2 million (2017: \$24.1 million).

The decrease in collateral value is largely due to the reduction in cash collateral following utilisation to settle customer outstanding.

	2018 \$million	2017 \$million
Property, plant and equipment	8.7	14.9
Equity shares	–	0.2
Guarantees	8.6	4.0
Cash	0.6	4.6
Other	0.3	0.4
Total	18.2	24.1

Other credit risk mitigation

Other forms of credit risk mitigation are set out below.

Credit default swaps

The Group has entered into credit default swaps for portfolio management purposes, referencing loan assets with a notional value of \$21 billion (2017: \$16 billion). These credit default swaps are accounted for as financial guarantees as per IFRS 9. The Group continues to hold the underlying assets referenced in the credit default swaps and it continues to be exposed to related credit and foreign exchange risk on these assets.

Derivative financial instruments

The Group enters into master netting agreements, which in the event of default result in a single amount owed by or to the counterparty through netting the sum of the positive and negative mark-to-market values of applicable derivative transactions. These are set out in more detail under Derivative financial instruments credit risk mitigation.

Off-balance sheet exposures

For certain types of exposures, such as letters of credit and guarantees, the Group obtains collateral such as cash depending on internal credit risk assessments, as well as in the case of letters of credit holding legal title to the underlying assets should a default take place.

Other portfolio analysis

This section provides maturity analysis by business segment and industry and Retail Products analysis by region.

Maturity analysis of loans and advances by client segment

The loans and advances to the Corporate & Institutional Banking and Commercial Banking segments remain predominantly short-term, with 60 per cent of loans and advances to customers in the segments maturing in less than one year, a decrease compared with December 2017, and 96 per cent of loans to banks maturing in less than one year. Shorter maturity gives us the flexibility to respond promptly to events and rebalance or reduce our exposure to clients or sectors that are facing increased pressure or uncertainty.

The Private Banking loan book also demonstrates a short-term bias, typical for loans that are secured on wealth management assets.

The Retail Banking loan book continues to be longer-term in nature with 70 per cent of the loans maturing over five years as mortgages constitute the majority of this portfolio.

	31.12.18			
	One year or less \$million	One to five years \$million	Over five years \$million	Total \$million
Amortised cost				
Corporate & Institutional Banking	60,794	36,164	10,330	107,288
Retail Banking	16,372	14,091	71,600	102,063
Commercial Banking	21,085	5,660	1,364	28,109
Private Banking	12,710	396	618	13,724
Central & other items	10,265	7	–	10,272
Gross loans and advances to customers	121,226	56,318	83,912	261,456
Impairment provisions	(4,329)	(294)	(276)	(4,899)
Net loans and advances to customers	116,897	56,024	83,636	256,557
Net loans and advances to banks	58,784	2,597	33	61,414

	31.12.17 (IAS 39)			
	One year or less \$million	One to five years \$million	Over five years \$million	Total \$million
Amortised cost and FVTPL				
Corporate & Institutional Banking	90,613	31,827	9,454	131,894
Retail Banking	24,200	17,341	61,680	103,221
Commercial Banking	21,683	5,293	1,231	28,207
Private Banking	12,407	270	676	13,353
Central & other items	9,335	6	2	9,343
Net of individual impairment provisions	158,238	54,737	73,043	286,018
Portfolio impairment provision				(465)
Net carrying value (customers)				285,553
Net carrying value (banks)	77,739	2,974	612	81,325

Industry and Retail Products analysis of loans and advances by geographic region (unaudited)

This section provides an analysis of the Group's amortised cost loan portfolio, net of provisions, by industry and region.

In the Corporate & Institutional Banking and Commercial Banking segments our largest industry exposure is manufacturing, which constitutes 17 per cent of Corporate & Institutional Banking and Commercial Banking loans and advances to customers (1 January 2018: 16 per cent). The manufacturing sector group is spread across a diverse range of industries, including automobiles and components, capital goods, pharmaceuticals, biotech and life sciences, technology hardware and equipment, chemicals, paper products and packaging, with lending spread over 4,639 clients.

The financing, insurance and non-banking industry group constitutes 15 per cent of Corporate & Institutional Banking and Commercial Banking loans and advances to customers. Clients are mostly investment grade institutions and this lending forms part of the liquidity management of the Group.

Loans and advances to the energy sector have dropped by 1 per cent to 12 per cent of total loans and advances to Corporate & Institutional Banking and Commercial Banking (1 January 2018: 13 per cent). The energy sector lending is spread across five subsectors and over 438 clients.

The Group provides loans to commercial real estate counterparties of \$15 billion, which represents 6 per cent of total customer loans and advances. In total, \$8.8 billion of this lending is to counterparties where the source of repayment is substantially derived from rental or sale of real estate and is secured by real estate collateral. The remaining commercial real estate loans comprise working capital loans to real estate corporates, loans with non-property collateral, unsecured loans and loans to real estate entities of diversified conglomerates. The average LTV ratio of the commercial real estate portfolio has increased to 43 per cent, compared with 41 per cent in 2017. The proportion of loans with an LTV greater than 80 per cent has remained at 1 per cent during the same period.

The mortgage portfolio continues to be the largest portion of the Retail Products portfolio, at 66 per cent. CCPL and other unsecured lending remain broadly stable at 15 per cent of total Retail Products loans and advances.

Industry and Retail products analysis by geographic region

	31.12.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Industry:					
Energy	2,778	5,279	2,793	6,150	17,000
Manufacturing	10,531	6,298	3,209	3,601	23,639
Financing, insurance and non-banking	8,657	4,653	915	6,662	20,887
Transport, telecom and utilities	5,712	4,177	4,703	1,178	15,770
Food and household products	1,945	4,011	2,798	975	9,729
Commercial real estate	8,148	4,865	1,854	168	15,035
Mining and quarrying	1,683	2,283	1,088	932	5,986
Consumer durables	4,892	2,255	731	524	8,402
Construction	831	1,094	1,225	152	3,302
Trading companies and distributors	1,976	624	391	16	3,007
Government	1,726	8,815	3,113	83	13,737
Other	1,686	1,899	803	824	5,212
Retail Products:					
Mortgages	52,434	19,156	2,126	1,884	75,600
CCPL and other unsecured lending	10,269	4,234	2,459	–	16,962
Auto	–	522	150	1	673
Secured wealth products	6,912	9,055	310	1,723	18,000
Other	2,616	320	679	1	3,616
Net loans and advances to customers	122,796	79,540	29,347	24,874	256,557
Net loans and advances to banks	27,858	11,676	5,573	16,307	61,414

	01.01.18				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost					
Industry:					
Energy	2,841	5,874	3,188	6,262	18,165
Manufacturing	10,885	6,290	3,145	1,883	22,203
Financing, insurance and non-banking	7,096	4,996	1,242	6,480	19,814
Transport, telecom and utilities	6,396	3,870	4,508	995	15,769
Food and household products	2,173	4,100	2,485	1,168	9,926
Commercial real estate	8,047	5,084	1,472	52	14,655
Mining and quarrying	1,878	2,857	1,033	580	6,348
Consumer durables	4,214	2,536	975	691	8,416
Construction	987	1,097	1,275	238	3,597
Trading companies and distributors	1,153	573	426	128	2,280
Government	1,669	6,585	1,184	164	9,602
Other	1,831	1,884	1,069	579	5,363
Retail Products:					
Mortgages	54,602	20,099	2,273	1,783	78,757
CCPL and other unsecured lending	9,585	3,935	2,893	2	16,415
Auto	–	399	230	–	629
Secured wealth products	5,268	6,973	212	1,657	14,110
Other	2,349	2,409	696	4	5,458
Net carrying value (customers)	120,974	79,561	28,306	22,666	251,507
Net carrying value (banks)	30,002	12,408	4,595	15,290	62,295

	31.12.17 (IAS 39)				
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Amortised cost and FVTPL					
Industry:					
Energy	2,855	6,097	3,303	6,289	18,544
Manufacturing	10,919	6,685	3,221	1,906	22,731
Financing, insurance and non-banking	8,213	6,421	1,308	29,042	44,984
Transport, telecom and utilities	6,456	3,965	4,707	1,036	16,164
Food and household products	2,174	4,126	2,577	1,179	10,056
Commercial real estate	8,429	5,169	1,479	62	15,139
Mining and quarrying	2,079	2,903	1,089	570	6,641
Consumer durables	4,432	2,544	1,300	790	9,066
Construction	989	1,118	1,358	238	3,703
Trading companies & distributors	1,192	573	432	128	2,325
Government	4,864	6,728	1,430	1,398	14,420
Other	1,839	2,174	1,075	583	5,671
Retail Products:					
Mortgages	54,609	20,105	2,279	1,785	78,778
CCPL and other unsecured lending	10,175	4,336	3,022	2	17,535
Auto	—	399	234	—	633
Secured wealth products	5,278	7,005	213	1,658	14,154
Other	2,365	2,410	696	3	5,474
	126,868	82,758	29,723	46,669	286,018
Portfolio impairment provision	(129)	(179)	(121)	(36)	(465)
Net carrying value (customers)	126,739	82,579	29,602	46,633	285,553
Net carrying value (banks)	33,226	16,523	7,428	24,148	81,325

Debt securities and other eligible bills

This section provides further detail on gross debt securities and treasury bills and asset-backed securities.

	31.12.18 Debt securities and other eligible bills \$million	01.01.18 Debt securities and other eligible bills \$million
Amortised cost and FVOCI		
12-month expected credit losses (stage 1)	118,713	107,308
AAA	55,205	30,759
AA- to AA+	35,685	48,206
A- to A+	13,803	11,016
BBB- to BBB+	9,639	9,431
Lower than BBB-	30	257
Unrated	4,351	7,639
Lifetime expected credit losses (stage 2)	6,909	8,302
AAA	156	71
AA- to AA+	115	416
A- to A+	54	242
BBB- to BBB+	5,486	4,838
Lower than BBB-	292	403
Unrated	806	2,332
Credit-impaired financial assets (stage 3)	232	221
Lower than BBB-	—	—
Unrated	232	221
Gross balance ¹	125,854	115,831

1 Excludes fair value through profit or loss

Amortised cost and FVTPL

Net impaired securities:	45
Impaired securities	421
Impairment	(376)
Securities neither past due nor impaired:	135,797
AAA	35,937
AA- to AA+	51,914
A- to A+	13,305
BBB- to BBB+	17,498
Lower than BBB-	5,333
Unrated	11,810
Net carrying value	135,842

The standard credit ratings used by the Group are those used by Standard & Poor's or its equivalent. Debt securities held that have a short-term rating are reported against the long-term rating of the issuer. For securities that are unrated, the Group applies an internal credit rating, as described under the credit rating and measurement section.

Debt securities in the AAA rating category increased during the year by \$24.5 billion to \$55.2 billion. In line with the balance sheet growth, the Group strengthened its portfolio of liquid assets by holding more highly rated securities mainly issued by the US and UK governments. The increase in holdings of debt securities rated A- to A+ under stage 1 is mainly due to China sovereign rating downgrade from AA- to A+ by Standard & Poor's. Stage 1 unrated debt securities have reduced by \$3.3 billion mainly due to securities reported as unrated in prior years having now been given a rating or maturing in 2018.

Movement in net carrying value of debt securities and other eligible bills

	31.12.18 Net carrying value \$million	31.12.17 (IAS 39) Net carrying value \$million
Amortised cost and FVOCI		
As at 1 January 2018	115,534	107,584
Exchange translation differences and other movements	(2,794)	3,463
Additions	276,394	265,126
Maturities and disposals	(263,996)	(260,271)
Transfers to assets held for sale	–	(60)
Impairment, net of recoveries on disposal	(7)	(20)
Changes in fair value (including the effect of fair value hedging)	84	17
Amortisation of discounts and premiums	375	292
As at 31 December 2018	125,590	116,131

Asset-backed securities (unaudited)

	31.12.18				01.01.18			
	Percentage of notional value of portfolio \$million	Notional \$million	Carrying value \$million	Fair value ¹ \$million	Percentage of notional value of portfolio \$million	Notional \$million	Carrying value \$million	Fair value ¹ \$million
Residential mortgage-backed securities (RMBS) ²	59%	4,369	4,369	4,356	44%	2,814	2,812	2,812
Collateralised debt obligations (CDOs)	2%	155	150	150	1%	75	70	69
Commercial mortgage-backed securities (CMBS)	1%	94	94	94	1%	63	29	29
Other asset-backed securities (other ABS) ³	38%	2,855	2,849	2,846	54%	3,518	3,517	3,519
	100%	7,473	7,462	7,446	100%	6,470	6,428	6,429
<i>Of which:</i>								
Financial assets held at fair value through profit or loss	11%	823	816	819	14%	887	885	890
Financial assets held at non trading mandatorily fair value through profit or loss	4%	282	278	278	7%	453	410	410
Financial assets held at amortised cost	34%	2,559	2,556	2,556	17%	1,078	1,079	1,072
Investment securities – FVOCI	51%	3,809	3,812	3,793	63%	4,052	4,054	4,057
	100%	7,473	7,462	7,446	100%	6,470	6,428	6,429

1 Fair value reflects the value of the entire portfolio, including assets redesignated to loans at amortised cost

2 RMBS includes Other UK, Dutch, Australia and Korea RMBS

3 Other asset-backed securities includes auto loans, credit cards, student loans, future flows and trade receivables

The carrying value of asset-backed securities (ABS) represents 1 per cent (2017: 1 per cent) of the Group's total assets.

The credit quality of the ABS portfolio remains strong, with over 99 per cent of the overall portfolio rated investment grade, and 71 per cent of the overall portfolio rated as AAA. Residential mortgage-backed securities (RMBS) make up 59 per cent of the overall portfolio and have a weighted averaged credit rating of AAA (AAA in 2017).

Other ABS includes auto ABS, comprising 22 per cent of the overall portfolio, and credit card ABS (3 per cent). Both maintain a weighted average credit rating of AAA. The balance of Other ABS mainly includes securities backed by consumer loans, CLOs, CMBS, diversified payment rights and receivables ABS.

IFRS 9 methodology

Approach for determining expected credit losses

Credit loss terminology

Component	Definition
Probability of default (PD)	The probability that a counterparty will default, over the next 12 months from the reporting date (stage 1) or over the lifetime of the product (stage 2) and incorporating the impact of forward-looking economic assumptions that have an effect on credit risk, such as interest rates, unemployment rates and GDP forecasts. The PD estimates will fluctuate in line with the economic cycle. The lifetime (or term structure) PDs are based on statistical models, calibrated using historical data and adjusted to incorporate forward-looking economic assumptions.
Loss given default (LGD)	The loss that is expected to arise on default, incorporating the impact of forward-looking economic assumptions where relevant, which represents the difference between the contractual cash flows due and those that the bank expects to receive. The Group estimates LGD based on the history of recovery rates and considers the recovery of any collateral that is integral to the financial asset, taking into account forward-looking economic assumptions where relevant.
Exposure at default (EAD)	The expected balance sheet exposure at the time of default, taking into account the expected change in exposure over the lifetime of the exposure. This incorporates the impact of drawdowns of committed facilities, repayments of principal and interest, amortisation and prepayments, together with the impact of forward-looking economic assumptions where relevant.

To determine the expected credit loss, these components are multiplied together (PD for the reference period (up to 12 months or lifetime) x LGD at the beginning of the period x EAD at the beginning of the period) and discounted to the balance sheet date using the effective interest rate as the discount rate.

Although the IFRS 9 models leverage the existing Basel advanced IRB risk components, several significant adjustments are required to ensure the resulting outcome is in line with the IFRS 9 requirements.

Key differences between regulatory and IFRS expected credit loss models

	Basel advanced IRB expected loss	IFRS 9 Expected credit loss
Rating philosophy	Point-in-time, through-the-cycle or hybrid, depending on the relevant regulatory requirements	Point-in-time
Parameters calibration	Often conservative, due to regulatory floors and downturn calibration	Unbiased estimate, based on conditions known at the balance sheet date
– PD		Inclusion of forward-looking information and removal of conservatism and bias
– LGD		Removal of regulatory floors, exclusion of non-direct costs
– EAD	Floored at outstanding amount	Recognises ability to have a reduction in exposure from the balance sheet date to the default date
Timeframe	12-month period	Up to 12 months and lifetime
Discounting applied	Discounting at the weighted average cost of capital to the time of default	Discounting at the effective interest rate (EIR) to the balance sheet reporting date

IFRS 9 expected credit loss models have been developed for the Corporate & Institutional Banking and Commercial Banking businesses on a global basis, in line with their respective portfolios. However, for some of the most material countries, country-specific models have also been developed.

The calibration of forward-looking information is assessed at a country or region level to take into account local macroeconomic conditions.

Retail Banking expected credit loss models are country and product specific given the local nature of the Retail Banking business.

For less material Retail Banking loan portfolios, the Group has adopted simplified approaches based on historical roll rates or loss rates:

- For medium-sized Retail Banking portfolios, a roll rate model is applied, which uses a matrix that gives average loan migration rate from delinquency states from period to period. A matrix multiplication is then performed to generate the final PDs by delinquency bucket over different time horizons
- For smaller Retail Banking portfolios, loss rate models are applied. These use an adjusted gross charge-off rate, developed using monthly write-off and recoveries over the preceding 12 months and total outstanding balances

For a limited number of exposures, proxy parameters or approaches are used where the data is not available to calculate the origination PDs and a proxy approach is taken to apply the SICR criteria; or for some retail portfolios where a full history of LGD data is not available and estimates based on the loss experience from similar portfolios are used. The use of proxies is monitored and will reduce over time.

Application of lifetime

Expected credit loss is estimated based on the shorter of the expected life and the maximum contractual period for which the Group is exposed to credit risk. For Retail Banking credit cards and Corporate & Institutional Banking overdraft facilities, however, the Group does not typically enforce the contractual period. As a result, for these instruments, the lifetime of the exposure is based on the period the Group is exposed to credit risk. This period has been determined by reference to expected behavioural life of the exposure and the extent to which credit risk management actions curtail the period of exposure. For credit cards, this has resulted in an average life of between 3 and 10 years across our footprint markets. Overdraft facilities have a 22-month lifetime.

Key assumptions and judgements in determining expected credit loss

Incorporation of forward-looking information

The evolving economic environment is a key determinant of the ability of a bank's clients to meet their obligations as they fall due. It is a fundamental principle of IFRS 9 that the provisions banks hold against potential future credit risk losses should depend not just on the health of the economy today, but should also take into account potential changes to the economic environment. For example, if a bank were to anticipate a sharp slowdown in the world economy over the coming year, it should hold more provisions today to absorb the credit losses likely to occur in the near future.

To capture the effect of changes to the economic environment, the PDs and LGDs used to calculate expected credit loss, incorporate forward-looking information in the form of forecasts of the values of economic variables and asset prices that are likely to have an effect on the repayment ability of the Group's clients.

The 'Base Forecast' of the economic variables and asset prices is based on management's view, supported by projections from the Group's in-house research team and outputs from models that project specific economic variables and asset prices.

Forecast of key macroeconomic variables underlying the expected credit loss calculation and the impact on non-linearity

The Base Forecast – management's view of the most likely outcome – is that the synchronised expansion of the global economy will continue over the coming years alongside a normalisation of monetary policy in the developed world and the successful rebalancing of the Chinese economy, with US–China trade tensions putting China's export sectors under some pressure.

While this Base Forecast is the premise for the Group's strategic plan, one of the key requirements of IFRS 9 is that the assessment of provisions should be based on a range of potential outcomes for the future economic environment. For example, the global economy may grow more quickly or more slowly than the Base Forecast, and these variations would have different implications for the provisions that the Group should hold today. As the negative impact of an economic downturn on credit losses tends to be greater than the positive impact of an economic upturn, if the Group sets provisions only on the expected credit loss under the Base Forecast, it might not end up with a level of provisions that appropriately considers the range of potential outcomes. To address this skewness (or non-linearity) in expected credit loss, IFRS 9 requires the ECL to be the probability-weighted amount calculated for a range of possible outcomes.

To take account of the potential non-linearity in expected credit loss, the Group simulates a set of 50 scenarios around the Base Forecast and calculates the expected credit loss under each of them. These scenarios are generated by a Monte Carlo simulation, which considers the degree of uncertainty (or volatility) around economic outcomes and how these outcomes have tended to move in relation to one another (or correlation). The use of Monte Carlo simulation is motivated by the number and spread of countries in which the Group operates. This implies that the number of countries' macroeconomic variables to forecast is large, but more importantly the observation that a downturn in one part of the world is never perfectly synchronised with downturns everywhere else means that the Group may be challenged to capture a full range of scenarios with a handful of manually tuned scenarios.

While the 50 scenarios do not each have a specific narrative, they reflect a range of plausible hypothetical alternative outcomes for the global economy. Some imply an unwinding of the current shocks and uncertainty leading to higher global economic activity and higher asset prices, while others represent an intensification of current shocks or introduction of new shocks that raise uncertainty, leading to lower global economic activity and lower asset prices.

The table below provides a summary of the Group's Base Forecast, alongside the corresponding range seen across the multiple scenarios.

Over the medium term – five years ahead – there has been relatively little change in the forecast level of activity relative to the start of the year. At the margin, the ongoing trade policy tensions between the US and China have reduced prospective export growth in China, particularly in the near term. The effect of the external trade shock is expected to be offset by moderate domestic policy stimulus by Chinese authorities and so average real GDP growth projections over the medium term have been revised downwards only marginally, to 6.0 per cent from 6.1 per cent. Some policy stimulus was provided during 2018, for example an easing of monetary policy by the People's Bank of China (PBoC). This policy stance is expected to persist and so the projected average three-month interbank interest rate over the medium term has been revised down materially to 3.1 per cent from 4.2 per cent.

In contrast to the Chinese economy, the US economy continued to grow above trend during 2018, prompting the Federal Reserve to raise US policy interest rates faster than expected. For those countries where the monetary policy framework is based on managing the level of the currency in reference to the US dollar – either as a currency board (Hong Kong) or as a currency basket (Singapore) – domestic interest rates rise, to some degree, with US interest rates. The revised outlook for short-term interbank interest rates is not expected to have a material effect on activity, property price inflation or unemployment in those countries over the medium term.

The most material revision in the base forecast is to the oil price. At the start of the year oil prices were expected to average around US\$61/barrel over the medium term, but by the end of the year that projection had been revised up to around US\$85. While current prices have been impacted by speculative movements out of oil, a number of supply and demand factors together determine the oil price. The most important driver of the rise in projected oil prices over the medium term was the decision by the US government not to renew waivers on certain sanctions on Iran, including the export of oil.

	China			Hong Kong			Korea			Singapore			India		
	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³
31.12.2018															
GDP growth (YoY%)	6.0	4.3	7.7	3.0	0.6	5.6	2.9	0.4	5.3	2.4	(1.7)	6.4	7.7	5.6	10.1
Unemployment (%)	4.0	3.8	4.2	3.4	2.4	4.6	3.2	2.4	4.0	3.0	2.3	3.7	N/A	N/A	N/A
3-month interest rates (%)	3.1	2.0	4.3	3.0	1.8	4.2	2.6	1.4	4.0	2.4	1.3	3.8	6.9	5.1	8.9
House prices (YoY%)	5.8	3.4	8.5	2.3	(8.1)	12.1	3.5	1.3	6.1	4.4	(1.5)	10.6	8.4	1.4	15.1

	China			Hong Kong			Korea			Singapore			India		
	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³	Base forecast	Low ²	High ³
01.01.2018															
GDP growth (YoY%)	6.1	4.5	7.6	3.0	0.3	5.4	2.9	0.8	5.6	2.3	(2.0)	6.1	7.5	5.4	9.7
Unemployment (%)	4.0	3.8	4.2	3.6	2.4	4.8	3.3	2.5	4.6	2.8	2.2	3.5	N/A ¹	N/A ¹	N/A ¹
3-month interest rates (%)	4.2	2.9	5.6	1.7	1.0	3.7	2.3	1.4	4.3	1.7	1.2	3.9	6.2	5.3	9.0
House prices (YoY%)	5.4	3.5	8.0	2.0	(7.5)	12.3	3.5	1.4	6.0	3.8	(1.8)	9.2	8.5	1.3	15.5

	Base forecast	Low ²	High ³
31.12.2018			
Crude price Brent, \$ pb	85	40	118

	Base forecast	Low ²	High ³
01.01.2018			
Crude price Brent, \$ pb	61	35	92

1 Not available

2 Represents the 10th percentile in the range used to determine non-linearity

3 Represents the 90th percentile in the range used to determine non-linearity

The final expected credit loss reported by the Group is a simple average of the expected credit loss for each of the 50 scenarios. The impact of non-linearity on expected credit loss is set out in the table below:

	Including non-linearity \$million	Excluding non-linearity \$million	Difference %
Total expected credit loss ¹	1,163	1,139	2.1

1 Total modelled expected credit loss comprises stage 1 and stage 2 balances of \$1,031 million and \$132 million of modelled expected credit loss on stage 3 loans

The average expected credit loss under multiple scenarios is 2.1 per cent higher than the expected credit loss calculated using only the most likely scenario (the Base Forecast). Portfolios that are more sensitive to non-linearity include those with greater leverage and/or a longer tenor, such as Project and Shipping Finance portfolios. Other portfolios display minimal non-linearity owing to limited their responsiveness to macroeconomic impacts for structural reasons such as significant collateralisation as with the Retail Banking mortgage portfolios.

Credit-impaired assets managed by Group Special Assets Management (GSAM) incorporate forward-looking economic assumptions in respect of the recovery outcomes identified and are assigned individual probability weightings. These assumptions are not based on a Monte Carlo simulation but are informed by the Base Forecast.

Sensitivity of expected credit loss calculation to macroeconomic variables

The expected credit loss calculation relies on multiple variables and is inherently non-linear and portfolio-dependent, which implies that no single analysis can fully demonstrate the sensitivity of the expected credit loss to changes in the macroeconomic variables. The Group has conducted a series of analyses with the aim of identifying the macroeconomic variables which might have the greatest impact on overall expected credit loss. These encompassed single variable and multi-variable exercises, using simple up/down variation and extracts from actual calculation data, as well as bespoke scenario design and assessment.

The primary conclusion of these exercises is that no individual macroeconomic variable is materially influential – that is, likely to result in an impact of at least 1 per cent of the Group's expected credit loss. The Group believes this is plausible, because the number of variables used in the expected credit loss calculation is large. This does not mean that macroeconomic variables are uninfluential; rather, that the Group believes that consideration of macroeconomics should involve whole scenarios, as this aligns with the multi-variable nature of the calculation.

As the Group has two principal uncertainties related to the macroeconomic outlook, a sensitivity analysis of ECL was undertaken to explore the combined effect of these: extended trade tensions that could lead to a China slowdown with spillovers to emerging markets. In this scenario, current trade policy tensions between the US and China increase dramatically. The US targets trading partners with which it has a material trade deficit and pushes through highly protectionist measures, initiating trade tensions with Asia focused on China. Indirectly, economies reliant on global trade flows are vulnerable to the trade shock. The escalating trade tensions create uncertainty which reduces risk appetite, leading to a decline in asset prices and lower consumption and investment across developed and emerging markets. This leads to a global slowdown and a sharp fall in commodity prices. As an indication, China annual real GDP growth troughs at circa. 4 per cent, representing a marked divergence from the base forecast growth of around 6 per cent, while China exports growth dips negative for the first time since 2009. US GDP slows from a trend rate of about 2 per cent down to 1 per cent. Crude oil prices fall, and residential property indices in China and Hong Kong dip negative. To contextualise this scenario relative to the Monte Carlo generated scenarios, the China and US GDP dips approach the lowest growth boundary of the 50 scenarios in 2019, crude oil remains closer to the middle than to the bottom edge, but the China property price index falls well below the simulated lower bound over a period of years.

Applying this scenario, modelled stage 1 and 2 expected credit loss provisions would be approximately \$362 million higher than the reported base case expected credit loss provision (excluding the impact of non-linearity). This includes the impact of exposures transferring to stage 2 from stage 1 but does not consider an increase in stage 3 defaults. The proportion of exposures in stage 2 would increase from 8 per cent to 10 per cent. As expected, this has an impact on our corporate exposures in China, Hong Kong and Singapore. Within Retail Banking, the Group's credit card portfolios in Hong Kong and Singapore were impacted. Note that the actual outcome of any scenario may be materially different due to, amongst other factors, the effect of management actions to mitigate potential increases in risk and changes in the underlying portfolio.

Significant increase in credit risk

Quantitative criteria

SICR is assessed by comparing the risk of default at the reporting date to the risk of default at origination. Whether a change in the risk of default is significant or not is assessed using quantitative and qualitative criteria. These quantitative significant deterioration thresholds have been separately defined for each business and where meaningful are consistently applied across business lines.

Assets are considered to have experienced SICR if they have breached both relative and absolute thresholds for the change in the average annualised lifetime probability of default over the residual term of the exposure.

The absolute measure of increase in credit risk is used to capture instances where the PDs on exposures are relatively low at initial recognition as these may increase by several multiples without representing a significant increase in credit risk. Where PDs are relatively high at initial recognition, a relative measure is more appropriate in assessing whether there is a significant increase in credit risk, as the PDs increase more quickly.

The SICR thresholds have been calibrated based on the following principles:

- **Stability** – The thresholds are set to achieve a stable stage 2 population at a portfolio level, trying to minimise the number of accounts moving back and forth between stage 1 and stage 2 in a short period of time
- **Accuracy** – The thresholds are set such that there is a materially higher propensity for stage 2 exposures to eventually default than is the case for stage 1 exposures
- **Dependency from backstops** – The thresholds are stringent enough such that a high proportion of accounts transfer to stage 2 due to movements in forward-looking PD rather than relying on backward-looking backstops such as arrears
- **Relationship with business and product risk profiles** – The thresholds reflect the relative risk differences between different products, and are aligned to business processes

For Corporate & Institutional Banking and Commercial Banking clients, the relative threshold is a 100 per cent increase in PD and the absolute change in PD is between 50 and 100 bps.

For Retail Banking clients, the relative threshold is a 100 per cent increase in PD and the absolute change in PD is between 100 and 350 bps depending on the product. Certain countries have a higher absolute threshold reflecting the lower default rate within their personal loan portfolios compared with the Group's other personal loan portfolios.

Private Banking clients are assessed qualitatively, based on a delinquency measure relating to collateral top-ups or sell-downs.

Debt securities with an internal credit rating mapped to an investment grade equivalent are allocated to stage 1 and all other debt securities to stage 2.

Qualitative criteria

Qualitative factors that indicate that there has been a significant increase in credit risk include processes linked to current risk management, such as placing loans on non-purely precautionary early alert.

Backstop

Across all portfolios, accounts that are 30 or more days past due (DPD) on contractual payments of principal and/or interest that have not been captured by the criteria above are considered to have experienced a significant increase in credit risk.

Expert credit judgement may be applied in assessing significant increase in credit risk to the extent that certain risks may not have been captured by the models or through the above criteria. Such instances are expected to be rare, for example due to events arising close to the reporting date.

Corporate & Institutional Banking and Commercial Banking clients

Quantitative criteria

Exposures are assessed based on both the absolute and the relative movement in the PD from origination to the reporting date as described above.

To account for the fact that the mapping between internal credit grades (used in the origination process) and PDs is non-linear (e.g. a one-notch downgrade in the investment grade universe results in a much smaller PD increase than in the sub-investment grade universe), the absolute thresholds have been differentiated by credit quality at origination, as measured by internal credit grades being investment grade or sub-investment grade.

Qualitative criteria

All assets of clients that have been placed on early alert (for non-purely precautionary reasons) are deemed to have experienced a significant increase in credit risk.

An account is placed on non-purely precautionary early alert if it exhibits risk or potential weaknesses of a material nature requiring closer monitoring, supervision or attention by management. Weaknesses in such a borrower's account, if left uncorrected, could result in deterioration of repayment prospects and the likelihood of being downgraded. Indicators could include a rapid erosion of position within the industry, concerns over management's ability to manage operations, weak/deteriorating operating results, liquidity strain and overdue balances among other factors.

All client assets that have been assigned a CG12 rating, equivalent to 'higher risk', are deemed to have experienced a significant increase in credit risk. Accounts rated CG12 are managed by the GSAM unit. All Corporate & Institutional Banking and Commercial Banking clients are placed on CG12 when they are 30 DPD unless they are granted a waiver through a strict governance process.

Retail Banking clients

Quantitative criteria

Material portfolios (defined as a combination of country and product, for example Hong Kong mortgages, Taiwan credit cards), for which a statistical model has been built, are assessed based on both the absolute and relative movement in the PD from origination to the reporting date as described previously. For these portfolios, the original lifetime PD term structure is determined based on the original application score or risk segment of the client.

Qualitative criteria

Accounts that are 30 DPD that have not been captured by the quantitative criteria are considered to have experienced a significant increase in credit risk. For less material portfolios, which are modelled based on a roll rate or loss rate approach, significant increase in credit risk is primarily assessed through the 30 DPD trigger.

Private Banking clients

For Private Banking clients, significant increase in credit risk is assessed by referencing the nature and the level of collateral against which credit is extended (known as 'Classes of risk').

Qualitative criteria

For all Private Banking classes, in line with risk management practice, an increase in credit risk is deemed to have occurred where margining or LTV covenants have been breached.

For Class I assets, if these margining requirements have not been met within 30 days of a trigger, a significant increase in credit risk is assumed to have occurred.

For Class I and Class III assets, a significant increase in credit risk is assumed to have occurred where the bank is unable to 'sell down' the applicable assets to meet revised collateral requirements within five days of a trigger.

Class II assets are typically unsecured or partially secured, or secured against illiquid collateral such as shares in private companies. Significant credit deterioration of these assets is deemed to have occurred when any early alert trigger has been breached.

Debt securities

Quantitative criteria

The bank is utilising the low credit risk simplified approach. All debt securities with an internal credit rating mapped to an investment grade equivalent are allocated to stage 1 and all other debt securities are allocated to stage 2.

Qualitative criteria

Debt securities utilise the same qualitative criteria as the Corporate & Institutional Banking and Commercial Banking client segments, including being placed on early alert or being classified as CG12.

Assessment of credit-impaired financial assets

Retail Banking clients

The core components in determining credit-impaired expected credit loss provisions are the value of gross charge-off and recoveries. Gross charge-off and/or loss provisions are recognised when it is established that the account is unlikely to pay through the normal process. Recovery of unsecured debt post credit impairment is recognised based on actual cash collected, either directly from clients or through the sale of defaulted loans to third-party institutions. Release of credit impairment provisions for secured loans is recognised if the loan outstanding is paid in full (release of full provision), or the provision is higher than the loan outstanding (release of the excess provision).

Corporate & Institutional Banking, Commercial Banking and Private Banking clients

Credit-impaired accounts are managed by the Group's specialist recovery unit, Group Special Assets Management (GSAM), which is independent from its main businesses. Where any amount is considered irrecoverable, a stage 3 credit impairment provision is raised. This stage 3 provision is the difference between the loan-carrying amount and the probability-weighted present value of estimated future cash flows, reflecting a range of scenarios (typically the best, worst and most likely recovery outcomes). Where the cash flows include realisable collateral, the values used will incorporate the impact of forward-looking economic information.

The individual circumstances of each client are considered when GSAM estimates future cash flows and timing of future recoveries which involve significant judgement. All available sources, such as cash flow arising from operations, selling assets or subsidiaries, realising collateral or payments under guarantees, are considered. In any decision relating to the raising of provisions, the Group attempts to balance economic conditions, local knowledge and experience, and the results of independent asset reviews.

Write-offs

Where it is considered that there is no realistic prospect of recovering a portion of an exposure against which an impairment provision has been raised, that amount will be written off.

Governance and application of expert credit judgement in respect of expected credit losses

The models used in determining expected credit losses are reviewed and approved by the Group Credit Model Assessment Committee (CMAC), which is appointed by the Model Risk Committee. The CMAC has the responsibility to assess and approve the use of models and to review all IFRS 9 interpretations related to models. The CMAC also provides oversight on operational matters related to model development, performance monitoring and model validation activities including standards, regulatory and Group Internal Audit matters.

Prior to submission to the CMAC for approval, the models have been validated by Group Model Validation (GMV), a function which is independent of the business and the model developers. GMV's analysis comprises review of model documentation, model design and methodology; data validation; review of model development and calibration process; out-of-sample performance testing; and assessment of compliance review against IFRS 9 rules and internal standards.

Key inputs into the calculation and resulting expected credit loss provisions are subject to review and approval by the IFRS 9 Impairment Committee which is appointed by the Group Risk Committee. The IFRS 9 Impairment Committee consists of senior representatives from Risk, Finance, and Group Economic Research. It meets at least twice every quarter, once before the models are run to approve key inputs into the calculation, and once after the models are run to approve the expected credit loss provisions and any judgemental override that may be necessary.

The IFRS 9 Impairment Committee:

- Oversees the appropriateness of all Business Model Assessment and Solely Payments of Principal and Interest (SPPI) tests
- Reviews and approves expected credit loss for financial assets classified as stages 1, 2 and 3 for each financial reporting period
- Reviews and approves stage allocation rules and thresholds
- Approves material adjustments in relation to expected credit loss for FVOCI and amortised cost financial assets
- Reviews, challenges and approves base macroeconomic forecasts and (the multiple macroeconomic scenarios approach) that are utilised in the forward-looking expected credit loss calculations

The IFRS 9 Impairment Committee is supported by an Expert Panel which reviews and challenges the full extended version of base case projections and multiple macroeconomic scenarios. The Expert Panel consists of members of Enterprise Risk Management (which includes the Scenario Design team), Finance, Group Economic Research and country representatives of major jurisdictions.

Stage 3

- Credit-impaired
- Non-performing

Stage 2

- Lifetime expected credit loss
- Performing but has exhibited significant increase in credit risk (SICR)

Stage 1

- 12-month expected credit loss
- Performing

Country Risk (unaudited)

Country cross-border risk is the risk that the Group will be unable to obtain payment from counterparties on their contractual obligations as a result of certain actions taken by foreign governments, chiefly relating to convertibility and transferability of foreign currency.

The profile of the Group's country cross-border exposures as at 31 December 2018 remained consistent with its strategic focus on core franchise countries. Changes in the pace of economic activity and portfolio management activity had an impact on the growth of cross-border exposure for certain territories.

Country cross-border exposure to China remains predominantly short-term (85 per cent of exposure had a tenor of less than one-year). During 2018, the Group's cross-border exposure to China decreased, primarily driven by a loan portfolio reduction, as well as repayment of some large-scale term and bridge loans.

Country cross-border exposure to Hong Kong rose marginally, with strong loan book growth largely offset by a decline in trade finance exposures; reflecting a more subdued global trade environment and domestic economic headwinds.

Singapore's cross-border exposure declined during 2018 due to a reduction in exposure from corporate business loans and structured finance transactions, partially offset by an uptick in interbank exposures.

The increase in United Arab Emirates cross-border exposure reflects growth in the loan book and trade finance. Growth is supported by new exposures to Abu Dhabi government-related entities and core Dubai corporates, increased refinancing activities and bridging loans to acquisition transactions.

The decrease in cross-border exposure to South Korea reflects a reduction in marketable securities held, as well as economic and external headwinds stemming from uncertainty around the ongoing trade tensions and monetary tightening in the United States.

India's cross-border exposure declined, primarily driven by facility roll-offs on the loan book, as well as a reduction in both issuer risk and private bank exposures.

Cross-border exposure to developed countries in which the Group does not have a major presence, predominantly relates to treasury and liquidity management activities, which can change significantly from period to period. Exposure to such markets also represents global corporate business for customers with interests in our footprint. The increase in exposures to the United States, Germany and Australia are all largely attributed to Group liquidity management operations during the year.

The table below, which is based on the Group's internal country cross-border risk reporting requirements, shows cross-border exposures that exceed 1 per cent of total assets.

	31.12.18			31.12.17		
	Less than one year \$million	More than one year \$million	Total \$million	Less than one year \$million	More than one year \$million	Total \$million
China ¹	37,039	6,458	43,497	38,676	6,204	44,880
United States	15,369	8,986	24,355	10,068	9,524	19,592
Hong Kong ¹	11,451	8,819	20,270	11,686	7,964	19,650
Singapore	12,799	5,921	18,720	13,555	5,955	19,510
United Arab Emirates	8,531	9,139	17,670	7,932	8,341	16,273
South Korea	12,210	4,550	16,760	14,513	4,331	18,844
India	10,536	5,674	16,210	11,687	5,819	17,506
Germany	3,236	7,080	10,316	3,022	4,505	7,527
Australia	2,495	5,335	7,830	1,916	4,045	5,961

1 Cross-border exposures for 31.12.17 (IAS 39) relating to China and Hong Kong have been restated to reflect methodology amendments:

- China – Less than one-year bucket restated from \$40,351 million to \$38,676 million. Consequently the total is restated from \$46,455 million to \$44,880 million
- Hong Kong – More than one-year bucket restated from \$7,867 million to \$7,964 million. Consequently the total is restated from \$19,552 million to \$19,650 million

Traded risk

Traded risk is the potential for loss resulting from activities undertaken by the bank in financial markets. Under the Enterprise Risk Management Framework, the introduction of the Traded Risk Framework in 2018 sought to bring together all risk types exhibiting risk features common to traded risk.

These risk types include Market risk, Counterparty Credit risk, Issuer risk, XVA, Algorithmic trading and Pension risk. Traded Risk Management (TRM, formerly Market and Traded Credit Risk) is the core risk management function supporting market-facing businesses, specifically Financial Markets and Treasury Markets.

Market risk

Market risk is the potential for loss of economic value due to adverse changes in financial market rates or prices. The Group's exposure to market risk arises predominantly from the following sources:

- Trading book: the Group provides clients access to financial markets, facilitation of which entails the Group taking moderate market risk positions. All trading teams support client activity; there are no proprietary trading teams. Hence, income earned from market risk-related activities is primarily driven by the volume of client activity rather than risk-taking.
- Non-trading book:
 - The Treasury Markets desk is required to hold a liquid assets buffer, much of which is held in high-quality marketable debt securities
 - The Group has capital invested and related income streams denominated in currencies other than US dollars. To the extent that these are not hedged, the Group is subject to structural foreign exchange risk which is reflected in reserves

A summary of our current policies and practices regarding market risk management is provided in the Principal Risks section.

The primary categories of market risk for the Group are:

- Interest rate risk: arising from changes in yield curves, credit spreads and implied volatilities on interest rate options
- Foreign exchange rate risk: arising from changes in currency exchange rates and implied volatilities on foreign exchange options
- Commodity risk: arising from changes in commodity prices and implied volatilities on commodity options; covering energy, precious metals, base metals and agriculture
- Equity risk: arising from changes in the prices of equities, equity indices, equity baskets and implied volatilities on related options

Market risk changes

The average level of total trading and non-trading VaR in 2018 was 20 per cent lower than in 2017, but the actual level of total VaR as at year end 2018 was 14 per cent higher than in 2017. The reduction in the total average VaR was driven by the non-trading book, where the duration of the portfolio in the first half of 2018 was reduced. However, during the fourth quarter of 2018 the non-trading VaR increased, driven by both an increase in the bond inventory size in high-quality assets from Treasury Markets and reduced portfolio diversification.

For the trading book, the average level of VaR in 2018 was lower than in 2017 by 19 per cent. Trading activities have remained relatively unchanged and client-driven.

Daily value at risk (VaR at 97.5%, one day)

	31.12.18				31.12.17			
	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million
Trading and non-trading								
Interest rate risk ³	19.2	25.9	16.6	25.9	22.6	28.5	18.1	18.7
Foreign exchange risk	4.4	8.6	2.5	7.7	5.5	12.3	3.0	6.0
Commodity risk	1.3	2.1	0.8	1.2	1.2	2.0	0.6	1.0
Equity risk	4.8	6.8	2.6	2.7	7.7	8.4	6.4	6.7
Total ⁴	20.6	26.1	16.4	25.5	25.7	32.4	20.3	22.3

	31.12.18				31.12.17			
	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million
Trading ⁵								
Interest rate risk ³	8.0	11.7	6.0	7.9	10.1	13.1	7.7	8.5
Foreign exchange risk	4.4	8.6	2.5	7.7	5.5	12.3	3.0	6.0
Commodity risk	1.3	2.1	0.8	1.2	1.2	2.0	0.6	1.0
Equity risk	0.1	0.1	–	–	0.1	0.4	0.1	0.1
Total ⁴	9.8	13.8	7.5	13.6	12.1	15.7	8.3	10.9

	31.12.18				31.12.17			
	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million
Non-trading								
Interest rate risk ³	16.8	20.7	14.1	20.7	19.5	23.1	14.4	14.4
Equity risk ⁶	4.7	6.8	2.6	2.7	7.6	8.1	6.2	6.6
Total ⁴	17.2	21.3	15.3	21.3	21.7	27.6	16.3	16.3

1 Highest and lowest VaR for each risk factor are independent and usually occur on different days

2 Actual one day VaR at year end date

3 Interest rate risk VaR includes credit spread risk arising from securities accounted as FVTPL or FVOCI

4 The total VaR shown in the tables above is not a sum of the component risks, due to offsets between them

5 Trading book for market risk is defined in accordance with the EU Capital Requirements Regulation (CRDIV/CRR) Part 3 Title I Chapter 3, which restricts the positions permitted in the trading book

6 Non-trading equity risk VaR includes only listed equities

The following table sets out how trading and non-trading VaR is distributed across the Group's products:

	31.12.18				31.12.17			
	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million	Average \$million	High ¹ \$million	Low ¹ \$million	Actual ² \$million
Trading and non-trading	20.6	26.1	16.4	25.5	25.7	32.4	20.3	22.3
Trading ⁴								
Rates	5.0	7.1	3.8	5.8	5.9	8.6	4.4	5.1
Global foreign exchange	4.4	8.6	2.5	7.7	5.5	12.3	3.0	6.0
Credit trading and capital markets	3.8	6.1	1.8	2.9	4.6	6.9	2.6	4.9
Commodities	1.3	2.1	0.8	1.2	1.2	2.0	0.6	1.0
Equities	0.1	0.1	–	–	0.1	0.4	0.1	0.1
XVA	3.1	4.1	2.3	3.5	5.5	8.3	3.0	3.0
Total ³	9.8	13.8	7.5	13.6	12.1	15.7	8.3	10.9
Non-trading								
Treasury markets	16.8	20.7	14.1	20.7	19.5	23.1	14.4	14.4
Listed private equity	4.7	6.8	2.6	2.7	7.6	8.1	6.2	6.6
Total ³	17.2	21.3	15.3	21.3	21.7	27.6	16.3	16.3

1 Highest and lowest VaR for each risk factor are independent and usually occur on different days

2 Actual one-day VaR at year end date

3 The total VaR shown in the tables above is not a sum of the component risks due to offsets between them

4 Trading book for market risk is defined in accordance with the EU Capital Requirements Regulation (CRDIV/CRR) Part 3 Title I Chapter 3 which restricts the positions permitted in the trading book

Risks not in VaR (unaudited)

In 2018, the main market risk not reflected in VaR was currency risk where the exchange rate is currently pegged or managed. The historical one-year VaR observation period does not reflect the future possibility of a change in the currency regime such as sudden depegging. The other material market risk not reflected in VaR was associated with basis risks where historical market price data for VaR is sometimes more limited, and therefore proxied, generating a potential basis risk. Additional capital is set aside to cover such 'risks not in VaR'. For further details on market risk capital see the Standard Chartered PLC Pillar 3 Disclosures 2018 section on market risk.

Backtesting (unaudited)

Regulatory backtesting is applied at both Group and Solo levels. In 2018, there have been two negative exceptions at Group level and three at Solo level (in 2017, there was one exception at Group level and one exception at Solo level).

Group and Solo exceptions occurred on 16 August 2018 driven by RMB which appreciated sharply due to PBoC intervention following a period of decline. Additionally, Group and Solo exceptions occurred on 2 November 2018 driven by TWD and RMB exposures when Asian currencies strengthened on talk of a draft trade deal between the US and China. On 15 November 2018 a Solo exception was driven by GBP and USD. GBP depreciated as the draft Brexit agreement ran into difficulties, and US treasury yields fell as a result of safe haven purchases. Three exceptions in a year due to market events is within the 'green zone' applied internationally to internal models by bank supervisors (Basel Committee on Banking Supervision: 'Supervisory framework for the use of backtesting in conjunction with the internal models approach to market risk capital requirements', January 1996).

The graph below illustrates the performance of the VaR model used in capital calculations. It compares the 99 percentile loss confidence level given by the VaR model with the hypothetical profit and loss of each day given the actual market movement without taking into account any intra-day trading activity.

Financial Markets loss days

	31.12.18	31.12.17
Number of loss days reported for Financial Markets trading book total product income ¹	8	15

1 Reflects total product income for Financial Markets:

- Including CVA and FVA risk
- Excluding Treasury Markets business (non-trading) and periodic valuation changes for Capital Markets, expected loss provisions and OIS discounting

Average daily income earned from market risk related activities¹

	31.12.18 \$million	31.12.17 \$million
Trading		
Interest rate risk	3.1	3.5
Foreign exchange risk	3.9	3.7
Commodity risk	0.8	0.6
Equity risk	—	—
Total	7.8	7.8
Non-trading		
Interest rate risk	2.4	2.4
Equity risk	0.4	0.3
Total	2.8	2.7

1 Includes the elements of Trading income, Interest income and Other income which are generated from market risk-related activities. XVA income is included under Interest rate risk

Mapping of market risk items to the balance sheet (unaudited)

Market risk contributes 7.4 per cent of the Group's regulatory capital risk-weighted asset (RWA) requirement (refer to risk-weighted assets tables). As highlighted in the VaR disclosure, during 2018 the majority of market risk was managed within Treasury Markets and Financial Markets, which span both the trading book and non-trading book. The non-trading equity market risk is generated by listed private equity holdings within Principal Finance. Treasury manages the market risk associated with debt and equity capital issuance.

	Amounts as per financial statements \$million	Exposure to trading risk \$million	Exposure to non-trading risk \$million	Market risk type
Financial assets				
Derivative financial instruments	45,621	45,386	235	Interest rate, foreign exchange, commodity or equity risk
Loans and advances to banks	82,065	19,319	62,746	Interest rate or foreign exchange risk
Loans and advances to customers	299,371	42,436	256,935	Interest rate or foreign exchange risk
Debt securities and other eligible bills	147,614	22,494	125,120	Interest rate mainly, but also foreign exchange or equity risk
Equities	1,954	1,347	607	Equities risk mainly, but also interest or foreign exchange risk
Other assets	35,401	6,666	28,735	Interest rate, foreign exchange, commodity or equity risk
Total	612,026	137,648	474,378	
Financial liabilities				
Deposits by banks	35,017	—	35,017	Interest rate or foreign exchange risk
Customer accounts	437,181	—	437,181	Interest rate or foreign exchange risk
Debt securities in issue	53,859	—	53,859	Interest rate mainly, but also foreign exchange or equity risk
Derivative financial instruments	47,209	46,839	370	Interest rate, foreign exchange, commodity or equity risk
Short positions	3,226	3,226	—	Interest rate, foreign exchange, commodity or equity risk
Total	576,492	50,065	526,427	

Structural foreign exchange exposures

The table below sets out the principal structural foreign exchange exposures (net of investment hedges) of the Group.

	31.12.18 \$million	01.01.18 \$million	31.12.17 \$million
Hong Kong dollar	7,792	7,028	7,119
Indian rupee	3,819	4,782	4,806
Renminbi	2,900	3,767	3,784
Singapore dollar	2,852	2,874	2,972
Korean won	2,148	2,284	2,361
Taiwanese dollar	1,238	1,569	1,589
UAE dirham	1,852	1,785	1,842
Malaysian ringgit	1,513	1,453	1,512
Thai baht	1,304	1,277	1,277
Indonesian rupiah	999	1,073	1,090
Pakistani rupee	458	545	543
Other	3,999	3,909	4,000
	30,874	32,346	32,895

As at 31 December 2018, the Group had taken net investment hedges using derivative financial investments of \$2,137 million (2017: \$2,003 million) to partly cover its exposure to the Korean won, \$800 million (2017: \$792 million) to partly cover its exposure to the Taiwanese dollar, \$1,606 million (2017: \$490 million) to partly cover its exposure to the Renminbi and \$712 million to partly cover its exposure to the Indian rupee. An analysis has been performed on these exposures to assess the impact of a 1 per cent fall in the US dollar exchange rates, adjusted to incorporate the impacts of correlations of these currencies to the US dollar. The impact on the positions above would be an increase of \$336 million (2017: \$357 million). Changes in the valuation of these positions are taken to reserves.

For analysis of the Group's capital position and requirements, refer to the Capital Review.

Counterparty credit risk

Counterparty credit risk is the potential for loss in the event of the default of a derivative counterparty, after taking into account the value of eligible collaterals and risk mitigation techniques. The Group's counterparty credit exposures are included in the Credit risk section.

Derivative financial instruments credit risk mitigation

The Group enters into master netting agreements, which in the event of default result in a single amount owed by or to the counterparty through netting the sum of the positive and negative mark-to-market values of applicable derivative transactions. The value of exposure under master netting agreements is \$32,283 million (2017: \$29,135 million).

In addition, the Group enters into credit support annexes (CSAs) with counterparties where collateral is deemed a necessary or desirable mitigant to the exposure. Cash collateral includes collateral called under a variation margin process from counterparties if total uncollateralised mark-to-market exposure exceeds the threshold and minimum transfer amount specified in the CSA. With certain counterparties, the CSA is reciprocal and requires us to post collateral if the overall mark-to-market values of positions are in the counterparty's favour and exceed an agreed threshold. The Group holds \$6,834 million (2017: \$6,562 million) under CSAs.

Liquidity and Funding risk

Liquidity and Funding risk is the risk that we may not have sufficient stable or diverse sources of funding to meet our obligations as they fall due.

The Group's liquidity and funding risk approach requires each country to ensure that it operates within predefined liquidity limits and remain in compliance with Group liquidity policies and practices, as well as local regulatory requirements.

The Group achieves this through a combination of setting Risk Appetite and associated limits, policy formation, risk measurement and monitoring, prudential and internal stress testing, governance and review.

Since the beginning of the year, there were no significant changes in treasury policies as disclosed in the 2017 Annual Report and Accounts.

The Group has relatively low levels of sterling and euro funding and exposures within the context of the overall Group balance sheet.

The result of the UK referendum to leave the EU has therefore not had a material first order liquidity impact.

Primary sources of funding

The Group's funding strategy is largely driven by its policy to maintain adequate liquidity at all times, in all geographic locations and for all currencies, and hence to be in a position to meet all obligations as they fall due. The Group's funding profile is therefore well diversified across different sources, maturities and currencies.

A substantial portion of our assets are funded by customer deposits aligned with our policy to fund customer assets predominantly using customer deposits. Wholesale funding is diversified by type and maturity and represents a stable source of funds for the Group.

We maintain access to wholesale funding markets in all major financial centres in which we operate. This seeks to ensure that we have market intelligence, maintain stable funding lines and can obtain optimal pricing when performing our interest rate risk management activities.

In 2018, the Group issued approximately \$4.6 billion of senior debt securities and \$0.5 billion of subordinated debt securities from its holding company (HoldCo) Standard Chartered PLC (2017: \$1.5 billion of term senior debt and \$1 billion of Additional Tier 1).

Debt refinancing levels are low. In the next 12 months approximately \$3.9 billion of the Group's HoldCo senior debt is falling due for repayment either contractually or callable by the Group.

The information presented in the Liquidity pool section is on a financial view. This is the location in which the transaction or balance was booked and provides a more accurate view of where liquidity risk is actually located.

The chart below shows the composition of liabilities in which customer deposits make up 63.5 per cent of total liabilities as at 31 December 2018, the majority of which are current accounts, savings accounts and time deposits. Our largest customer deposit base by geography is Greater China & North Asia (in particular Hong Kong), which holds 44.9 per cent of Group customer accounts.

Liquidity and funding risk metrics

We monitor key liquidity metrics regularly, both on a country basis and in aggregate across the Group.

The following liquidity and funding Board Risk Appetite metrics define the maximum amount and type of risk that the Group is willing to assume in pursuit of its strategy: Liquidity Coverage Ratio (LCR), liquidity stress survival horizons, external wholesale borrowing, and advances-to-deposits ratio.

Liquidity Coverage Ratio (unaudited)

The LCR is a regulatory requirement set to ensure that the Group has sufficient unencumbered high-quality liquid assets to meet its liquidity needs in a 30-calendar-day liquidity stress scenario.

The Group monitors and reports its liquidity position under European Commission Delegated Regulation 2015/61 and has maintained its liquidity position above the prudential requirement.

At the reporting date, the Group LCR was 154 per cent (2017: 146 per cent) with a prudent surplus to both Board-approved Risk Appetite and regulatory requirements. The ratio increased 8 per cent year-on-year due to an increase in our liquidity buffer partially aligned to the growth in our overall balance sheet as we continued to focus on high-quality liquidity across our businesses. We also held adequate liquidity across our footprint to meet all local prudential LCR requirements, where applicable.

	31.12.18 \$million	31.12.17 \$million
Liquidity buffer	149,602	132,251
Total net cash outflows	97,443	90,691
Liquidity coverage ratio	154%	146%

For a more detailed Group LCR disclosure, refer to Section 6 of the Group's 2018 Pillar 3 Disclosures.

Stressed coverage (unaudited)

The Group intends to maintain a prudent and sustainable funding and liquidity position, in all countries and currencies, such that it can withstand a severe but plausible liquidity stress.

Our approach to managing liquidity and funding is reflected in the following Board-level Risk Appetite statement.

"The Group should hold an adequate buffer of high-quality liquid assets to survive extreme but plausible liquidity stress scenarios for at least 60 days without recourse to extraordinary central bank support."

The Group's internal liquidity stress testing framework covers the following stress scenarios:

- Standard Chartered-specific – this scenario captures the liquidity impact from an idiosyncratic event affecting Standard Chartered only i.e. the rest of the market is assumed to operate normally
- Market wide – this scenario captures the liquidity impact from a market wide crisis affecting all participants in a country, region or globally
- Combined – this scenario assumes both Standard Chartered-specific and Market-wide events affecting the Group simultaneously and hence the most severe scenario

All scenarios include, but are not limited to, modelled outflows for retail and wholesale funding, off-balance sheet funding risk, cross currency funding risk, intraday risk, franchise risk and risks associated with a deterioration of a firm's credit rating.

Stress testing results show that a positive surplus was maintained under all scenarios at 31 December 2018 i.e. respective countries are able to survive for a period of time as defined under each scenario. The Combined scenario at 31 December 2018 showed the Group maintained liquidity resources to survive greater than 60 days, as per our Board Risk Appetite. The results take into account currency convertibility and portability constraints across all major presence countries.

Standard Chartered Bank's credit ratings as at 31 December 2018 were A+ with stable outlook (Fitch), A with stable outlook (S&P) and A1 with stable outlook (Moody's). A downgrade in the Group's long-term credit ratings would increase derivative collateral requirements and outflows due to rating-linked liabilities. At 31 December 2018, the estimated contractual outflow of a two-notch long-term ratings downgrade is \$1.6 billion (unaudited).

External wholesale borrowing

The Board sets a risk limit to prevent excessive reliance on wholesale borrowing. Limits are applied to all branches and operating subsidiaries in the Group and as at the reporting date the Group remained within Board Risk Appetite.

Advances-to-deposits ratio

This is defined as the ratio of total loans and advances to customers relative to total customer accounts. An advances-to-deposits ratio of below 100 per cent demonstrates that customer deposits exceed

customer loans as a result of the emphasis placed on generating a high level of funding from customers.

The advances-to-deposits ratio (2018: 64.9 per cent) decreased from the previous year (2017: 67.0 per cent).

Loans and advances to customers have increased 3 per cent since the end of 2017 to \$258 billion. This growth was largely due to higher Corporate Finance balances in Hong Kong as well as growth in our Transaction Banking and Wealth Management businesses. This growth was partially offset by a reduction in lending and retail mortgages primarily due to unfavourable foreign exchange movements in Korea, Singapore and Hong Kong.

Customer accounts have also increased 6 per cent from the end of 2017 to \$398 billion as the Group focused on high-quality liquidity across its businesses with an emphasis on Retail Banking, Transaction Banking and other deposits with high liquidity and regulatory value.

	31.12.18 \$million	31.12.17 ¹ \$million
Total loans and advances to customers ²	258,334	251,625
Total customer accounts ³	397,764	375,745
Advances-to-deposits ratio	64.9%	67.0%

1 The 2017 comparatives have been represented to exclude reverse repurchase agreements of \$33,928 million and repurchase agreements of \$35,979 million

2 Excludes reverse repurchase agreement and other similar secured lending of \$3,151 million and includes loans and advances to customers held at fair value through profit and loss of \$4,928 million

3 Includes customer accounts held at fair value through profit or loss of \$6,751 million

Net stable funding ratio (NSFR) (unaudited)

On 23 November 2016, the European Commission, as part of a package of risk-reducing measures, proposed a binding requirement for stable funding NSFR at European Union level. The proposal aims to implement the European Banking Authority's interpretation of the Basel standard on NSFR (BCBS295). Pending implementation of the final rules, the Group continues to monitor NSFR in line with the final recommendation from the Basel Committee on Banking Supervision (BCBS).

The NSFR is a balance sheet metric which requires institutions to maintain a stable funding profile in relation to the characteristics of their assets and off-balance sheet activities over a one-year horizon. It is the ratio between the amount of available stable funding (ASF) and the amount of required stable funding (RSF). ASF factors are applied to balance sheet liabilities and capital, based on their perceived stability and the amount of stable funding they provide. Likewise, RSF factors are applied to assets and off-balance sheet exposures according to the amount of stable funding they require. At the last reporting date, the Group NSFR remained above 100 per cent.

Liquidity pool (unaudited)

The liquidity value of the Group's LCR eligible liquidity pool at the reporting date was \$150 billion. The figures in the below table account for haircuts, currency convertibility and portability constraints, and therefore are not directly comparable with the consolidated balance sheet. The pool is held to offset stress outflows as defined in European Commission Delegated Regulation 2015/61.

The pool increased \$17 billion year-on-year, reflecting overall balance sheet growth as we continued to improve the quality of our funding base and focus on growing quality and RWA efficient assets. Our liquidity pool composition also changed over the period as we increased our holdings of Level 2A LCR eligible securities.

	31.12.18				
	Greater China & North East Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Level 1 securities					
Cash and balances at central banks	16,267	2,645	1,416	28,232	48,560
Central banks, governments/public sector entities	33,462	9,900	1,540	30,166	75,068
Multilateral development banks and international organisations	1,543	1,451	195	8,487	11,676
Other	–	–	–	1,125	1,125
Total Level 1 securities	51,272	13,996	3,151	68,010	136,429
Level 2A securities	3,943	1,083	60	5,296	10,382
Level 2B securities	–	1,264	–	1,527	2,791
Total LCR eligible assets	55,215	16,343	3,211	74,833	149,602

	31.12.17				
	Greater China & North East Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Total \$million
Level 1 securities					
Cash and balances at central banks	13,779	2,400	1,708	33,191	51,078
Central banks, governments/public sector entities	28,187	12,265	1,064	24,464	65,980
Multilateral development banks and international organisations	–	563	159	8,568	9,290
Other	–	–	–	130	130
Total Level 1 securities	41,966	15,228	2,931	66,353	126,478
Level 2A securities	2,234	825	113	1,147	4,319
Level 2B securities	–	246	3	1,206	1,455
Total LCR eligible assets	44,200	16,299	3,047	68,706	132,252

Encumbrance (unaudited)

Encumbered assets

Encumbered assets represent on-balance sheet assets pledged or subject to any form of arrangement to secure, collateralise or credit enhance a transaction from which it cannot be freely withdrawn. Cash collateral pledged against derivatives and Hong Kong government certificates of indebtedness, which secure the equivalent amount of Hong Kong currency notes in circulation, are included within Other assets.

Unencumbered – readily available for encumbrance

Unencumbered assets that are considered by the Group to be readily available in the normal course of business to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements and are not subject to any restrictions on their use for these purposes.

Unencumbered – other assets capable of being encumbered

Unencumbered assets that, in their current form, are not considered by the Group to be readily realisable in the normal course of business to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements and are not subject to any restrictions on their use for these purposes. Included within this category are loans and advances which would be suitable for use in secured funding structures such as securitisations.

Unencumbered – cannot be encumbered

Unencumbered assets that have not been pledged and cannot be used to secure funding, meet collateral needs, or be sold to reduce potential future funding requirements, as assessed by the Group.

Derivatives, reverse repurchase assets and stock lending

These assets are shown separately as these on-balance sheet amounts cannot be pledged. However, these assets can give rise to off-balance sheet collateral which can be used to raise secured funding or meet additional funding requirements.

The following table provides a reconciliation of the Group's encumbered assets to total assets.

31.12.18										
	Assets encumbered as a result of transactions with counterparties other than central banks				Other assets (comprising assets encumbered at the central bank and unencumbered assets)					
	Assets \$million	As a result of securitisations \$million	Other \$million	Total \$million	Assets positioned at the central bank (i.e. pre-positioned plus encumbered) \$million	Assets not positioned at the central bank				Total \$million
						Readily available for encumbrance \$million	Other assets that are capable of being encumbered \$million	Derivatives and reverse repo/stock lending \$million	Cannot be encumbered \$million	
Cash and balances at central banks	57,511	—	—	—	8,152	49,359	—	—	—	57,511
Derivative financial instruments	45,621	—	—	—	—	—	—	45,621	—	45,621
Loans and advances to banks	82,065	447	—	447	—	45,623	13,918	20,698	1,379	81,618
Loans and advances to customers	299,371	497	7	504	—	—	243,802	41,037	14,028	298,867
Investment securities	149,568	—	7,521	7,521	—	95,523	40,591	—	5,933	142,047
Other assets	35,401	—	16,287	16,287	—	—	11,440	—	7,674	19,114
Current tax assets	492	—	—	—	—	—	—	—	492	492
Prepayments and accrued income	2,505	—	—	—	—	—	1,356	—	1,149	2,505
Interests in associates and joint ventures	2,307	—	—	—	—	—	—	—	2,307	2,307
Goodwill and intangible assets	5,056	—	—	—	—	—	—	—	5,056	5,056
Property, plant and equipment	6,490	—	—	—	—	—	400	—	6,090	6,490
Deferred tax assets	1,047	—	—	—	—	—	—	—	1,047	1,047
Assets classified as held for sale	1,328	—	—	—	—	—	—	—	1,328	1,328
Total	688,762	944	23,815	24,759	8,152	190,505	311,507	107,356	46,483	664,003

	Assets encumbered as a result of transactions with counterparties other than central banks				Other assets (comprising assets encumbered at the central bank and unencumbered assets)					
	Assets \$million	As a result of securitisations \$million	Other \$million	Total \$million	Assets positioned at the central bank (i.e. pre-positioned plus encumbered) \$million	Assets not positioned at the central bank				Total \$million
						Readily available for encumbrance \$million	Other assets that are capable of being encumbered \$million	Derivatives and reverse repo/stock lending \$million	Cannot be encumbered \$million	
Cash and balances at central banks	58,864	—	—	—	9,761	49,103	—	—	—	58,864
Derivative financial instruments	47,031	—	—	—	—	—	—	47,031	—	47,031
Loans and advances to banks	81,325	—	—	—	—	47,380	5,333	21,260	7,352	81,325
Loans and advances to customers	285,553	11	—	11	—	—	232,328	33,928	19,286	285,542
Investment securities	138,187	—	8,213	8,213	178	91,928	29,967	—	7,901	129,974
Other assets	33,490	—	14,930	14,930	—	—	11,604	—	6,956	18,560
Current tax assets	491	—	—	—	—	—	—	—	491	491
Prepayments and accrued income	2,307	—	—	—	—	—	1,503	—	804	2,307
Interests in associates and joint ventures	2,307	—	—	—	—	—	—	—	2,307	2,307
Goodwill and intangible assets	5,013	—	—	—	—	—	352	—	4,661	5,013
Property, plant and equipment	7,211	—	—	—	—	—	1,148	—	6,063	7,211
Deferred tax assets	1,177	—	—	—	—	—	—	—	1,177	1,177
Assets classified as held for sale	545	—	—	—	—	—	—	—	545	545
Total	663,501	11	23,143	23,154	9,939	188,411	282,235	102,219	57,543	640,347

The Group received \$85,768 million (2017: \$72,982 million) as collateral under reverse repurchase agreements, that was eligible for repledging; of this the Group sold or repledged \$40,552 million (2017: \$34,018 million) under repurchase agreements.

Liquidity analysis of the Group's balance sheet

Contractual maturity of assets and liabilities

The following table presents assets and liabilities by maturity groupings based on the remaining period to the contractual maturity date as at the balance sheet date on a discounted basis. Contractual maturities do not necessarily reflect actual repayments or cashflows.

Within the tables below, cash and balances with central banks, interbank placements and investment securities that are fair value through other comprehensive income are used by the Group principally for liquidity management purposes.

As at the reporting date, assets remain predominantly short-dated, with 61 per cent maturing in under one year. Our less than three month cumulative net funding gap increased from the previous year, largely due to an increase in customer accounts as the Group focused on improving the quality of its deposit base. In practice, these deposits are recognised as stable and have behavioural profiles that extend beyond their contractual maturities.

31.12.18

	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Assets									
Cash and balances at central banks	49,359	—	—	—	—	—	—	8,152	57,511
Derivative financial instruments	6,902	5,861	5,827	3,509	2,333	4,458	8,079	8,652	45,621
Loans and advances to banks ^{1,2}	38,331	20,549	11,209	5,214	2,835	2,584	1,064	279	82,065
Loans and advances to customers ^{1,2}	84,846	33,756	18,133	11,641	10,321	17,519	39,306	83,849	299,371
Investment securities	15,297	13,589	14,131	14,300	17,402	25,695	31,303	17,851	149,568
Other assets	21,155	8,909	2,385	224	135	96	155	21,567	54,626
Total assets	215,890	82,664	51,685	34,888	33,026	50,352	79,907	140,350	688,762
Liabilities									
Deposits by banks ^{1,3}	30,368	2,593	572	553	397	244	230	60	35,017
Customer accounts ^{1,4}	331,633	51,553	23,643	10,966	11,634	3,631	1,154	2,967	437,181
Derivative financial instruments	7,467	6,072	6,136	3,544	2,140	5,257	8,886	7,707	47,209
Senior debt	1,259	959	509	5,087	667	2,878	6,327	10,093	27,779
Other debt securities in issue ¹	4,893	9,792	8,062	177	715	1,030	16	1,395	26,080
Other liabilities	22,835	8,698	4,130	852	536	868	401	11,823	50,143
Subordinated liabilities and other borrowed funds	23	17	—	—	—	2,522	4,421	8,018	15,001
Total liabilities	398,478	79,684	43,052	21,179	16,089	16,430	21,435	42,063	638,410
Net liquidity gap	(182,588)	2,980	8,633	13,709	16,937	33,922	58,472	98,287	50,352

1 Loans and advances, investment securities, deposits by banks, customer accounts and debt securities in issue include financial instruments held at fair value through profit or loss, see Note 13 Financial instruments

2 Loans and advances include reverse repurchase agreements and other similar secured lending of \$61.7 billion

3 Deposits by banks include repurchase agreements and other similar secured borrowing of \$5 billion

4 Customer accounts include repurchase agreements and other similar secured borrowing of \$39.4 billion

31.12.17

	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Assets									
Cash and balances at central banks	49,103	—	—	—	—	—	—	9,761	58,864
Derivative financial instruments	6,284	7,706	5,930	3,537	2,601	5,427	7,111	8,435	47,031
Loans and advances to banks ^{1,2}	36,548	21,238	12,042	4,299	3,612	1,588	1,386	612	81,325
Loans and advances to customers ^{1,2}	87,794	32,618	17,459	11,357	8,545	17,500	37,237	73,043	285,553
Investment securities	14,185	18,208	13,692	11,213	9,145	22,369	31,660	17,715	138,187
Other assets	19,349	4,466	2,521	105	247	138	127	25,588	52,541
Total assets	213,263	84,236	51,644	30,511	24,150	47,022	77,521	135,154	663,501
Liabilities									
Deposits by banks ^{1,3}	29,365	2,484	1,437	530	730	154	135	651	35,486
Customer accounts ^{1,4}	327,434	37,178	19,716	10,775	9,321	3,115	1,746	2,439	411,724
Derivative financial instruments	8,018	8,035	6,068	3,544	2,685	5,057	7,794	6,900	48,101
Senior debt	67	273	1,801	53	1,937	5,053	4,747	5,585	19,516
Other debt securities in issue ¹	4,139	10,616	9,954	2,005	779	1,091	794	4,508	33,886
Other liabilities	20,428	5,988	3,672	671	303	696	897	13,150	45,805
Subordinated liabilities and other borrowed funds	—	116	1,382	—	—	—	3,887	11,791	17,176
Total liabilities	389,451	64,690	44,030	17,578	15,755	15,166	20,000	45,024	611,694
Net liquidity gap	(176,188)	19,546	7,614	12,933	8,395	31,856	57,521	90,130	51,807

1 Loans and advances, investment securities, deposits by banks, customer accounts and debt securities in issue include financial instruments held at fair value through profit or loss, see Note 13 Financial instruments

2 Loans and advances include reverse repurchase agreements and other similar secured lending of \$55.2 billion

3 Deposits by banks include repurchase agreements and other similar secured borrowing of \$3.8 billion

4 Customer accounts include repurchase agreements and other similar secured borrowing of \$36.0 billion

Behavioural maturity of financial assets and liabilities

The cash flows presented in the previous section reflect the cash flows that will be contractually payable over the residual maturity of the instruments. However, contractual maturities do not necessarily reflect the timing of actual repayments or cash flow. In practice, certain assets and liabilities behave differently from their contractual terms, especially for short-term customer accounts, credit card balances and overdrafts, which extend to a longer period than their contractual maturity. On the other hand, mortgage balances tend to have a shorter repayment period than their contractual maturity date. Expected customer behaviour is assessed and managed on a country basis using qualitative and quantitative techniques, including analysis of observed customer behaviour over time.

Maturity of financial liabilities on an undiscounted basis

The following table analyses the contractual cash flows payable for the Group's financial liabilities by remaining contractual maturities on an undiscounted basis. The financial liability balances in the table below will not agree to the balances reported in the consolidated balance sheet as the table incorporates all contractual cash flows, on an undiscounted basis, relating to both principal and interest payments. Derivatives not treated as hedging derivatives are included in the 'on demand' time bucket and not by contractual maturity.

Within the 'More than five years and undated' maturity band are undated financial liabilities, all of which relate to subordinated debt, on which interest payments are not included as this information would not be meaningful given the instruments are undated. Interest payments on these instruments are included within the relevant maturities up to five years.

	31.12.18								
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Deposits by banks	30,467	2,609	593	569	409	267	250	62	35,226
Customer accounts	332,115	51,845	24,686	11,094	11,780	3,700	1,226	3,552	439,998
Derivative financial instruments ¹	45,665	137	141	9	91	31	679	456	47,209
Debt securities in issue	6,169	11,345	8,786	5,310	1,628	3,685	7,104	13,000	57,027
Subordinated liabilities and other borrowed funds	23	–	255	–	414	3,169	6,154	13,865	23,880
Other liabilities	19,746	8,757	4,129	892	520	885	407	12,302	47,638
Total liabilities	434,185	74,693	38,590	17,874	14,842	11,737	15,820	43,237	650,978

	31.12.17								
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Deposits by banks	29,427	2,497	1,460	545	743	160	150	697	35,679
Customer accounts	327,501	37,353	20,720	10,901	9,463	3,178	1,840	2,919	413,875
Derivative financial instruments ¹	47,267	–	3	–	153	166	246	266	48,101
Debt securities in issue	4,287	10,888	11,878	2,141	2,876	6,550	6,163	11,769	56,552
Subordinated liabilities and other borrowed funds	126	207	1,490	210	166	657	3,726	19,356	25,938
Other liabilities	20,800	6,052	3,676	681	324	720	929	11,241	44,423
Total liabilities	429,408	56,997	39,227	14,478	13,725	11,431	13,054	46,248	624,568

1 Derivatives are on a discounted basis

Interest rate risk in the banking book (unaudited)

The following table provides the estimated impact on the Group's earnings of a 50bps parallel shock (up and down) across all yield curves. The sensitivities shown represent the estimated change in base case projected net interest income, plus the change in interest rate implied income and expense from FX swaps used to manage banking book currency positions, under the two interest rate shock scenarios.

The interest rate sensitivities are indicative and based on simplified scenarios, estimating the aggregate impact of an instantaneous 50bps parallel shock across all yield curves over a one-year horizon, including the time taken to implement changes to pricing before becoming effective. The assessment assumes that non-interest rate sensitive aspects of the size and mix of the balance sheet remain constant and that there are no specific management actions in response to the change in rates. No assumptions are made in relation to the impact on credit spreads in a changing rate environment.

Significant modelling and behavioural assumptions are made regarding scenario simplification, market competition, pass-through rates, asset and liability re-pricing tenors, and price flooring. In particular, the assumption that interest rates of all currencies and maturities shift by the same amount concurrently, and that no actions are taken to mitigate the impacts arising from this are considered unlikely. Reported sensitivities will vary over time due to a number of factors including changes in balance sheet composition, market conditions, customer behaviour and risk management strategy and should therefore not be considered an income or profit forecast.

31.12.18				
Estimated one-year impact to earnings from a parallel shift in yield curves at the beginning of the period of:	USD bloc \$million	HKD, SGD & KRW bloc \$million	Other currency bloc \$million	Total \$million
+ 50bps	10	110	90	210
– 50bps	(20)	(70)	(90)	(180)

31.12.17				
Estimated one-year impact to earnings from a parallel shift in yield curves at the beginning of the period of:	USD bloc \$million	HKD, SGD & KRW bloc \$million	Other currency bloc \$million	Total \$million
+ 50bps	70	120	140	330
– 50bps	(50)	(100)	(140)	(290)

As at 31 December 2018, the Group estimates the one-year impact of an instantaneous, parallel increase across all yield curves of 50bps to be an earnings benefit of \$210 million. The corresponding impact from a parallel decrease of 50bps would result in an earnings reduction of \$180 million.

The benefit from rising interest rates is primarily from reinvesting at higher yields and from assets re-pricing faster and to a greater extent than deposits. The current estimate for US dollar sensitivity has reduced since December 2017 on rising deposit sensitivity to changes in interest rates.

The US dollar sensitivity is also impacted by the dampening effect due to the asymmetry of funding trading book assets with banking book liabilities. The sensitivities include the cost of banking book liabilities used to fund the trading book, however the revenue associated with the trading book positions is recognised in net trading income. This asymmetry in both the up and down scenarios should be broadly offset within total operating income.

Operational risk (unaudited)

Operational risks arise from the processes executed within the Group. Risks associated with these processes are mapped into a Group Process Universe where the standardised Control Assessment Standards are applied. The standards are benchmarked against regulatory requirements.

A summary of our operational risk management approach is provided in the Risk management approach.

Operational risk profile

The operational risk profile is the Group's overall exposure to non-financial risk, at a given point in time, covering all Principal Risk Types. The operational risk profile comprises both operational risk events (including losses) and the current exposures to non-financial risks.

Operational risk events and losses

Operational losses are one indicator of the effectiveness and robustness of the non-financial risk control environment. As at 31 December 2018, recorded operational losses for 2018 are lower than 2017. Operational losses in 2018 comprise unrelated non-systemic events which were not individually significant.

Losses in 2017 include incremental events that were recognised in 2018 and reclassification of Basel event types and Basel business lines. As at 31 December 2018, the largest loss recorded for 2017 relates to an internal fraud loss of \$21.7 million in the Retail Banking Basel business line.

The Group's profile of operational loss events in 2018 and 2017 is summarised in the table below. It shows the percentage distribution of gross operational losses by Basel business line. This does not include provision made for potential penalties relating to US investigation, the FCA decision and previously disclosed foreign trading issues, which will be assessed when settled. Further details are set out in Note 26.

Distribution of operational losses by Basel business line	% Loss	
	31.12.18	31.12.17
Agency services	1.4%	2.4%
Commercial Banking	6.7%	13.8%
Corporate Finance	—	3.4%
Corporate items	5.5%	3.2%
Payment and settlements	14.6%	1.4%
Retail Banking	53.8%	45.8%
Retail brokerage	0.1%	0.1%
Trading and sales	17.9%	29.9%

The Group's profile of operational loss events in 2018 and 2017 is also summarised by Basel event type in the table below. It shows the percentage distribution of gross operational losses by Basel event type. This does not include provision made for potential penalties relating to US investigation, the FCA decision and previously disclosed foreign trading issues, which will be assessed when settled. Further details are set out in Note 26.

Distribution of operational losses by Basel event type	% Loss	
	31.12.18	31.12.17
Business disruption and system failures	5.8%	0.4%
Clients products and business practices	1.9%	33.4%
Damage to physical assets	0.1%	0.0%
Employment practices and workplace safety	0.2%	0.1%
Execution delivery and process management	53.1%	31.5%
External fraud	36.4%	17.6%
Internal fraud	2.5%	17.0%

Other principal risks (unaudited)

Losses arising from operational failures for other principal risks (for example: Compliance, Conduct, Reputational, Information and Cyber Security and Financial Crime) are reported as operational losses. Operational losses do not include operational risk-related credit impairments.

For further information on the Group's liquidity stress testing framework refer to the Risk Management Approach.

Capital review

The Capital review provides an analysis of the Group's capital and leverage position and requirements

Capital summary

The Group's capital and leverage position is managed within the Board-approved risk appetite. The Group is well capitalised with low leverage and high levels of loss-absorbing capacity.

Capital, leverage and RWA	31.12.18	31.12.17
CET1 capital	14.2%	13.6%
Tier 1 capital	16.8%	16.0%
Total capital	21.6%	21.0%
UK leverage	5.6%	6.0%
Risk-weighted assets (RWA) \$million	258,297	279,748

The Group's Common Equity Tier 1 (CET1) capital and Tier 1 leverage position were ahead of both the current requirements and the expected end-state requirements for 2019. For further detail see the Standard Chartered PLC Pillar 3 Disclosures 2018 section on Capital.

The Group's current Pillar 2A requirement reduced in 2018 to 2.9 per cent of RWA, of which at least 1.6 per cent must be held in CET1. This requirement can vary over time.

The Group currently estimates its minimum requirement for own funds and eligible liabilities (MREL) at 21.8 per cent of RWA from 1 January 2022. The Group's combined buffer (the capital conservation, global systemically important institution (G-SII) and countercyclical buffers) is additive, resulting in a current estimate of its total loss absorbing capacity requirement of 25.7 per cent of RWA from 1 January 2022. The Group estimates that its MREL position was around 27.2 per cent of RWA and around 9.5 per cent of leverage exposure at 31 December 2018.

The Group continued its programme of MREL issuance from its holding company in 2018, issuing \$5.0 billion of MREL eligible securities across senior debt and Tier 2 during the period including the Group's inaugural issuance of US dollar callable senior notes. As part of its proactive approach to capital management, the Group successfully conducted a liability management exercise to buy back British pound sterling denominated debt and improve the capital efficiency of the non-equity capital stock.

Regulatory update

The European Commission has proposed amendments to the Capital Requirements Directive, the Capital Requirements Regulation and the Bank Recovery and Resolution Directive. Any proposed reforms remain subject to change and until the proposals are in final form it is uncertain how they will affect the Group.

The Group remains a G-SII, with a 1.0 per cent G-SII CET1 buffer which phases in at a rate of 0.25 per cent per year and was fully implemented on 1 January 2019. The Standard Chartered PLC 2017 G-SII disclosure is published at: <http://investors.sc.com/fullyearresults>

In line with previous guidance, the decrease in the CET1 capital ratio on adoption of the IFRS 9 accounting standard was around 13 basis points (bps) after considering the offset against existing regulatory expected losses. Under transitional rules, the day-one impact on the CET1 ratio was negligible.

In the Bank of England's 2018 stress tests, under the hypothetical annual cyclical scenario, the Group exceeded all hurdle rates. The Group has a diverse and liquid balance sheet and these results demonstrate the Group's continued capital strength and increased resilience to stress.

Capital ratios (unaudited)

	31.12.18	31.12.17
CET1	14.2%	13.6%
Tier 1 capital	16.8%	16.0%
Total capital	21.6%	21.0%

CRD IV Capital base¹

	31.12.18 \$million	31.12.17 \$million
CET1 instruments and reserves		
Capital instruments and the related share premium accounts	5,617	5,603
Of which: share premium accounts	3,965	3,957
Retained earnings	25,377	25,316
Accumulated other comprehensive income (and other reserves)	11,878	12,766
Non-controlling interests (amount allowed in consolidated CET1)	686	850
Independently reviewed interim and year-end profits	1,072	1,227
Foreseeable dividends net of scrip	(527)	(399)
CET1 capital before regulatory adjustments	44,103	45,363
CET1 regulatory adjustments		
Additional value adjustments (prudential valuation adjustments)	(564)	(574)
Intangible assets (net of related tax liability)	(5,146)	(5,112)
Deferred tax assets that rely on future profitability (excludes those arising from temporary differences)	(115)	(125)
Fair value reserves related to net losses on cash flow hedges	10	45
Deduction of amounts resulting from the calculation of excess expected loss	(875)	(1,142)
Net gains on liabilities at fair value resulting from changes in own Credit Risk	(412)	(53)
Defined-benefit pension fund assets	(34)	(40)
Fair value gains arising from the institution's own Credit Risk related to derivative liabilities	(127)	(59)
Exposure amounts which could qualify for risk weighting of 1250%	(123)	(141)
Total regulatory adjustments to CET1	(7,386)	(7,201)
CET1 capital	36,717	38,162
Additional Tier 1 capital (AT1) instruments	6,704	6,719
AT1 regulatory adjustments	(20)	(20)
Tier 1 capital	43,401	44,861
Tier 2 capital instruments	12,325	13,927
Tier 2 regulatory adjustments	(30)	(30)
Tier 2 capital	12,295	13,897
Total capital	55,696	58,758
Total risk-weighted assets (unaudited)	258,297	279,748

¹ CRD IV capital is prepared on the regulatory scope of consolidation

Movement in total capital

	31.12.18 \$million	31.12.17 \$million
CET1 at 1 January	38,162	36,608
Ordinary shares issued in the period and share premium	14	6
Profit for the period	1,072	1,227
Foreseeable dividends net of scrip deducted from CET1	(527)	(399)
Difference between dividends paid and foreseeable dividends	(575)	(233)
Movement in goodwill and other intangible assets	(34)	(256)
Foreign currency translation differences	(1,161)	1,363
Non-controlling interests ¹	(164)	41
Movement in eligible other comprehensive income ²	60	80
Deferred tax assets that rely on future profitability	10	72
Decrease/(increase) in excess expected loss ¹	267	(402)
Additional value adjustments (prudential valuation adjustment)	10	86
IFRS 9 day-one transitional impact on regulatory reserves ¹	(441)	–
Exposure amounts which could qualify for risk weighting	18	27
Other	6	(58)
CET1 at 31 December	36,717	38,162
AT1 at 1 January	6,699	5,684
Issuances net of redemptions	–	992
Foreign currency translation difference	(15)	23
Other	–	–
AT1 at 31 December	6,684	6,699
Tier 2 capital at 1 January	13,897	15,146
Regulatory amortisation	166	779
Issuances net of redemptions	(1,713)	(2,907)
Foreign currency translation difference	(215)	676
Tier 2 ineligible minority interest	144	233
Other	16	(30)
Tier 2 capital at 31 December	12,295	13,897
Total capital at 31 December	55,696	58,758

1 See impact of IFRS 9 on CET1

2 Movement in eligible other comprehensive income includes own credit gains

The main movements in capital in the period were:

- The CET1 ratio increased to 14.2 per cent predominantly as a result of lower RWA
- CET1 capital decreased by \$1.4 billion, mainly due to \$1.1 billion of dividends paid along with foreseeable dividends, FX translation of \$1.2 billion and IFRS 9 day-one transitional adjustment to retained earnings of \$0.4 billion being offset, in part, by profit after tax of \$1.1 billion
- AT1 remained at \$6.7 billion during the period
- Tier 2 capital reduced by \$1.6 billion to \$12.3 billion as a result of redemptions and the impact of the liability management exercise more than offsetting the new issuance of \$0.5 billion of Tier 2 in the period

Impact of IFRS 9 on CET1

	31.12.18 \$million	31.12.17 \$million
IFRS 9 impact on regulatory reserves net of tax	(843)	N/A
IFRS 9 regulatory static transitional relief	402	N/A
IFRS 9 day-one transitional impact on regulatory reserves	(441)	N/A
IFRS 9 impact on excess expected loss shield	572	N/A
IFRS 9 impact on non-controlling interest	(57)	N/A
Overall net day-one transitional impact of IFRS 9 on CET1 capital	74	N/A

Risk-weighted assets by business (unaudited)

	31.12.18			
	Credit Risk \$million	Operational Risk \$million	Market Risk \$million	Total risk \$million
Corporate & Institutional Banking	96,954	13,029	19,008	128,991
Retail Banking	35,545	7,358	—	42,903
Commercial Banking	27,711	2,770	—	30,481
Private Banking	5,103	758	—	5,861
Central & other items	45,825	4,135	101	50,061
Total risk-weighted assets	211,138	28,050	19,109	258,297

	31.12.17			
	Credit Risk \$million	Operational Risk \$million	Market Risk \$million	Total risk \$million
Corporate & Institutional Banking	109,368	14,740	22,994	147,102
Retail Banking	36,345	7,761	—	44,106
Commercial Banking	29,712	3,356	—	33,068
Private Banking	5,134	809	—	5,943
Central & other items	45,671	3,812	46	49,529
Total risk-weighted assets	226,230	30,478	23,040	279,748

Risk-weighted assets by geographic region (unaudited)

	31.12.18 \$million	31.12.17 \$million
Greater China & North Asia	81,023	84,593
ASEAN & South Asia	87,935	96,733
Africa & Middle East	53,072	56,437
Europe & Americas	40,789	44,735
Central & other items	(4,522)	(2,750)
Total risk-weighted assets	258,297	279,748

Movement in risk-weighted assets (unaudited)

	Credit Risk								
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million	Operational Risk \$million	Market Risk \$million	Total risk \$million
At 1 January 2017	106,834	33,210	27,553	5,129	41,149	213,875	33,693	21,877	269,445
Assets (decline)/growth	(6,363)	2,349	1,973	445	2,273	677	—	—	677
Net credit migration	4,035	74	(465)	—	9	3,653	—	—	3,653
Risk-weighted assets efficiencies	(2,295)	—	—	—	—	(2,295)	—	—	(2,295)
Model, methodology and policy changes	4,990	(368)	—	(575)	2,372	6,419	—	(2,178)	4,241
Disposals	—	(710)	—	—	(443)	(1,153)	—	—	(1,153)
Foreign currency translation	2,167	1,790	651	135	311	5,054	—	—	5,054
Other non-Credit Risk movements	—	—	—	—	—	—	(3,215)	3,341	126
At 31 December 2017	109,368	36,345	29,712	5,134	45,671	226,230	30,478	23,040	279,748
Assets (decline)/growth	(1,527)	1,466	(1,347)	56	2,896	1,544	—	—	1,544
Net credit migration	(2,120)	25	237	—	494	(1,364)	—	—	(1,364)
Risk-weighted assets efficiencies	(3,540)	(597)	—	—	(748)	(4,885)	—	—	(4,885)
Model, methodology and policy changes	(3,338)	(671)	66	—	77	(3,866)	—	(1,948)	(5,814)
Disposals	—	—	—	—	(626)	(626)	—	—	(626)
Foreign currency translation	(1,889)	(1,023)	(957)	(87)	(1,939)	(5,895)	—	—	(5,895)
Other non-Credit Risk movements	—	—	—	—	—	—	(2,428)	(1,983)	(4,411)
At 31 December 2018	96,954	35,545	27,711	5,103	45,825	211,138	28,050	19,109	258,297

Movements in risk-weighted assets

RWA decreased by \$21.5 billion, or 7.7 per cent, from 31 December 2017 to \$258.3 billion. This was principally due to a decrease in Credit Risk RWA of \$15.1 billion, or 6.7 per cent, and reductions in both Market and Operational Risk RWA of \$3.9 billion and \$2.4 billion respectively.

Corporate & Institutional Banking

Credit Risk RWA decreased by \$12.4 billion to \$97.0 billion mainly due to:

- \$3.5 billion decrease due to RWA efficiencies, mainly \$2.4 billion in Financial Markets through novation, trade compressions and process enhancement in collateral recognition and \$1.1 billion of savings from RWA efficiency initiatives on sovereign and financial institution exposures
- \$3.3 billion decrease in model, methodology and policy changes, mainly due to \$2.9 billion PRA-approved internal ratings-based (IRB) model changes relating to LGD parameters
- \$2.1 billion decrease due to net credit migration principally in ASEAN & South Asia (ASA)
- \$1.9 billion decrease from foreign currency translation due to depreciation of currencies in India, Europe and China against the US dollar
- \$1.5 billion RWA decrease from asset balance reduction in Principal Finance and Transaction Banking

Retail Banking

Credit Risk RWA decreased by \$0.8 billion to \$35.5 billion mainly due to:

- \$1.0 billion decrease from foreign currency translation mainly due to depreciation of currencies in Korea and India against the US dollar
- \$0.7 billion RWA decrease due to model changes in mortgages in ASA
- \$0.6 billion of benefit from RWA efficiency initiatives on exposures secured by residential real estate, partially offset by
- \$1.5 billion RWA increase from asset balance growth, primarily in Greater China & North Asia (GCNA)

Commercial Banking

Credit Risk RWA decreased by \$2.0 billion to \$27.7 billion mainly due to:

- \$1.3 billion RWA decrease from asset balance reductions in Transaction Banking and Corporate Finance
- \$0.9 billion decrease from foreign currency translation mainly due to depreciation of currencies in India, Pakistan against the US dollar, partially offset by
- \$0.2 billion increase due to net credit migration in GCNA

Private Banking

Credit Risk RWA is broadly flat at \$5.1 billion. Decreases from foreign currency translation were mostly offset by changes in asset balance growth in Wealth Management products.

Central & other items

Central & other items RWA mainly relates to the Treasury Markets liquidity portfolio, the Group's principal joint venture investment, PT Bank Permata Tbk, equity investments and deferred/current tax assets.

Credit Risk RWA increased by \$0.2 billion to \$45.8 billion mainly due to:

- \$2.9 billion increase in Credit Risk RWA mainly due to higher liquid assets over year end in Treasury Markets
- \$0.5 billion increase due to net credit migration in Africa & Middle East (AME) on sovereign exposures
- \$0.1 billion increase in model, methodology and policy changes, due to PRA approved IRB model changes relating to LGD parameters, partially offset by
- \$1.9 billion decrease from foreign currency translation mainly due to depreciation of currencies in Indonesia, India and Pakistan against the US dollar
- \$0.7 billion of benefit from RWA efficiency initiatives on sovereign exposures
- \$0.6 billion saving from the disposal of an investment in ASA

Market Risk

Total Market Risk RWA (MRWA) decreased by \$3.9 billion, or 17.1 per cent from 31 December 2017 to \$19.1 billion. This change was due mainly to reduced trading book debt security holdings and to changes in internal models approach (IMA) scope and model.

Operational Risk

Operational Risk RWA reduced by \$2.4 billion to \$28.1 billion, due to a decrease in the average income over a rolling three-year time horizon, as lower 2017 income replaced higher 2014 income. This represents a 7.9 per cent year-on-year reduction in Operational Risk RWA.

UK leverage ratio

The Group's UK leverage ratio, which excludes qualifying claims on central banks in accordance with a PRA waiver, was 5.6 per cent, which is above the current minimum requirement of 3.6 per cent. The lower UK leverage ratio in the period was due to the combined impact of an increased exposure measure and lower Tier 1 capital (end point).

UK leverage ratio (unaudited)

	31.12.18 \$million	31.12.17 \$million
Tier 1 capital (transitional)	43,401	44,861
Additional Tier 1 capital subject to phase out	(1,743)	(1,758)
Tier 1 capital (end point)	41,658	43,103
Derivative financial instruments	45,621	47,031
Derivative cash collateral	10,323	9,513
Securities financing transactions (SFTs)	61,735	55,187
Loans and advances and other assets	571,083	551,770
Total on-balance sheet assets	688,762	663,501
Regulatory consolidation adjustments ¹	(45,521)	(31,712)
Derivatives adjustments		
Derivatives netting	(34,300)	(29,830)
Adjustments to cash collateral	(14,827)	(18,411)
Net written credit protection	1,221	1,360
Potential future exposure on derivatives	28,498	30,027
Total derivatives adjustments	(19,408)	(16,854)
Counterparty risk leverage exposure measure for SFTs	8,281	13,238
Off-balance sheet items	115,335	96,260
Regulatory deductions from Tier 1 capital	(6,847)	(7,089)
UK leverage exposure (end point)	740,602	717,344
UK leverage ratio (end point)	5.6%	6.0%
UK leverage exposure quarterly average	734,976	723,508
UK leverage ratio quarterly average	5.8%	6.0%
Countercyclical leverage ratio buffer	0.1%	0.1%
G-SII additional leverage ratio buffer	0.3%	0.2%

1 Includes adjustment for qualifying central bank claims

Statement of directors' responsibilities

The directors are responsible for preparing the Annual Report and the Group and Company financial statements in accordance with applicable law and regulations.

Company law requires the directors to prepare Group and Company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with International Financial Reporting Standards as adopted by the European Union (IFRSs as adopted by the EU) and applicable law and have elected to prepare the Company financial statements on the same basis.

Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Company and of their profit or loss for that period. In preparing each of the Group and Company financial statements, the directors are required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and estimates that are reasonable, relevant and reliable;
- State whether they have been prepared in accordance with IFRSs as adopted by the EU;
- Assess the Group and the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and
- Use the going concern basis of accounting unless they either intend to liquidate the Group or the Company or to cease operations, or have no realistic alternative but to do so

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that its financial statements comply with the Companies Act 2006. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the directors are also responsible for preparing a Strategic Report, Directors' Report, Directors' Remuneration Report and Corporate Governance Statement that complies with that law and those regulations.

The directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility statement of the directors in respect of the annual financial report

We confirm that to the best of our knowledge:

- The financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation taken as a whole; and
- The Strategic report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face

We consider the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

By order of the Board

Andy Halford
Group Chief Financial Officer

26 February 2019

Consolidated income statement

For the year ended 31 December 2018

	Notes	31.12.18 \$million	31.12.17 \$million
Interest income		17,264	14,435
Interest expense		(8,471)	(6,254)
Net interest income	3	8,793	8,181
Fees and commission income		4,029	3,942
Fees and commission expense		(537)	(430)
Net fee and commission income	4	3,492	3,512
Net trading income	5	1,683	1,527
Other operating income	6	821	1,205
Operating income		14,789	14,425
Staff costs		(7,074)	(6,758)
Premises costs		(790)	(823)
General administrative expenses		(2,926)	(2,007)
Depreciation and amortisation		(857)	(829)
Operating expenses	7	(11,647)	(10,417)
Operating profit before impairment losses and taxation		3,142	4,008
Credit impairment	8	(653)	(1,362)
Other impairment			
Goodwill	9	–	(320)
Other	9	(182)	(179)
Profit from associates and joint ventures	32	241	268
Profit before taxation		2,548	2,415
Taxation	10	(1,439)	(1,147)
Profit for the year		1,109	1,268
Profit attributable to:			
Non-controlling interests	29	55	49
Parent company shareholders		1,054	1,219
Profit for the year		1,109	1,268
		cents	cents
Earnings per share:			
Basic earnings per ordinary share	12	18.7	23.5
Diluted earnings per ordinary share	12	18.5	23.3

The Notes form an integral part of these financial statements.

Consolidated statement of comprehensive income

For the year ended 31 December 2018

	Notes	31.12.18 \$million	31.12.17 \$million
Profit for the year		1,109	1,268
Other comprehensive (loss)/income			
Items that will not be reclassified to income statement:		382	(238)
Own credit gains/(losses) on financial liabilities designated at fair value through profit or loss		394	(249)
Equity instruments at fair value through other comprehensive income		36	—
Actuarial (losses)/gains on retirement benefit obligations	30	(19)	32
Taxation relating to components of other comprehensive income	10	(29)	(21)
Items that may be reclassified subsequently to income statement:		(1,189)	1,532
Exchange differences on translation of foreign operations:			
Net (losses)/gains taken to equity		(1,462)	1,637
Net gains/(losses) on net investment hedges		282	(288)
Share of other comprehensive income/(loss) from associates and joint ventures		33	(1)
Debt instruments at fair value through other comprehensive income/available-for-sale investments:			
Net valuation (losses)/gains taken to equity		(128)	369
Reclassified to income statement		31	(233)
Cash flow hedges:			
Net gains taken to equity		34	35
Reclassified to income statement	14	7	11
Taxation relating to components of other comprehensive income	10	14	2
Other comprehensive (loss)/income for the year, net of taxation		(807)	1,294
Total comprehensive income for the year		302	2,562
Total comprehensive income attributable to:			
Non-controlling interests	29	34	50
Parent company shareholders		268	2,512
Total comprehensive income for the year		302	2,562

Consolidated balance sheet

As at 31 December 2018

	Notes	31.12.18 \$million	31.12.17 \$million
Assets			
Cash and balances at central banks	13,35	57,511	58,864
Financial assets held at fair value through profit or loss	13	87,132	27,564
Derivative financial instruments	13,14	45,621	47,031
Loans and advances to banks ¹	13,15	61,414	78,188
Loans and advances to customers ²	13,15	256,557	282,288
Investment securities	13	125,901	117,025
Other assets	20	35,401	33,490
Current tax assets	10	492	491
Prepayments and accrued income		2,505	2,307
Interests in associates and joint ventures	32	2,307	2,307
Goodwill and intangible assets	17	5,056	5,013
Property, plant and equipment	18	6,490	7,211
Deferred tax assets	10	1,047	1,177
Assets classified as held for sale	21	1,328	545
Total assets		688,762	663,501
Liabilities			
Deposits by banks	13	29,715	30,945
Customer accounts	13	391,013	370,509
Repurchase agreements and other similar secured borrowing	13,16	1,401	39,783
Financial liabilities held at fair value through profit or loss	13	60,700	16,633
Derivative financial instruments	13,14	47,209	48,101
Debt securities in issue	13,22	46,454	46,379
Other liabilities	23	38,309	35,257
Current tax liabilities	10	676	376
Accruals and deferred income		5,393	5,493
Subordinated liabilities and other borrowed funds	13,27	15,001	17,176
Deferred tax liabilities	10	563	404
Provisions for liabilities and charges	24	1,330	183
Retirement benefit obligations	30	399	455
Liabilities included in disposal groups held for sale	21	247	–
Total liabilities		638,410	611,694
Equity			
Share capital and share premium account	28	7,111	7,097
Other reserves		11,878	12,767
Retained earnings		26,129	26,641
Total parent company shareholders' equity		45,118	46,505
Other equity instruments	28	4,961	4,961
Total equity excluding non-controlling interests		50,079	51,466
Non-controlling interests	29	273	341
Total equity		50,352	51,807
Total equity and liabilities		688,762	663,501

1 Reverse repurchase agreements and other similar secured lending balances held at amortised cost of \$3,815 million (31 December 2017: \$20,694 million) have been included with loans and advances to banks

2 Reverse repurchase agreements and other similar secured lending balances held at amortised cost of \$3,151 million (31 December 2017: \$33,581 million) have been included with loans and advances to customers

The Notes form an integral part of these financial statements.

These financial statements were approved by the Board of directors and authorised for issue on 26 February 2019 and signed on its behalf by:

José Viñals
Chairman

Bill Winters
Group Chief Executive

Andy Halford
Group Chief Financial Officer

Consolidated statement of changes in equity

For the year ended 31 December 2018

	Share capital and share premium account \$million	Capital and merger reserves ¹ \$million	Own credit adjustment reserve \$million	Available-for-sale reserve \$million	Fair value through other comprehensive income – debt \$million	Fair value through other comprehensive income – equity \$million	Cash flow hedge reserve \$million	Translation reserve \$million	Retained earnings \$million	Parent company shareholders' equity \$million	Other equity instruments \$million	Non-controlling interests \$million	Total \$million
At 1 January 2017	7,091	17,129	289	(4)	–	–	(85)	(5,805)	25,753	44,368	3,969	321	48,658
Profit after tax for the year	–	–	–	–	–	–	–	–	1,219	1,219	–	49	1,268
Other comprehensive (loss)/income	–	–	(235)	87	–	–	40	1,351	50 ²	1,293	–	1	1,294
Distributions	–	–	–	–	–	–	–	–	–	–	–	(51)	(51)
Shares issued, net of expenses	6	–	–	–	–	–	–	–	–	6	–	–	6
Other equity instruments issued, net of expenses	–	–	–	–	–	–	–	–	–	–	992	–	992
Net own shares adjustment	–	–	–	–	–	–	–	–	10	10	–	–	10
Share option expense, net of taxation	–	–	–	–	–	–	–	–	125	125	–	–	125
Dividends ³	–	–	–	–	–	–	–	–	(445)	(445)	–	–	(445)
Other movements ⁴	–	–	–	–	–	–	–	–	(71)	(71)	–	21 ⁵	(50)
As at 31 December 2017	7,097	17,129	54	83	–	–	(45)	(4,454)	26,641	46,505	4,961	341	51,807
IFRS 9 reclassifications ⁶	–	–	–	(83)	(131)	45	–	–	169	–	–	–	–
IFRS 9 re-measurements ⁶	–	–	–	–	–	4	–	–	31	35	–	–	35
Expected credit loss, net	–	–	–	–	65	–	–	–	(1,074) ⁷	(1,009)	–	(8)	(1,017)
Tax impact	–	–	–	–	(11)	5	–	–	179	173	–	–	173
Impact of IFRS 9 on share of joint ventures and associates, net of tax	–	–	–	–	–	(1)	–	–	(51)	(52)	–	–	(52)
IFRS 9 transition adjustments	–	–	–	(83)	(77)	53	–	–	(746)	(853)	–	(8)	(861)
As at 1 January 2018	7,097	17,129	54	–	(77)	53	(45)	(4,454)	25,895	45,652	4,961	333	50,946
Profit after tax for the year	–	–	–	–	–	–	–	–	1,054	1,054	–	55	1,109
Other comprehensive income/(loss)	–	–	358	–	(84)	67	35	(1,158)	(4) ²	(786)	–	(21)	(807)
Distributions	–	–	–	–	–	–	–	–	–	–	–	(97)	(97)
Shares issued, net of expenses	14	–	–	–	–	–	–	–	–	14	–	–	14
Net own shares adjustment	–	–	–	–	–	–	–	–	1	1	–	–	1
Share option expense, net of taxation	–	–	–	–	–	–	–	–	158	158	–	–	158
Dividends ³	–	–	–	–	–	–	–	–	(975)	(975)	–	–	(975)
Other movements	–	–	–	–	–	–	–	–	–	–	–	3 ⁸	3
As at 31 December 2018	7,111	17,129	412	–	(161)	120	(10)	(5,612)	26,129	45,118	4,961	273	50,352

1 Includes capital reserve of \$5 million, capital redemption reserve of \$13 million and merger reserve of \$17,111 million

2 Comprises actuarial gain/(loss), net of taxation and share from associates and joint ventures \$(4) million (31 December 2017: \$50 million)

3 Comprises dividends paid net of scrip \$539 million (31 December 2017: \$nil) and dividends on preference shares classified as equity and Additional Tier 1 securities \$436 million (31 December 2017: \$445 million). (refer Note 11)

4 Other movements of \$(71) million is mainly due to issue of shares by Nepal to its non-controlling interests including premium (\$19 million) as the adjustment to the carrying value of Group's share of the issue. This is offset by other equity adjustments of \$(90) million

5 Other movements of \$21 million relates to issue of shares by Nepal to its non-controlling interests including premium (\$12 million) as the increase in non-controlling interest. The remaining \$9 million relates to an acquisition

6 As per Note 41 Transition to IFRS 9 Financial Instruments

7 The Group's initial estimate of credit impairment provisions on adoption of IFRS 9 was \$6,720 million. Following refinement of the Group's expected loss models, the estimate of the opening credit impairment provisions has been revised down by \$222 million to \$6,498 million, and the net expected credit loss of \$(1,296) million adjusted against retained earnings has similarly decreased by \$222 million to \$1,074 million

8 Mainly due to additional share capital issued by Angola subscribed by its non-controlling interests without change in shareholding percentage

The Notes form an integral part of these financial statements.

Cash flow statement

For the year ended 31 December 2018

	Notes	Group		Company	
		31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million
Cash flows from operating activities:					
Profit before taxation		2,548	2,415	790	207
Adjustments for non-cash items and other adjustments included within income statement					
Change in operating assets	34	2,635	3,241	232	615
Change in operating liabilities	34	(12,837)	(13,625)	61	459
Contributions to defined benefit schemes	34	33,859	5,819	(462)	575
Contributions to defined benefit schemes	30	(143)	(143)	–	–
UK and overseas taxes paid	10	(770)	(915)	–	(14)
Net cash from/(used in) operating activities		25,292	(3,208)	621	1,842
Cash flows from investing activities:					
Purchase of property, plant and equipment	18	(171)	(165)	–	–
Disposal of property, plant and equipment		85	29	–	–
Acquisition of investment in subsidiaries, associates, and joint ventures, net of cash acquired	32	–	(44)	–	(1,000)
Dividends received from subsidiaries, associates and joint ventures	32	67	2	1,035	392
Disposal of subsidiaries		7	–	–	–
Purchase of investment securities		(276,388)	(265,186)	–	–
Disposal and maturity of investment securities		263,983	261,316	621	2,850
Net cash (used in)/from investing activities		(12,417)	(4,048)	1,656	2,242
Cash flows from financing activities:					
Issue of ordinary and preference share capital, net of expenses	28	14	6	14	6
Exercise of share options		9	10	9	10
Purchase of own shares		(8)	–	(8)	–
Issue of Additional Tier 1 capital, net of expenses	28	–	992	–	992
Gross proceeds from issue of subordinated liabilities	34	500	–	500	–
Interest paid on subordinated liabilities	34	(602)	(743)	(507)	(353)
Repayment of subordinated liabilities	34	(2,097)	(2,984)	(474)	(1,249)
Proceeds from issue of senior debts	34	9,766	2,292	4,552	1,501
Repayment of senior debts	34	(7,030)	(4,162)	(3,141)	(3,237)
Interest paid on senior debts	34	(507)	(896)	(355)	(825)
Investment from non-controlling interests		–	21	–	–
Dividends paid to non-controlling interests and preference shareholders		(533)	(496)	(436)	(445)
Dividends paid to ordinary shareholders		(539)	–	(539)	–
Net cash used in financing activities		(1,027)	(5,960)	(385)	(3,600)
Net increase/(decrease) in cash and cash equivalents		11,848	(13,216)	1,892	484
Cash and cash equivalents at beginning of the year		87,231	96,977	15,714	15,230
Effect of exchange rate movements on cash and cash equivalents		(1,579)	3,470	–	–
Cash and cash equivalents at end of the year	35	97,500	87,231	17,606	15,714

Notes to the financial statements

1. Accounting policies

Statement of compliance

The Group financial statements consolidate Standard Chartered PLC (the Company) and its subsidiaries (together referred to as the Group) and equity account the Group's interest in associates and jointly controlled entities.

The parent company financial statements present information about the Company as a separate entity.

Both the parent company financial statements and the Group financial statements have been prepared and approved by the directors in accordance with International Financial Reporting Standards (IFRS) and IFRS Interpretations Committee interpretations as endorsed by the European Union (EU). EU-endorsed IFRS may differ from IFRS published by the International Accounting Standards Board (IASB) if a standard has not been endorsed by the EU.

The Company has taken advantage of the exemption in section 408 of the Companies Act 2006 not to present its individual statement of comprehensive income and related notes that form a part of these financial statements.

The following parts of the Risk review and Capital review form part of these financial statements:

a) From the start of Risk profile section to the end of other principal risks in the same section excluding:

- Credit quality by geographic region
- Credit quality by industry
- Forborne and other modified loans by region
- Credit-impaired (stage 3) loans by geographic region
- Industry and Retail products analysis by geographic region
- Asset-backed securities
- Country risk
- Risks not in VaR
- Backtesting
- Mapping of market risk items to the balance sheet
- Liquidity coverage ratio (LCR)
- Stressed coverage
- Net stable funding ratio (NSFR)
- Liquidity pool
- Encumbrance
- Interest rate risk in the banking book
- Operational risk
- Other principal risks

b) Capital review: from the start of 'Capital Requirements Directive (CRD) IV capital base' to the end of 'Impact of IFRS 9 on CET1', excluding capital ratios and risk-weighted assets (RWA)

Basis of preparation

The consolidated and Company financial statements have been prepared on a going concern basis and under the historical cost convention, as modified by the revaluation of cash-settled share-based payments, fair value through other comprehensive income, and financial assets and liabilities (including derivatives) at fair value through profit or loss.

Significant accounting estimates and judgements

In determining the carrying amounts of certain assets and liabilities, the Group makes assumptions of the effects of uncertain future events on those assets and liabilities at the balance sheet date. The Group's estimates and assumptions are based on historical experience and expectation of future events and are reviewed periodically. Further information about key assumptions concerning the future, and other key sources of estimation uncertainty and judgement, are set out in the relevant disclosure notes for the following areas:

- Credit impairment (Note 8)
- Taxation (Note 10)
- Valuation of financial instruments held at fair value (Note 13)
- Goodwill impairment (Note 17)
- Provisions for liabilities and charges (Note 24)
- Retirement benefit obligations (Note 30)
- Investments in associates and joint ventures (Note 32)

IFRS and Hong Kong accounting requirements

As required by the Hong Kong Listing Rules, an explanation of the differences in accounting practices between EU-endorsed IFRS and Hong Kong Financial Reporting Standards is required to be disclosed. There would be no significant differences had these accounts been prepared in accordance with Hong Kong Financial Reporting Standards.

Comparatives

Prior period comparatives are presented on an IAS 39 – Financial Instruments: Recognition and Measurement basis (Refer to the 31 December 2017 audited financial statements for the IAS 39 accounting policies). Certain comparatives have been changed to align with current year disclosures. The main changes are in respect of IFRS 9 (see below).

Amortised cost reverse repurchase agreements and other similar lending balances have been included with Loans and advances to customers and Loans and advances to banks as appropriate.

In addition, the comparatives for commitments disclosed in Note 25 Contingent liabilities and commitments have been restated, as a result of the availability of more reliable, centralised information following the implementation of IFRS 9. The ageing of commitments is now based on residual rather than original maturity. The Risk profile has similarly been updated. These changes have not resulted in any amendments to the reported income statement or balance sheet of the Group.

New accounting standards adopted by the Group

IFRS 9 Financial Instruments

On 1 January 2018, the Group adopted IFRS 9 Financial Instruments, and the corresponding disclosure amendments to IFRS 7 – Financial Instruments: Disclosures. IFRS 9 has been endorsed by the EU, replaces IAS 39 and introduces; new requirements for the classification and measurement of financial instruments; the recognition and measurement of credit impairment provisions; and provides for a simplified approach to hedge accounting.

The Group has further chosen:

- To continue to apply IAS 39 hedging requirements rather than those of IFRS 9. Hedging disclosures have, however, been updated to comply with new disclosure requirements
- To early adopt the 'Prepayment Features with Negative Compensation (Amendments to IFRS 9)' which was effective 1 January 2019 with early adoption permitted
- Not to restate comparative periods on the basis that it is not possible to do so without the use of hindsight

The Risk profile has been updated in accordance with the collateral and credit enhancement requirements of IFRS 7 Financial instruments: Disclosures, as amended for IFRS 9. The extent of collateral as a mitigant has been determined with reference to both the drawn and undrawn components of an exposure. Further, the collateral balances align to the expected credit loss methodology as this addresses the effects of collateral and other credit enhancements on the amounts arising from expected credit losses.

The new IFRS 9 accounting policies are stated in the Risk review, Note 8 Credit impairment and Note 13 Financial instruments.

Information on the transition from IAS 39 to IFRS 9 is stated in Note 41.

The Group's initial estimate of credit impairment provisions on adoption of IFRS 9 was \$6,720 million. Following refinement of the Group's expected loss models, the estimate of the opening credit impairment provisions has been revised down by \$222 million to \$6,498 million, and the net expected credit loss of \$(1,296) million adjusted against retained earnings has similarly decreased by \$222 million to \$(1,074) million. The relevant IFRS 9 disclosures in the Risk review and in Note 41 Transition to IFRS 9 Financial Instruments have been re-presented accordingly.

IFRS 15 Revenue from Contracts with Customers

IFRS 15 is effective from 1 January 2018 and has been endorsed by the EU, and replaces IAS 18 Revenue. IFRS 15 is conceptually similar to IAS 18, but includes more granular guidance on how to recognise and measure revenue, and also introduces additional disclosure requirements. The Group performed an assessment of the new standard and concluded that the current treatment of revenue from contracts with customers is consistent with the new principles and there is no material transitional impact.

Going concern

These financial statements were approved by the Board of directors on 26 February 2019. The directors made an assessment of the Group's ability to continue as a going concern and confirm they are satisfied that the Group has adequate resources to continue in business for a period of at least 12 months from the date of approval of these financial statements. For this reason, the Group continues to adopt the going concern basis of accounting for preparing the financial statements.

New accounting standards in issue but not yet effective

IFRS 16 Leases

The effective date of IFRS 16 is 1 January 2019 and the standard was endorsed by the EU in November 2017. IFRS 16 introduces a single lessee accounting model and requires a lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to recognise a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments. IFRS 16 substantially carries forward the lessor accounting requirements in IAS 17 Leases. Accordingly, a lessor continues to classify its leases as operating leases or finance leases, and to account for those two types of leases differently.

The significant judgements in the implementation were determining if a contract contained a lease, and the determination of whether the Group is reasonably certain that it will exercise extension options present in lease contracts. The significant estimates were the determination of incremental borrowing rates in the respective economic environments.

The impact of IFRS 16 on the Group is primarily where the Group is a lessee in property lease contracts. The Group has elected to adopt the simplified approach of transition and will not restate comparative information. On 1 January 2019 the Group will recognise a lease liability, being the remaining lease payments including extensions options where renewal is reasonably certain, discounted using the Group's incremental borrowing rate at the date of initial application in the economic environment of the lease. The corresponding right-of-use asset recognised will be the amount of the lease liability adjusted by prepaid or accrued lease payments related to those leases. Any difference will be recognised in retained earnings at the date of initial application. The balance sheet increase as a result of recognition of the lease liability and right-of-use asset as of 1 January 2019 will be approximately \$1.4 billion. However, the actual impact may change as judgements and estimates are refined.

IFRIC 23 Uncertainty over Income Tax Treatments

IFRIC 23 is effective from 1 January 2019 and has been endorsed by the EU. It clarifies the accounting for uncertainties in income taxes and is not expected to result in a material impact to the Group's financial report.

Other amendments and clarifications made to existing standards that are not yet effective are not expected to result in a material impact on the Group's financial report.

2. Segmental information

The Group's segmental reporting is in accordance with IFRS 8 Operating Segments and is reported consistently with the internal performance framework and as presented to the Group's Management Team. The four client segments are Corporate & Institutional Banking, Retail Banking, Commercial Banking and Private Banking. The four geographic regions are Greater China & North Asia, ASEAN & South Asia, Africa & Middle East, and Europe & Americas. Activities not directly related to a client segment and/or geographic region are included in Central & other items. These mainly include Corporate Centre costs, treasury markets, treasury activities, certain strategic investments and the UK bank levy.

The following should also be noted:

- Transactions and funding between the segments are carried out on an arm's-length basis
- Corporate Centre costs represent stewardship and central management services roles and activities that are not directly attributable to business or country operations
- Treasury markets, joint ventures and associate investments are managed in the regions and are included within the applicable region. However, they are not managed directly by a client segment and are therefore included in the Central & other items segment
- In addition to treasury activities, Corporate Centre costs and other Group related functions, Central & other items for regions includes globally run businesses or activities that are managed by the client segments but not directly by geographic management. These include Principal Finance and Portfolio Management
- The Group allocated central costs (excluding Corporate Centre costs) relating to client segments and geographic regions using appropriate business drivers (such as in proportion to the direct cost base of each segment before allocation of indirect costs) and these are reported within operating expenses

Basis of preparation

The analysis reflects how the client segments and geographic regions are managed internally. This is described as the Management View and is principally the location from which a client relationship is managed, which may differ from where it is financially booked and may be shared between businesses and/or regions. In certain instances this approach is not appropriate and a Financial View is disclosed, that is, the location in which the transaction or balance was booked. Typically the Financial View is used in areas such as the Market and Liquidity risk reviews where actual booking location is more important for an assessment. Segmental information is therefore on a Management View unless otherwise stated.

Restructuring items excluded from underlying results

The Group has made a provision of \$900 million for potential penalties related to previously disclosed matters, namely, the US investigation relating to historical violation of US sanctions laws and regulations, the decision notice from the FCA concerning the Group's historical financial crime controls and investigations relating to foreign exchange trading issues. Further details of these and other legal and regulatory matters can be found in Note 26.

The Group incurred net restructuring charges of \$478 million in 2018 of which \$375 million related to Principal Finance and included a \$160 million loss in the fourth quarter in respect of the announced spin-out of the business and the sale of the majority of the Group's related investment portfolios to a third party. A further \$155 million related to planned initiatives to reduce ongoing costs and \$34 million related to the Group's ship leasing business that the Group has decided to discontinue. These gross charges were partly offset by recoveries in relation to the liquidation portfolio.

A net gain of \$69 million arose following the redemption of some GBP-denominated securities.

A reconciliation between underlying and statutory results is set out in the table below:

31.12.18							
	Underlying \$million	Provision for regulatory matters \$million	Restructuring \$million	Gains arising on repurchase of senior and subordinated liabilities \$million	Net gain on businesses disposed/hold for sale \$million	Goodwill impairment \$million	Statutory \$million
Operating income	14,968	–	(248)	69	–	–	14,789
Operating expenses	(10,464)	(900)	(283)	–	–	–	(11,647)
Operating profit/(loss) before impairment losses and taxation	4,504	(900)	(531)	69	–	–	3,142
Credit impairment	(740)	–	87	–	–	–	(653)
Other impairment	(148)	–	(34)	–	–	–	(182)
Profit from associates and joint ventures	241	–	–	–	–	–	241
Profit/(loss) before taxation	3,857	(900)	(478)	69	–	–	2,548

31.12.17							
	Underlying \$million	Provision for regulatory matters \$million	Restructuring \$million	Gains arising on repurchase of senior and subordinated liabilities \$million	Net gain on businesses disposed/ held for sale \$million	Goodwill impairment \$million	Statutory \$million
Operating income	14,289	–	58	–	78	–	14,425
Operating expenses	(10,120)	–	(297)	–	–	–	(10,417)
Operating profit/(loss) before impairment losses and taxation	4,169	–	(239)	–	78	–	4,008
Credit impairment	(1,200)	–	(162)	–	–	–	(1,362)
Other impairment	(169)	–	(10)	–	–	(320)	(499)
Profit from associates and joint ventures	210	–	58	–	–	–	268
Profit/(loss) before taxation	3,010	–	(353)	–	78	(320)	2,415

Underlying performance by client segment

31.12.18						
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Operating income	6,860	5,041	1,391	516	1,160	14,968
Operating expenses	(4,396)	(3,736)	(923)	(530)	(879)	(10,464)
Operating profit/(loss) before impairment losses and taxation	2,464	1,305	468	(14)	281	4,504
Credit impairment	(242)	(267)	(244)	–	13	(740)
Other impairment	(150)	(5)	–	–	7	(148)
Profit from associates and joint ventures	–	–	–	–	241	241
Underlying profit/(loss) before taxation	2,072	1,033	224	(14)	542	3,857
Provision for regulatory matters	(50)	–	–	–	(850)	(900)
Restructuring	(350)	(68)	(12)	(24)	(24)	(478)
Gains arising on repurchase of senior and subordinated liabilities	3	–	–	–	66	69
Statutory profit/(loss) before taxation	1,675	965	212	(38)	(266)	2,548
Total assets	308,496	103,780	31,379	13,673	231,434	688,762
Of which: loans and advances to customers including FVTPL	146,575	101,635	27,271	13,616	10,274	299,371
loans and advances to customers	104,677	101,235	26,759	13,616	10,270	256,557
loans held at fair value through profit or loss	41,898	400	512	–	4	42,814
Total liabilities	369,316	140,328	37,260	19,733	71,773	638,410
Of which: customer accounts	243,019	136,691	34,860	19,622	2,989	437,181

31.12.17

	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Operating income	6,496	4,834	1,333	500	1,126	14,289
Operating expenses	(4,409)	(3,585)	(881)	(500)	(745)	(10,120)
Operating profit before impairment losses and taxation	2,087	1,249	452	—	381	4,169
Credit impairment	(658)	(375)	(167)	(1)	1	(1,200)
Other impairment	(168)	(1)	(3)	—	3	(169)
Profit from associates and joint ventures	—	—	—	—	210	210
Underlying profit/(loss) before taxation	1,261	873	282	(1)	595	3,010
Restructuring	(275)	(19)	(13)	(15)	(31)	(353)
Net gains on businesses disposed/held for sale	—	—	—	—	78	78
Goodwill impairment	—	—	—	—	(320)	(320)
Statutory profit/(loss) before taxation	986	854	269	(16)	322	2,415
Total assets	293,334	105,178	31,650	13,469	219,870	663,501
Of which: loans and advances to customers	131,738	103,013	28,108	13,351	9,343	285,553
Total liabilities	353,582	132,819	36,385	22,203	66,705	611,694
Of which: customer accounts	222,714	129,536	33,880	22,222	3,372	411,724

Underlying performance by region

31.12.18

	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Central & other items \$million	Total \$million
Operating income	6,157	3,971	2,604	1,670	566	14,968
Operating expenses	(3,812)	(2,711)	(1,810)	(1,453)	(678)	(10,464)
Operating profit/(loss) before impairment losses and taxation	2,345	1,260	794	217	(112)	4,504
Credit impairment	(71)	(322)	(262)	(83)	(2)	(740)
Other impairment	(110)	6	—	17	(61)	(148)
Profit from associates and joint ventures	205	26	—	3	7	241
Underlying profit/(loss) before taxation	2,369	970	532	154	(168)	3,857
Provision for regulatory matters	—	—	—	(50)	(850)	(900)
Restructuring	(106)	105	(100)	(8)	(369)	(478)
Gains arising on repurchase of senior and subordinated liabilities	—	—	—	3	66	69
Statutory profit/(loss) before taxation	2,263	1,075	432	99	(1,321)	2,548
Net interest margin	1.44%	2.06%	3.03%	0.47%	—	1.58%
Total assets	269,765	147,049	57,800	201,912	12,236	688,762
Of which: loans and advances to customers including FVTPL	130,669	81,905	29,870	56,927	—	299,371
Total liabilities	238,249	127,478	36,733	198,853	37,097	638,410
Of which: customer accounts	196,870	96,896	29,916	113,499	—	437,181

	31.12.17					
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Central & other items \$million	Total \$million
Operating income	5,616	3,833	2,764	1,601	475	14,289
Operating expenses	(3,681)	(2,654)	(1,819)	(1,407)	(559)	(10,120)
Operating profit/(loss) before impairment losses and taxation	1,935	1,179	945	194	(84)	4,169
Credit impairment	(141)	(653)	(300)	(107)	1	(1,200)
Other impairment	(81)	(12)	(3)	(16)	(57)	(169)
Profit/(loss) from associates and joint ventures	229	(22)	—	—	3	210
Underlying profit/(loss) before taxation	1,942	492	642	71	(137)	3,010
Restructuring	35	(161)	(33)	(25)	(169)	(353)
Net gains on businesses disposed/held for sale	—	19	—	—	59	78
Goodwill impairment	—	—	—	—	(320)	(320)
Statutory profit/(loss) before taxation	1,977	350	609	46	(567)	2,415
Net interest margin	1.36%	1.92%	3.34%	0.51%		1.55%
Total assets	257,692	148,467	59,166	185,345	12,831	663,501
Of which: loans and advances to customers	126,739	82,579	29,602	46,633	—	285,553
Total liabilities	228,093	128,165	39,413	177,525	38,498	611,694
Of which: customer accounts	186,517	95,310	31,797	98,100	—	411,724

Additional segmental information (statutory)

	31.12.18					
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Net interest income	3,470	3,164	863	297	999	8,793
Net fees and commission income	1,496	1,579	284	192	(59)	3,492
Other income	1,640	298	243	29	294	2,504
Operating income	6,606	5,041	1,390	518	1,234	14,789

	31.12.17					
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Net interest income	3,225	3,006	802	286	862	8,181
Net fees and commission income	1,471	1,626	285	182	(52)	3,512
Other income	1,827	271	242	32	360	2,732
Operating income	6,523	4,903	1,329	500	1,170	14,425

	31.12.18					
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Central & other items \$million	Total \$million
Net interest income	3,351	2,561	1,493	692	696	8,793
Other income	2,799	1,431	1,112	987	(333)	5,996
Operating income	6,150	3,992	2,605	1,679	363	14,789

	31.12.17					
	Greater China & North Asia \$million	ASEAN & South Asia \$million	Africa & Middle East \$million	Europe & Americas \$million	Central & other items \$million	Total \$million
Net interest income	2,950	2,402	1,619	692	518	8,181
Other income	2,663	1,468	1,145	904	64	6,244
Operating income	5,613	3,870	2,764	1,596	582	14,425

	31.12.18							
	Hong Kong \$million	Korea \$million	China \$million	Singapore \$million	India \$million	UAE \$million	UK \$million	US \$million
Net interest income	1,854	672	648	1,049	646	365	294	243
Other income	1,893	337	171	499	290	272	534	424
Operating income	3,747	1,009	819	1,548	936	637	828	667

	31.12.17							
	Hong Kong \$million	Korea \$million	China \$million	Singapore \$million	India \$million	UAE \$million	UK \$million	US \$million
Net interest income	1,564	625	540	965	577	394	428	158
Other income	1,823	340	163	470	406	339	314	517
Operating income	3,387	965	703	1,435	983	733	742	675

3. Net interest income

Accounting policy

Interest income for financial assets held at either fair value through other comprehensive income or amortised cost, and interest expense on all financial liabilities held at amortised cost is recognised in profit or loss using the effective interest method.

Interest income and expense on financial instruments held at fair value through profit or loss is recognised within net interest income using the effective interest method, with the exception of fair value elected structured notes and structured deposits for which all gains and losses are recognised within trading income.

The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period, to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Group estimates cash flows considering all contractual terms of the financial instrument (for example prepayment options) but does not consider future credit losses. The calculation includes all fees paid or received between parties to the contract that are an integral part of the effective interest rate, transaction costs and all other premiums or discounts. Where the estimates of cash flows have been revised, the carrying amount of the financial asset or liability is adjusted to reflect the actual and revised cash flows, discounted at the instruments original effective interest rate. The adjustment is recognised as interest income or expense in the period in which the revision is made.

Interest income for financial assets that are either held at fair value through other comprehensive income or amortised cost that have become credit-impaired subsequent to initial recognition (stage 3) and have had amounts written off, is recognised using the credit adjusted effective interest rate. This rate is calculated in the same manner as the effective interest rate except that expected credit losses are included in the expected cash flows. Interest income is therefore recognised on the amortised cost of the financial asset including expected credit losses. Should the credit risk on a stage 3 financial asset improve such that the financial asset is no longer considered credit-impaired, interest income recognition reverts to a computation based on the rehabilitated gross carrying value of the financial asset.

	31.12.18 \$million	31.12.17 \$million
Balances at central banks	364	287
Loans and advances to banks	2,293	1,955
Loans and advances to customers	10,527	8,845
Listed debt securities	1,913	928
Unlisted debt securities	1,227	1,501
Other eligible bills	849	836
Accrued on impaired assets (discount unwind)	91	83
Interest income	17,264	14,435
Deposits by banks	811	891
Customer accounts	5,764	3,859
Debt securities in issue	1,129	756
Subordinated liabilities and other borrowed funds	767	748
Interest expense	8,471	6,254
Net interest income	8,793	8,181
Of which from financial instruments held at:		
Amortised cost	12,255	10,861
Fair value through other comprehensive income/ available-for-sale investments	2,845	2,657
Fair value through profit or loss	2,164	847
Held-to-maturity	—	70
Interest income	17,264	14,435
Of which from financial instruments held at:		
Amortised cost	7,384	6,128
Fair value through profit or loss	1,087	126
Interest expense	8,471	6,254
Net interest income	8,793	8,181

4. Net fees and commission

Accounting policy

Fees and commissions charged for services provided or received by the Group are recognised on an accrual basis when the service has been provided or significant act performed.

Loan syndication fees are recognised as revenue when the syndication has been completed and the Group retained no part of the loan package for itself, or retained a part at the same effective interest rate as for the other participants.

The Group can act as trustee or in other fiduciary capacities that result in the holding or placing of assets on behalf of individuals, trusts, retirement benefit plans and other institutions. The assets and income arising thereon are excluded from these financial statements, as they are not assets and income of the Group.

The determination of the services performed for the customer, the transaction price, and when the services are completed depends on the nature of the product with the customer. The main considerations on income recognition by product are as follows:

Transaction Banking

The Group recognises fee income associated with transactional Trade, Cash Management and Custody activities at the point in time the service is provided. The Group recognises income associated with Trade contingent risk exposures (such as letters of credit and guarantees) and periodic Custody activities over the period in which the service is provided.

Payment of fees is usually received at the same time the service is provided. In some cases, letters of credit and guarantees issued by the Group have annual upfront premiums, which are amortised on a straight-line basis to fee income over the year.

Financial Markets and Corporate Finance

The Group recognises fee income at the point in time the service is provided. Fee income is recognised for a significant non-lending service when the transaction has been completed and the terms of the contract with the customer entitle the Group to the fee. Fees are usually received shortly after the service is provided.

Syndication fees are recognised when the syndication is complete. Fees are generally received before completion of the syndication, or within 12 months of the transaction date.

Wealth Management

Commissions for bancassurance activities are recorded as they are earned. These commissions are received within a short time frame of the commission being earned.

Target-linked fees are accrued over the period in which the target is met, provided it is assessed as highly probable that the target will be met. Cash payment is received at a contractually specified date after achievement of a target has been confirmed.

Upfront and trailing commissions for managed investment placements are recorded as they are confirmed. Income from these activities is relatively even throughout the period, and cash is usually received within a short time frame after the commission is earned.

Retail Products

The Group recognises most income at the point in time the Group is entitled to the fee, since most services are provided at the time of the customer's request.

Credit card annual fees are recognised at the time the fee is received since in most of our retail markets there are contractual circumstances under which fees are waived, so income recognition is constrained until the uncertainties associated with the annual fee are resolved. The Group defers the fair value of reward points on its credit card reward programmes, and recognises income and costs associated with fulfilling the reward at the time of redemption.

	31.12.18 \$million	31.12.17 \$million
Fees and commissions income	4,029	3,942
Fees and commissions expense	(537)	(430)
Net fees and commission	3,492	3,512

Total fee income arising from financial instruments that are not fair valued through profit or loss is \$1,478 million (31 December 2017: \$1,067 million) and arising from trust and other fiduciary activities is \$144 million (31 December 2017: \$130 million).

Total fee expense arising from financial instruments that are not fair valued through profit or loss is \$143 million (31 December 2017: \$74 million) and arising from trust and other fiduciary activities is \$27 million (31 December 2017: \$22 million).

	31.12.18					
	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Transaction Banking	1,066	12	223	—	—	1,301
Trade	448	12	163	—	—	623
Cash Management and Custody	618	—	60	—	—	678
Financial Markets	206	—	25	—	—	231
Corporate Finance	181	—	21	—	—	202
Lending and Portfolio Management	57	—	13	—	—	70
Principal Finance	(14)	—	—	—	—	(14)
Wealth Management	—	1,167	2	190	—	1,359
Retail Products	—	403	—	2	—	405
Treasury	—	—	—	—	(22)	(22)
Others	—	(3)	—	—	(37)	(40)
Net fees and commission	1,496	1,579	284	192	(59)	3,492

	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Central & other items \$million	Total \$million
Transaction Banking	1,044	12	221	—	—	1,277
Trade	450	12	160	—	—	622
Cash Management and Custody	594	—	61	—	—	655
Financial Markets	167	—	26	—	—	193
Corporate Finance	207	—	19	—	—	226
Lending and Portfolio Management	36	—	15	—	—	51
Principal Finance	17	—	—	—	—	17
Wealth Management	—	1,171	4	180	—	1,355
Retail Products	—	441	—	2	—	443
Treasury	—	—	—	—	(20)	(20)
Others	—	2	—	—	(32)	(30)
Net fees and commission	1,471	1,626	285	182	(52)	3,512

Upfront bancassurance consideration amounts are amortised on a straight-line basis over the contractual period to which the consideration relates. Deferred income on the balance sheet in respect of these activities is \$886 million (31 December 2017: \$970 million). The income will be earned evenly over the next 10.5 years (31 December 2017: 11.5 years).

5. Net trading income

Accounting policy

Gains and losses arising from changes in the fair value of financial instruments held at fair value through profit or loss are included in the income statement in the period in which they arise.

Income is recognised from the sale and purchase of trading positions, margins on market making and customer business and fair value changes.

	31.12.18 \$million	31.12.17 \$million
Net trading income	1,683	1,527
Significant items within net trading income include:		
Gains on instruments held for trading	1,756	1,716
Losses on financial assets mandatorily at fair value through profit or loss	(104)	—
Gains on financial assets designated at fair value through profit or loss	11	167
Gains/(losses) on financial liabilities designated at fair value through profit or loss	30	(202)

6. Other operating income

Accounting policy

Operating lease income is recognised on a straight-line basis over the period of the lease unless another systematic basis is more appropriate.

Dividends on equity instruments are recognised when the Group's right to receive payment is established.

On disposal of fair value through other comprehensive income financial instruments, the cumulative gain or loss recognised in other comprehensive income is recycled to the profit or loss in other operating income/expense.

When the Group loses control of the subsidiary or disposal group, the difference between the consideration received and the carrying amount of the subsidiary or disposal group is recognised as a gain or loss on sale of the business.

	31.12.18 \$million	31.12.17 \$million
Other operating income includes:		
Rental income from operating lease assets	573	670
Gains less losses on disposal of fair value through other comprehensive income/available-for-sale investments	(31)	235
Net gain on sale of businesses	9	28
Net gain on derecognition of investment in associate	–	64
Dividend income	25	46
Gains arising on repurchase of senior and subordinated liabilities ¹	69	–
Other	176	162
	821	1,205

1 On 14 June 2018, Standard Chartered PLC repurchased in part, £245.7 million of its £750 million 4.375 per cent senior debt 2038 and £372.5 million of its £900 million 5.125 per cent subordinated debt 2034. On the same date, Standard Chartered Bank repurchased in part, £95.1 million of its £200 million 7.75 per cent subordinated notes (callable 2022). This activity resulted in an overall gain of £69 million for the Group. Please refer to Note 27

7. Operating expenses

Accounting policy

Short-term employee benefits: salaries and social security expenses are recognised over the period in which the employees provide the service. Variable compensation is included within share-based payments costs and wages and salaries. Further details are disclosed in the Annual Report.

Pension costs: contributions to defined contribution pension schemes are recognised in profit or loss when payable. For defined benefit plans, net interest expense, service costs and expenses are recognised in the income statement. Further details are provided in Note 30.

Share-based compensation: the Group operates equity-settled and cash-settled share-based payment compensation plans. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. Further details are provided in Note 31.

	31.12.18 \$million	31.12.17 \$million
Staff costs:		
Wages and salaries	5,439	5,047
Social security costs	171	159
Other pension costs (Note 30)	365	357
Share-based payment costs	166	152
Other staff costs	933	1,043
	7,074	6,758

Other staff costs include redundancy expenses of \$153 million (31 December 2017: \$85 million). Further costs in this category include training, travel costs and other staff related costs.

The following table summarises the number of employees within the Group:

	31.12.18			31.12.17		
	Business	Support services	Total	Business	Support services	Total
At 31 December	38,621	46,781	85,402	40,636	45,385	86,021
Average for the year	39,929	46,339	86,268	41,806	44,988	86,794

The Company employed nil staff at 31 December 2018 (31 December 2017: nil) and it incurred costs of \$5 million (31 December 2017: \$5 million).

Details of directors' pay and benefits and interests in shares are disclosed in the Annual Report.

Transactions with directors, officers and other related parties are disclosed in Note 36.

	31.12.18 \$million	31.12.17 \$million
Premises and equipment expenses:		
Rental of premises	374	379
Other premises and equipment costs	395	427
Rental of computers and equipment	21	17
	790	823
General administrative expenses:		
UK bank levy	324	220
Provision for regulatory matters	900	—
Other general administrative expenses	1,702	1,787
	2,926	2,007
Depreciation and amortisation:		
Property, plant and equipment:		
Premises	86	85
Equipment	94	85
Operating lease assets	304	328
	484	498
Intangibles:		
Software	363	320
Acquired on business combinations	10	11
	857	829
Total operating expenses	11,647	10,417

The UK bank levy is applied on the chargeable equities and liabilities on the Group's consolidated balance sheet. Key exclusions from chargeable equities and liabilities include Tier 1 capital, insured or guaranteed retail deposits, repos secured on certain sovereign debt and liabilities subject to netting. The rate of the levy for 2018 is 0.16 per cent for chargeable short-term liabilities, with a lower rate of 0.08 per cent generally applied to chargeable equity and long-term liabilities (i.e. liabilities with a remaining maturity greater than one year). The rates will be gradually reduced over the next two years, from 1 January 2021 they will be 0.10 per cent for short-term liabilities and 0.05 per cent for long-term liabilities. In addition, the scope of the bank levy will be restricted to the balance sheet of UK operations only from that date.

8. Credit impairment

Accounting policy

Significant accounting estimates and judgements

The Group's expected credit loss (ECL) calculations are outputs of complex models with a number of underlying assumptions. The significant judgements in determining expected credit loss include:

- The Group's criteria for assessing if there has been a significant increase in credit risk; and
- Development of expected credit loss models, including the choice of inputs relating to macroeconomic variables

The calculation of credit impairment provisions also involves expert credit judgement to be applied by the credit risk management team based upon counterparty information they receive from various sources including relationship managers and on external market information. Details on the approach for determining expected credit loss can be found in the Credit risk section, under IFRS 9 Methodology.

Estimates of forecasts of key macroeconomic variables underlying the expected credit loss calculation can be found with in the Risk review, Key assumptions and judgements in determining expected credit loss.

Expected credit losses

Expected credit losses are determined for all financial debt instruments that are classified at amortised cost or fair value through other comprehensive income, undrawn commitments and financial guarantees.

An expected credit loss represents the present value of expected cash shortfalls over the residual term of a financial asset, undrawn commitment or financial guarantee.

A cash shortfall is the difference between the cash flows that are due in accordance with the contractual terms of the instrument and the cash flows that the Group expects to receive over the contractual life of the instrument.

Measurement

Expected credit losses are computed as unbiased, probability-weighted amounts which are determined by evaluating a range of reasonably possible outcomes, the time value of money, and considering all reasonable and supportable information including that which is forward-looking.

For material portfolios, the estimate of expected cash shortfalls is determined by multiplying the probability of default (PD) with the loss given default (LGD) with the expected exposure at the time of default (EAD). There may be multiple default events over the lifetime of an instrument. Further details on the components of PD, LGD and EAD are disclosed in the Credit risk section. For less material Retail Banking loan portfolios, the Group has adopted simplified approaches based on historical roll rates or loss rates.

Forward-looking economic assumptions are incorporated into the PD, LGD and EAD where relevant and where they influence credit risk, such as GDP growth rates, interest rates, house price indices and commodity prices among others. These assumptions are incorporated using the Group's most likely forecast for a range of macroeconomic assumptions. These forecasts are determined using all reasonable and supportable information, which includes both internally developed forecasts and those available externally, and are consistent with those used for budgeting, forecasting and capital planning.

To account for the potential non-linearity in credit losses, multiple forward-looking scenarios are incorporated into the range of reasonably possible outcomes for all material portfolios. For example, where there is a greater risk of downside credit losses than upside gains, multiple forward-looking economic scenarios are incorporated into the range of reasonably possible outcomes, both in respect of determining the PD (and where relevant, the LGD and EAD) and in determining the overall expected credit loss amounts. These scenarios are determined using a Monte Carlo approach centred around the Group's most likely forecast of macroeconomic assumptions.

The period over which cash shortfalls are determined is generally limited to the maximum contractual period for which the Group is exposed to credit risk. However, for certain revolving credit facilities, which include credit cards or overdrafts, the Group's exposure to credit risk is not limited to the contractual period. For these instruments, the Group estimates an appropriate life based on the period that the Group is exposed to credit risk, which includes the effect of credit risk management actions such as the withdrawal of undrawn facilities.

For credit-impaired financial instruments, the estimate of cash shortfalls may require the use of expert credit judgement. As a practical expedient, the Group may also measure credit impairment on the basis of an instrument's fair value using an observable market price.

The estimate of expected cash shortfalls on a collateralised financial instrument reflects the amount and timing of cash flows that are expected from foreclosure on the collateral less the costs of obtaining and selling the collateral, regardless of whether foreclosure is deemed probable.

Cash flows from unfunded credit enhancements held are included within the measurement of expected credit losses if they are part of, or integral to, the contractual terms of the instrument (this includes financial guarantees, unfunded risk participations and other non-derivative credit insurance). Although non-integral credit enhancements do not impact the measurement of expected credit losses, a reimbursement asset is recognised to the extent of the expected credit losses recorded.

Cash shortfalls are discounted using the effective interest rate (or credit-adjusted effective interest rate for purchased or originated credit-impaired instruments (POCI) on the financial instrument as calculated at initial recognition or if the instrument has a variable interest rate, the current effective interest rate determined under the contract.

Instruments	Location of expected credit loss provisions
Financial assets held at amortised cost	Loss provisions: netted against gross carrying value ¹
Financial assets held FVOCI – Debt instruments	Other comprehensive income (FVOCI expected credit loss reserve) ²
Loan commitments	Provisions for liabilities and charges ³
Financial guarantees	Provisions for liabilities and charges ³

- 1 Purchased or originated credit-impaired assets do not attract an expected credit loss provision on initial recognition. An expected credit loss provision will be recognised only if there is an increase in expected credit losses from that considered at initial recognition
- 2 Debt and treasury securities classified as fair value through other comprehensive income (FVOCI) are held at fair value on the face of the balance sheet. The expected credit loss attributed to these instruments is held as a separate reserve within other comprehensive income (OCI) and is recycled to the profit and loss account along with any fair value measurement gains or losses held within FVOCI when the applicable instruments are derecognised
- 3 Expected credit loss on loan commitments and financial guarantees is recognised as a liability provision. Where a financial instrument includes both a loan (i.e. financial asset component) and an undrawn commitment (i.e. loan commitment component), and it is not possible to separately identify the expected credit loss on these components, expected credit loss amounts on the loan commitment are recognised together with expected credit loss amounts on the financial asset. To the extent the combined expected credit loss exceeds the gross carrying amount of the financial asset, the expected credit loss is recognised as a liability provision

Recognition

12 months expected credit losses (stage 1)

Expected credit losses are recognised at the time of initial recognition of a financial instrument and represent the lifetime cash shortfalls arising from possible default events up to 12 months into the future from the balance sheet date. Expected credit losses continue to be determined on this basis until there is either a significant increase in the credit risk of an instrument or the instrument becomes credit-impaired. If an instrument is no longer considered to exhibit a significant increase in credit risk, expected credit losses will revert to being determined on a 12-month basis.

Significant increase in credit risk (stage 2)

If a financial asset experiences a significant increase in credit risk (SICR) since initial recognition, an expected credit loss provision is recognised for default events that may occur over the lifetime of the asset.

Significant increase in credit risk is assessed by comparing the risk of default of an exposure at the reporting date to the risk of default at origination (after taking into account the passage of time). Significant does not mean statistically significant nor is it assessed in the context of changes in expected credit loss. Whether a change in the risk of default is significant or not is assessed using a number of quantitative and qualitative factors, the weight of which depends on the type of product and counterparty. Financial assets that are 30 or more days past due and not credit-impaired will always be considered to have experienced a significant increase in credit risk. For less material portfolios where a loss rate or roll rate approach is applied to compute expected credit loss, significant increase in credit risk is primarily based on 30 days past due.

Quantitative factors include an assessment of whether there has been significant increase in the forward-looking probability of default (PD) since origination. A forward-looking PD is one that is adjusted for future economic conditions to the extent these are correlated to changes in credit risk. We compare the residual lifetime PD at the balance sheet date to the residual lifetime PD that was expected at the time of origination for the same point in the term structure and determine whether both the absolute and relative change between the two exceeds predetermined thresholds. To the extent that the differences between the measures of default outlined exceed the defined thresholds, the instrument is considered to have experienced a significant increase in credit risk.

Qualitative factors assessed include those linked to current credit risk management processes, such as lending placed on non-purely precautionary early alert (and subject to closer monitoring).

A non-purely precautionary early alert account is one which exhibits risk or potential weaknesses of a material nature requiring closer monitoring, supervision, or attention by management. Weaknesses in such a borrower's account, if left uncorrected, could result in deterioration of repayment prospects and the likelihood of being downgraded. Indicators could include a rapid erosion of position within the industry, concerns over management's ability to manage operations, weak/deteriorating operating results, liquidity strain and overdue balances among other factors.

Credit-impaired (or defaulted) exposures (stage 3)

Financial assets that are credit-impaired (or in default) represent those that are at least 90 days past due in respect of principal and/or interest. Financial assets are also considered to be credit-impaired where the obligors are unlikely to pay on the occurrence of one or more observable events that have a detrimental impact on the estimated future cash flows of the financial asset. It may not be possible to identify a single discrete event but instead the combined effect of several events may cause financial assets to become credit-impaired.

Evidence that a financial asset is credit-impaired includes observable data about the following events:

- Significant financial difficulty of the issuer or borrower;
- Breach of contract such as default or a past due event;
- For economic or contractual reasons relating to the borrower's financial difficulty, the lenders of the borrower have granted the borrower concession/s that lenders would not otherwise consider. This would include forbearance actions;
- Pending or actual bankruptcy or other financial reorganisation to avoid or delay discharge of the borrower's obligation/s;
- The disappearance of an active market for the applicable financial asset due to financial difficulties of the borrower;
- Purchase or origination of a financial asset at a deep discount that reflects incurred credit losses

Irrevocable lending commitments to a credit-impaired obligor that have not yet been drawn down are also included within the stage 3 credit impairment provision to the extent that the commitment cannot be withdrawn.

Loss provisions against credit-impaired financial assets are determined based on an assessment of the recoverable cash flows under a range of scenarios, including the realisation of any collateral held where appropriate. The loss provisions held represent the difference between the present value of the cash flows expected to be recovered, discounted at the instrument's original effective interest rate, and the gross carrying value of the instrument prior to any credit impairment. The Group's definition of default is aligned with the regulatory definition of default as set out in European Capital Requirements Regulation (CRR178) and related guidelines.

Expert credit judgement

For Corporate & Institutional, Commercial and Private Banking, borrowers are graded by credit risk management on a credit grading (CG) scale from CG1 to CG14. Once a borrower starts to exhibit credit deterioration, it will move along the credit grading scale in the performing book and when it is classified as CG12 the credit assessment and oversight of the loan will normally be performed by Group Special Assets Management (GSAM).

Borrowers graded CG12 exhibit well-defined weaknesses in areas such as management and/or performance but there is no current expectation of a loss of principal or interest. Where the impairment assessment indicates that there will be a loss of principal on a loan, the borrower is graded a CG14 while borrowers of other credit-impaired loans are graded CG13. Instruments graded CG13 or CG14 are regarded as non-performing loans, i.e. stage 3 or credit-impaired exposures.

For individually significant financial assets within stage 3, GSAM will consider all judgements that have an impact on the expected future cash flows of the asset. These include: the business prospects, industry and geo political climate of the customer, quality of realisable value of collateral, the Group's legal position relative to other claimants and any renegotiation/ forbearance/ modification options. The difference between the loan carrying amount and the discounted expected future cash flows will result in the stage 3 credit impairment amount. The future cash flow calculation involves significant judgements and estimates. As new information becomes available and further negotiations/forbearance measures are taken the estimates of the future cash flows will be revised, and will have an impact on the future cash flow analysis.

For financial assets which are not individually significant, such as the Retail Banking portfolio or small business loans, which comprise a large number of homogenous loans that share similar characteristics, statistical estimates and techniques are used, as well as credit scoring analysis.

Retail Banking clients are considered credit-impaired where they are more than 90 days past due. Retail Banking products are also considered credit-impaired if the borrower files for bankruptcy or other forbearance programme, the borrower is deceased or the business is closed in the case of a small business, or if the borrower surrenders the collateral, or there is an identified fraud on the account. Additionally, if the account is unsecured and the borrower has other credit accounts with the Group that are considered credit-impaired, the account may be also be credit-impaired.

Techniques used to compute impairment amounts use models which analyse historical repayment and default rates over a time horizon. Where various models are used, judgement is required to analyse the available information provided and select the appropriate model or combination of models to use.

Expert credit judgement is also applied to determine whether any post-model adjustments are required for credit risk elements which are not captured by the models.

Modified financial instruments

Where the original contractual terms of a financial asset have been modified for credit reasons and the instrument has not been derecognised (an instrument is derecognised when a modification results in a change in cash flows that the Group would consider substantial), the resulting modification loss is recognised within credit impairment in the income statement with a corresponding decrease in the gross carrying value of the asset. If the modification involved a concession that the bank would not otherwise consider, the instrument is considered to be credit-impaired and is considered forborne.

Expected credit loss for modified financial assets that have not been derecognised and are not considered to be credit-impaired will be recognised on a 12-month basis, or a lifetime basis, if there is a significant increase in credit risk. These assets are assessed to determine whether there has been a significant increase in credit risk subsequent to the modification. Although loans may be modified for non-credit reasons, a significant increase in credit risk may occur. In addition to the recognition of modification gains and losses, the revised carrying value of modified financial assets will impact the calculation of expected credit losses, with any increase or decrease in expected credit loss recognised within impairment.

Forborne loans

Forborne loans are those loans that have been modified in response to a customer's financial difficulties. Forbearance strategies assist clients who are temporarily in financial distress and are unable to meet their original contractual repayment terms. Forbearance can be initiated by the client, the Group or a third-party including government sponsored programmes or a conglomerate of credit institutions. Forbearance may include debt restructuring such as new repayment schedules, payment deferrals, tenor extensions, interest only payments, lower interest rates, forgiveness of principal, interest or fees, or relaxation of loan covenants.

Forborne loans that have been modified (and not derecognised) on terms that are not consistent with those readily available in the market and/or where we have granted a concession compared to the original terms of the loans are considered credit-impaired if there is a detrimental impact on cash flows. The modification loss (see Classification and measurement – Modifications) is recognised in the profit or loss within credit impairment and the gross carrying value of the loan reduced by the same amount. The modified loan is disclosed as 'Loans subject to forbearance – credit-impaired'.

Loans that have been subject to a forbearance modification, but which are not considered credit-impaired (not classified as CG13 or CG14), are disclosed as 'Forborne – not credit-impaired'. This may include amendments to covenants within the contractual terms.

Write-offs of credit-impaired instruments and reversal of impairment

To the extent a financial debt instrument is considered irrecoverable, the applicable portion of the gross carrying value is written off against the related loan provision. Such loans are written off after all the necessary procedures have been completed, it is decided that there is no realistic probability of recovery and the amount of the loss has been determined. Subsequent recoveries of amounts previously written off decrease the amount of the provision for loan impairment in the income statement. If, in a subsequent period, the amount of the credit impairment loss decreases and the decrease can be related objectively to an event occurring after the credit impairment was recognised (such as an improvement in the debtor's credit rating), the previously recognised credit impairment loss is reversed by adjusting the provision account. The amount of the reversal is recognised in the income statement.

Loss provisions on purchased or originated credit-impaired instruments (POCI)

The Group measures expected credit loss on a lifetime basis for POCI instruments throughout the life of the instrument. However, expected credit loss is not recognised in a separate loss provision on initial recognition for POCI instruments as the lifetime expected credit loss is inherent within the gross carrying amount of the instruments. The Group recognises the change in lifetime expected credit losses arising subsequent to initial recognition in the income statement and the cumulative change as a loss provision. Where lifetime expected credit losses on POCI instruments are less than those at initial recognition, then the favourable differences are recognised as impairment gains in the income statement (and as impairment loss where the expected credit losses are greater).

Improvement in credit risk/curing

A period may elapse from the point at which instruments enter lifetime expected credit losses (stage 2 or stage 3) and are reclassified back to 12-month expected credit losses (stage 1). For financial assets that are credit-impaired (stage 3), a transfer to stage 2 or stage 1 is only permitted where the instrument is no longer considered to be credit-impaired. An instrument will no longer be considered credit-impaired when there is no shortfall of cash flows compared to the original contractual terms.

For financial assets within stage 2, these can only be transferred to stage 1 when they are no longer considered to have experienced a significant increase in credit risk.

Where significant increase in credit risk was determined using quantitative measures, the instruments will automatically transfer back to stage 1 when the original PD based transfer criteria are no longer met. Where instruments were transferred to stage 2 due to an assessment of qualitative factors, the issues that led to the reclassification must be cured before the instruments can be reclassified to stage 1. This includes instances where management actions led to instruments being classified as stage 2, requiring that action to be resolved before loans are reclassified to stage 1.

A forbore loan can only be removed from the disclosure (cured) if the loan is performing (stage 1 or 2) and a further two-year probation period is met.

In order for a forbore loan to become performing, the following criteria have to be satisfied:

- At least a year has passed with no default based upon the forbore contract terms
- The customer is likely to repay its obligations in full without realising security
- The customer has no accumulated impairment against amount outstanding

Subsequent to the criteria above, a further two-year probation period has to be fulfilled, whereby regular payments are made by the customer and none of the exposures to the customer are more than 30 days past due.

	31.12.18 \$million	31.12.17 \$million
Net credit impairment against profit on loans and advances to banks and customers	607	1,365
Net credit impairment against profit or loss during the period relating to debt securities	7	20
Net credit impairment relating to financial guarantees and loan commitments	39	(23)
Credit impairment ¹	653	1,362

1 No material POCI assets

9. Other impairment

Accounting policy

Refer to the below referenced notes for the relevant accounting policy

	31.12.18 \$million	31.12.17 \$million
Impairment of goodwill (Note 17)	–	320
Impairment of fixed assets (Note 18)	150	137
Impairment losses on available-for-sale equity shares ¹	–	16
Impairment of other intangible assets (Note 17)	46	23
Other impairment – Other	(14)	3
Other impairment	182	179
	182	499

1 31 December 2017 equity shares impairment disclosed on an IAS 39 basis. 31 December 2018 equity shares disclosed on an IFRS 9 basis. Under IFRS 9, equity shares are either measured at FVTPL or FVOCI with fair value movements recognised accordingly

10. Taxation

Accounting policy

Income tax payable on profits is based on the applicable tax law in each jurisdiction and is recognised as an expense in the period in which profits arise.

Deferred tax is provided on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. Deferred tax is determined using tax rates (and laws) that have been enacted or substantively enacted as at the balance sheet date, and that are expected to apply when the related deferred tax asset is realised or the deferred income tax liability is settled.

Deferred tax assets are recognised where it is probable that future taxable profit will be available against which the temporary differences can be utilised. Where permitted, deferred tax assets and liabilities are offset on an entity basis and not by component of deferred taxation.

Current and deferred tax relating to items which are charged or credited directly to equity, is credited or charged directly to equity and is subsequently recognised in the income statement together with the current or deferred gain or loss.

Significant accounting estimates and judgements

- Determining the Group's tax charge for the year involves estimation and judgement, which includes an interpretation of local tax laws and an assessment of whether the tax authorities will accept the position taken. These judgements take account of external advice where appropriate, and the Group's view on settling with the relevant tax authorities
- The Group provides for current tax liabilities at the best estimate of the amount that is expected to be paid to the tax authorities where an outflow is probable. In making its estimates the Group assumes that the tax authorities will examine all the amounts reported to them and have full knowledge of all relevant information

The recoverability of the Group's deferred tax assets is based on management's judgement of the availability of future taxable profits against which the deferred tax assets will be utilised.

The following table provides analysis of taxation charge in the year:

	31.12.18 \$million	31.12.17 \$million
The charge for taxation based upon the profit for the year comprises:		
Current tax:		
United Kingdom corporation tax at 19 per cent (2017: 19.25 per cent):		
Current tax charge on income for the year	1	—
Adjustments in respect of prior years (including double tax relief)	49	1
Foreign tax:		
Current tax charge on income for the year	1,109	977
Adjustments in respect of prior years	(105)	(13)
	1,054	965
Deferred tax:		
Origination/reversal of temporary differences	254	156
Adjustments in respect of prior years	131	26
	385	182
Tax on profits on ordinary activities	1,439	1,147
Effective tax rate	56.5%	47.5%
Tax on profits on ordinary activities excluding the impact of US Tax Reform	1,439	927
Effective tax rate excluding the impact of US Tax Reform	56.5%	38.4%

The US Tax Cuts and Jobs Act of 2017, effective 1 January 2018, reduced the US corporate tax rate from 35 per cent to 21 per cent and introduced a Base Erosion and Anti Abuse Tax. The combined impact of these changes in the tax rates reduced the 2017 US deferred tax asset, increasing the 2017 deferred tax charge by \$220 million.

The tax charge for the year of \$1,439 million (31 December 2017: \$1,147 million) on a profit before tax of \$2,548 million (31 December 2017: \$2,415 million) reflects the impact of non-deductible regulatory provisions and other non-deductible expenses, non-creditable withholding taxes and the impact of countries with tax rates higher or lower than the UK, the most significant of which is India.

Foreign tax includes current tax of \$169 million (31 December 2017: \$167 million) on the profits assessable in Hong Kong.

Deferred tax includes origination or reversal of temporary differences of \$17 million (31 December 2017: \$5 million) provided at a rate of 16.5 per cent (31 December 2017: 16.5 per cent) on the profits assessable in Hong Kong.

Tax rate: The tax charge for the year is higher than the charge at the rate of corporation tax in the UK, 19 per cent. The differences are explained below:

	31.12.18 \$million	31.12.17 \$million
Profit on ordinary activities before tax	2,548	2,415
Tax at 19 per cent (2017: 19.25 per cent)	484	465
Lower tax rates on overseas earnings	(66)	(17)
Higher tax rates on overseas earnings	354	284
Non-creditable withholding taxes	158	67
Tax free income	(113)	(130)
Share of associates and joint ventures	(39)	(45)
Non-deductible expenses	322	217
Provision for regulatory matters	164	—
Bank levy	62	42
Non-taxable losses on investments	79	9
Payments on financial instruments in reserves	(68)	—
Non-taxable gains on disposals of businesses	—	(12)
Goodwill impairment	—	63
US Tax Reform	—	220
Deferred tax not recognised	2	39
Adjustments to tax charge in respect of prior years	75	14
Other items	25	(69)
Tax on profit on ordinary activities	1,439	1,147

Factors affecting the tax charge in future years: The Group's tax charge, and effective tax rate in future years could be affected by several factors including acquisitions, disposals and restructuring of our businesses, the mix of profits across jurisdictions with different statutory tax rates, changes in tax legislation and tax rates and resolution of uncertain tax positions.

The evaluation of uncertain tax positions involves an interpretation of local tax laws which could be subject to challenge by a tax authority, and an assessment of whether the tax authorities will accept the position taken. The Group does not currently consider that assumptions or judgements made in assessing tax liabilities have a significant risk of resulting in a material adjustment within the next financial year.

	31.12.18			31.12.17		
	Current tax \$million	Deferred tax \$million	Total \$million	Current tax \$million	Deferred tax \$million	Total \$million
Tax recognised in other comprehensive income						
Fair value through other comprehensive income/available-for-sale assets	–	21	21	1	7	8
Cash flow hedges	–	(6)	(6)	–	(6)	(6)
Own credit adjustment	9	(45)	(36)	–	14	14
Retirement benefit obligations	–	6	6	–	(35)	(35)
Total tax credit/(charge) recognised in equity	9	(24)	(15)	1	(20)	(19)

Current tax: The following are the movements in current tax during the year:

	31.12.18 \$million	31.12.17 \$million
Current tax comprises:		
Current tax assets	491	474
Current tax liabilities	(376)	(327)
Net current tax opening balance before transition	115	147
IFRS 9 transition	11	–
Net current tax opening balance after transition	126	147
Movements in income statement	(1,054)	(965)
Movements in other comprehensive income	9	1
Taxes paid	770	915
Other movements	(35)	17
Net current tax balance as at 31 December	(184)	115
Current tax assets	492	491
Current tax liabilities	(676)	(376)
Total	(184)	115

Deferred tax: The following are the major deferred tax liabilities and assets recognised by the Group and movements thereon during the year:

	At 1 January 2018 \$million	Exchange & other adjustments \$million	(Charge)/credit to profit \$million	(Charge)/credit to equity \$million	At 31 December 2018 \$million
Deferred tax comprises:					
Accelerated tax depreciation	(413)	4	(85)	–	(494)
Impairment provisions on loans and advances	1,206	(99)	(146)	–	961
Tax losses carried forward	290	(4)	(20)	–	266
Fair value through other comprehensive income assets	(21)	4	(1)	21	3
Cash flow hedges	(2)	1	–	(6)	(7)
Own credit adjustment	11	1	–	(45)	(33)
Retirement benefit obligations	38	(2)	(2)	6	40
Share-based payments	16	–	(1)	–	15
Other temporary differences	(190)	53	(130)	–	(267)
Net deferred tax assets	935	(42)	(385)	(24)	484

	At 1 January 2017 \$million	Exchange & other adjustments \$million	(Charge)/credit to profit \$million	(Charge)/credit to equity \$million	At 31 December 2017 \$million	IFRS 9 transition \$million	At 1 January 2018 \$million
Deferred tax comprises:							
Accelerated tax depreciation	(399)	(12)	(2)	–	(413)	–	(413)
Impairment provisions on loans and advances	934	36	101	–	1,071	135	1,206
Tax losses carried forward	396	8	(114)	–	290	–	290
Fair value through other comprehensive income/ available-for-sale assets	(27)	(2)	–	7	(22)	1	(21)
Cash flow hedges	5	(1)	–	(6)	(2)	–	(2)
Own credit adjustment	–	(3)	–	14	11	–	11
Retirement benefit obligations	76	3	(6)	(35)	38	–	38
Share-based payments	16	–	–	–	16	–	16
Other temporary differences	(60)	5	(161)	–	(216)	26	(190)
Net deferred tax assets	941	34	(182)	(20)	773	162	935

Deferred tax comprises assets and liabilities as follows:

	31.12.18			01.01.18			31.12.17		
	Total \$million	Asset \$million	Liability \$million	Total \$million	Asset \$million	Liability \$million	Total \$million	Asset \$million	Liability \$million
Deferred tax comprises:									
Accelerated tax depreciation	(494)	7	(501)	(413)	17	(430)	(413)	17	(430)
Impairment provisions on loans and advances	961	938	23	1,206	1,148	58	1,071	1,037	34
Tax losses carried forward	266	126	140	290	134	156	290	134	156
Fair value through other comprehensive income/ available-for-sale assets	3	(2)	5	(21)	(7)	(14)	(22)	(8)	(14)
Cash flow hedges	(7)	(12)	5	(2)	(7)	5	(2)	(7)	5
Own credit adjustment	(33)	(18)	(15)	11	(2)	13	11	(2)	13
Retirement benefit obligations	40	40	–	38	38	–	38	38	–
Share-based payments	15	15	–	16	16	–	16	16	–
Other temporary differences	(267)	(47)	(220)	(190)	(29)	(161)	(216)	(48)	(168)
	484	1,047	(563)	935	1,308	(373)	773	1,177	(404)

At 31 December 2018, the Group has net deferred tax assets of \$484 million (31 December 2017: \$773 million). The recoverability of the Group's deferred tax assets is based on management's judgement of the availability of future taxable profits against which the deferred tax assets will be utilised.

Of the Group's total deferred tax assets, \$266 million relates to tax losses carried forward. These tax losses have arisen in individual legal entities and will be offset as future taxable profits arise in those entities.

- \$139 million of the deferred tax assets relating to losses has arisen in Ireland, where there is no expiry date for unused tax losses. These losses relate to aircraft leasing and are expected to be fully utilised over the useful economical life of the assets being up to 18 years
- \$33 million of the deferred tax assets relating to losses has arisen in Korea. These losses have no expiry date, and there is a defined profit stream against which they are forecast to be utilised
- \$27 million of the deferred tax assets relating to losses has arisen in the US. Management forecasts show that the losses are expected to be fully utilised over a period of nine years. The tax losses expire after 20 years
- \$25 million of the deferred tax assets relating to losses has arisen in Taiwan. Management forecasts show that the losses are expected to be fully utilised over a period of one year. The tax losses expire after 10 years

The remaining deferred tax assets of \$42 million relating to losses has arisen in other jurisdictions and is expected to be recovered in less than 10 years.

	31.12.18 \$million	31.12.17 \$million
No account has been taken of the following potential deferred tax assets/(liabilities):		
Withholding tax on unremitted earnings from overseas subsidiaries	(281)	(343)
Foreign exchange movements on investments in branches ¹	–	–
Tax losses	1,283	1,311
Held over gains on incorporation of overseas branches	(413)	(399)
Other temporary differences	79	47

1 No potential deferred tax is included for foreign exchange movements on investments in branches as any branch disposals would be covered by the Branch Profits Exemptions and would not give rise to a tax liability or asset. The amount as at 31 December 2017, previously disclosed as \$339 million, has been restated to nil

11. Dividends

Accounting policy

Dividends on ordinary shares and preference shares classified as equity are recognised in equity in the year in which they are declared.

Dividends on ordinary equity shares are recorded in the year in which they are declared and, in respect of the final dividend, have been approved by the shareholders.

The Board considers a number of factors prior to dividend declaration which includes the rate of recovery in the Group's financial performance, the macroeconomic environment, and opportunities to further invest in our business and grow profitably in our markets.

Ordinary equity shares

	31.12.18		31.12.17	
	Cents per share	\$million	Cents per share	\$million
2017/2016 final dividend declared and paid during the year ¹	11.00	363	–	–
2018/2017 interim dividend declared and paid during the year ¹	6.00	198	–	–

1 The amounts are gross of scrip adjustments

Dividends on ordinary equity shares are recorded in the period in which they are declared and, in respect of the final dividend, have been approved by the shareholders. Accordingly, the final ordinary equity share dividends set out above relate to the respective prior years. The 2017 final dividend of 11 cents per ordinary share (\$363 million) was paid to eligible shareholders on 17 May 2018 and the 2018 interim dividend of six cents per ordinary share (\$198 million) was paid to eligible shareholders on 22 October 2018.

2018 recommended final ordinary equity share dividend

The 2018 ordinary equity share dividend recommended by the Board is 15 cents per share. The financial statements for the year ended 31 December 2018 do not reflect this dividend as this will be accounted for in shareholders' equity as an appropriation of retained profits in the year ending 31 December 2019.

The dividend will be paid in either pounds sterling, Hong Kong dollars or US dollars on 16 May 2019 to shareholders on the UK register of members at the close of business in the UK on 8 March 2019. The dividend will be paid in Indian rupees on 16 May 2019 to Indian Depository Receipt holders on the Indian register at the close of business in India on 8 March 2019.

Preference shares and Additional Tier 1 securities

Dividends on these preference shares and securities classified as equity are recorded in the period in which they are declared.

		31.12.18 \$million	31.12.17 \$million
Non-cumulative redeemable preference shares:	7.014 per cent preference shares of \$5 each	53	53
	6.409 per cent preference shares of \$5 each	26	39
		79	92
Additional Tier 1 securities: \$5 billion fixed rate resetting perpetual subordinated contingent convertible securities		357	353
		436	445
Dividends on these preference shares are treated as interest expense and accrued accordingly			
Non-cumulative irredeemable preference shares:	7 3/8 per cent preference shares of £1 each	9	10
	8 1/4 per cent preference shares of £1 each	10	11
		19	21

12. Earnings per ordinary share

Accounting policy

The Group measures earnings per share on an underlying basis. This differs from earnings defined in IAS 33 Earnings per share. Underlying earnings is profit/(loss) attributable to ordinary shareholders adjusted for profits or losses of a capital nature; amounts consequent to investment transactions driven by strategic intent; and other infrequent and/or exceptional transactions that are significant or material in the context of the Group's normal business earnings for the period.

The table below provides the basis of underlying earnings.

	31.12.18 \$million	31.12.17 \$million
Profit for the period attributable to equity holders	1,109	1,268
Non-controlling interest	(55)	(49)
Dividend payable on preference shares and AT1 classified as equity	(436)	(445)
Profit for the period attributable to ordinary shareholders	618	774
Items normalised:		
Provision for regulatory matters	900	–
Restructuring	478	353
Gains arising on repurchase of subordinated liabilities	(69)	–
Goodwill impairment (Note 9)	–	320
Net gain on businesses disposed and available-for-sale financial instruments (included within Note 6)	–	(78)
Impact of US Tax Reform (Note 10)	–	220
Tax on normalised items ¹	104	(36)
Underlying profit	2,031	1,553
Basic – Weighted average number of shares (millions)	3,306	3,293
Diluted – Weighted average number of shares (millions)	3,340	3,325
Basic earnings per ordinary share (cents)	18.7	23.5
Diluted earnings per ordinary share (cents)	18.5	23.3
Underlying basic earnings per ordinary share (cents)	61.4	47.2
Underlying diluted earnings per ordinary share (cents)	60.8	46.7

1 No tax is included in respect of the impairment of goodwill as no tax relief is available

13. Financial instruments

Classification and measurement

Accounting policy

The Group classifies its financial assets into the following measurement categories: amortised cost; fair value through other comprehensive income; and fair value through profit or loss. Financial liabilities are classified as either amortised cost, or held at fair value through profit or loss. Management determines the classification of its financial assets and liabilities at initial recognition of the instrument or, where applicable, at the time of reclassification.

Financial assets held at amortised cost and fair value through other comprehensive income

Debt instruments held at amortised cost or held at fair value through other comprehensive income (FVOCI) have contractual terms that give rise to cash flows that are solely payments of principal and interest (SPPI characteristics). Principal is the fair value of the financial asset at initial recognition but this may change over the life of the instrument as amounts are repaid. Interest consists of consideration for the time value of money, for the credit risk associated with the principal amount outstanding during a particular period and for other basic lending risks and costs, as well as a profit margin.

In assessing whether the contractual cash flows have SPPI characteristics, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making the assessment, the Group considers:

- Contingent events that would change the amount and timing of cash flows
- Leverage features
- Prepayment and extension terms
- Terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse asset arrangements); and
- Features that modify consideration of the time value of money – e.g. periodical reset of interest rates

Whether financial assets are held at amortised cost or at FVOCI depend on the objectives of the business models under which the assets are held. A business model refers to how the Group manages financial assets to generate cash flows.

The Group makes an assessment of the objective of a business model in which an asset is held at the individual product business line and, where applicable, within business lines depending on the way the business is managed and information is provided to management. Factors considered include:

- How the performance of the product business line is evaluated and reported to the Group's management
- How managers of the business model are compensated, including whether management is compensated based on the fair value of assets or the contractual cash flows collected
- The risks that affect the performance of the business model and how those risks are managed
- The frequency, volume and timing of sales in prior periods, the reasons for such sales and expectations about future sales activity

The Group's business model assessment is as follows:

Business model	Business objective	Characteristics	Businesses	Products
Hold to collect	Intent is to originate financial assets and hold them to maturity, collecting the contractual cash flows over the term of the instrument	• Providing financing and originating assets to earn interest income as primary income stream • Performing credit risk management activities • Costs include funding costs, transaction costs and impairment losses	• Corporate Lending • Corporate Finance • Transaction Banking • Retail Lending • Treasury Markets (Loans and Borrowings) • Financial Markets (selected)	• Loans and advances • Debt securities
Hold to collect and sell	Business objective met through both hold to collect and by selling financial assets	• Portfolios held for liquidity needs; or where a certain interest yield profile is maintained; or that are normally rebalanced to achieve matching of duration of assets and liabilities • Income streams come from interest income, fair value changes, and impairment losses	• Treasury Markets	• Derivatives • Debt securities
Fair value through profit or loss	All other business objectives, including trading and managing financial assets on a fair value basis	• Assets held for trading • Assets that are originated, purchased, and sold for profit taking or underwriting activity. • Performance of the portfolio is evaluated on a fair value basis. • Income streams are from fair value changes or trading gains or losses.	• All other business lines	• Derivatives • Trading portfolios • Financial Markets reverse repos

Financial assets which have SPPI characteristics and that are held within a business model whose objective is to hold financial assets to collect contractual cash flows ('hold to collect') are recorded at amortised cost. Conversely, financial assets which have SPPI characteristics but are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets ('hold to collect and sell') are classified as held at FVOCI.

Both hold to collect business and a hold to collect and sell business model involve holding financial assets to collect the contractual cash flows. However, the business models are distinct by reference to the frequency and significance that asset sales play in meeting the objective under which a particular group of financial assets is managed. Hold to collect business models are characterised by asset sales that are incidental to meeting the objectives under which a group of assets is managed. Sales of assets under a hold to collect business model can be made to manage increases in the credit risk of financial assets but sales for other reasons should be infrequent or insignificant.

Cash flows from the sale of financial assets under a hold to collect and sell business model by contrast are integral to achieving the objectives under which a particular group of financial assets are managed. This may be the case where frequent sales of financial assets are required to manage the Group's daily liquidity requirements or to meet regulatory requirements to demonstrate liquidity of financial instruments. Sales of assets under hold to collect and sell business models are therefore both more frequent and more significant in value than those under the hold to collect model.

Equity instruments designated as held at FVOCI

Non-trading equity instruments acquired for strategic purposes rather than capital gain may be irrevocably designated at initial recognition as held at FVOCI on an instrument by instrument basis. Dividends received are recognised in profit or loss. Gains and losses arising from changes in the fair value of these instruments, including foreign exchange gains and losses, are recognised directly in equity and are never reclassified to profit or loss even on derecognition.

Financial assets and liabilities held at fair value through profit or loss

Financial assets which are not held at amortised cost or that are not held at fair value through other comprehensive income are held at fair value through profit or loss. Financial assets and liabilities held at fair value through profit or loss are either mandatorily classified fair value through profit or loss or irrevocably designated at fair value through profit or loss at initial recognition.

Mandatorily classified at fair value through profit or loss

Financial assets and liabilities which are mandatorily held at fair value through profit or loss are split between two subcategories as follows:

Trading, including;

- Financial assets and liabilities held for trading, which are those acquired principally for the purpose of selling in the short-term; and
- Derivatives

Non-trading mandatorily at fair value through profit or loss, including;

- Instruments in a business which has a fair value business model (see the Group's business model assessment) which are not trading or derivatives;
- Hybrid financial assets that contain one or more embedded derivatives;
- Financial assets that would otherwise be measured at amortised cost or FVOCI but which do not have SPPI characteristics;
- Equity instruments that have not been designated as held at FVOCI; and
- Financial liabilities that constitute contingent consideration in a business combination.

Designated at fair value through profit or loss

Financial assets and liabilities may be designated at fair value through profit or loss when the designation eliminates or significantly reduces a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities on a different basis ('accounting mismatch').

Interest rate swaps have been acquired by the Group with the intention of significantly reducing interest rate risk on certain debt securities with fixed rates of interest. To significantly reduce the accounting mismatch between assets and liabilities and measurement bases, these debt securities have been designated at fair value through profit or loss.

Similarly, to reduce accounting mismatches, the Group has designated certain financial liabilities at fair value through profit or loss where the liabilities either:

- Have fixed rates of interest and interest rate swaps or other interest rate derivatives have been entered with the intention of significantly reducing interest rate risk; or
- Are exposed to foreign currency risk and derivatives have been acquired with the intention of significantly reducing exposure to market changes; or
- Have been acquired to fund trading asset portfolios or assets

Financial liabilities may also be designated at fair value through profit or loss where they are managed on a fair value basis or have an embedded derivative where the Group is not able to bifurcate and separately value the embedded derivative component.

Financial liabilities held at amortised cost

Financial liabilities that are not financial guarantees or loan commitments and that are not classified as financial liabilities held at fair value through profit or loss are classified as financial liabilities held at amortised cost.

Preference shares which carry a mandatory coupon that represents a market rate of interest at the issue date, or which are redeemable on a specific date or at the option of the shareholder, are classified as financial liabilities and are presented in other borrowed funds. The dividends on these preference shares are recognised in the income statement as interest expense on an amortised cost basis using the effective interest method.

Financial guarantee contracts and loan commitments

The Group issues financial guarantee contracts and loan commitments in return for fees. Under a financial guarantee contract, the Group undertakes to meet a customer's obligations under the terms of a debt instrument if the customer fails to do so. Loan commitments are firm commitments to provide credit under prespecified terms and conditions. Financial guarantee contracts and loan commitments issued at below market interest rates are initially recognised as liabilities at fair value, while financial guarantees and loan commitments issued at market rates are recorded off-balance sheet. Subsequently, these instruments are measured at the higher of the expected credit loss provision, and the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of IFRS 15 Revenue from Contracts with Customers. Refer to Note 8 for expected credit loss on loan commitments and financial guarantees.

Fair value of financial assets and liabilities

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in the principal market for the asset or liability, or in the absence of a principal market, the most advantageous market to which the Group has access at the date. The fair value of a liability includes the risk that the bank will not be able to honour its obligations.

The fair value of financial instruments is generally measured on the basis of the individual financial instrument. However, when a group of financial assets and financial liabilities is managed on the basis of its net exposure to either market risk or credit risk, the fair value of the group of financial instruments is measured on a net basis.

The fair values of quoted financial assets and liabilities in active markets are based on current prices. A market is regarded as active if transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. If the market for a financial instrument, and for unlisted securities, is not active, the Group establishes fair value by using valuation techniques.

Initial recognition

Purchases and sales of financial assets and liabilities held at fair value through profit or loss, and debt securities classified as financial assets held at fair value through other comprehensive income, are initially recognised on the trade-date (the date on which the Group commits to purchase or sell the asset). Loans and advances and other financial assets held at amortised cost are recognised on the settlement date (the date on which cash is advanced to the borrowers).

All financial instruments are initially recognised at fair value, which is normally the transaction price, plus directly attributable transaction costs for financial assets which are not subsequently measured at fair value through profit or loss.

In certain circumstances, the initial fair value may be based on a valuation technique which may lead to the recognition of profits or losses at the time of initial recognition. However, these profits or losses can only be recognised when the valuation technique used is based solely on observable market data. In those cases where the initially recognised fair value is based on a valuation model that uses unobservable inputs, the difference between the transaction price and the valuation model is not recognised immediately in the income statement but is amortised or released to the income statement as the inputs become observable, or the transaction matures or is terminated.

Subsequent measurement

Financial assets and financial liabilities held at amortised cost

Financial assets and financial liabilities held at amortised cost are subsequently carried at amortised cost using the effective interest method (see Interest income and expense). Foreign exchange gains and losses are recognised in the income statement.

Where a financial instrument carried at amortised cost is the hedged item in a qualifying fair value hedge relationship, its carrying value is adjusted by the fair value gain or loss attributable to the hedged risk.

Financial assets held at FVOCI

Debt instruments held at FVOCI are subsequently carried at fair value, with all unrealised gains and losses arising from changes in fair value (including any related foreign exchange gains or losses) recognised in other comprehensive income and accumulated in a separate component of equity. Foreign exchange gains and losses on the amortised cost are recognised in income. Changes in expected credit losses are recognised in the profit or loss and are accumulated in equity. On derecognition, the cumulative fair value gains or losses, net of the cumulative expected credit loss reserve, are transferred to the profit or loss.

Equity investments designated at FVOCI are subsequently carried at fair value with all unrealised gains and losses arising from changes in fair value (including any related foreign exchange gains or losses) recognised in other comprehensive income and accumulated in a separate component of equity. On derecognition, the cumulative reserve is transferred to retained earnings and is not recycled to profit or loss.

Financial assets and liabilities held at fair value through profit or loss

Financial assets and liabilities mandatorily held at fair value through profit or loss and financial assets designated at fair value through profit or loss are subsequently carried at fair value, with gains and losses arising from changes in fair value recorded in the net trading income line in the profit or loss unless the instrument is part of a cash flow hedging relationship. Contractual interest income on financial assets held at fair value through profit or loss is recognised as interest income in a separate line in the profit or loss.

Financial liabilities designated at fair value through profit or loss

Financial liabilities designated at fair value through profit or loss are held at fair value, with changes in fair value recognised in the net trading income line in the profit or loss, other than that attributable to changes in credit risk. Fair value changes attributable to credit risk are recognised in other comprehensive income and recorded in a separate category of reserves unless this is expected to create or enlarge an accounting mismatch, in which case the entire change in fair value of the financial liability designated at fair value through profit or loss is recognised in profit or loss.

Derecognition of financial instruments

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or where the Group has transferred substantially all risks and rewards of ownership. If substantially all the risks and rewards have been neither retained nor transferred and the Group has retained control, the assets continue to be recognised to the extent of the Group's continuing involvement.

Where financial assets have been modified, the modified terms are assessed on a qualitative and quantitative basis to determine whether a fundamental change in the nature of the instrument has occurred, such as whether the derecognition of the pre-existing instrument and the recognition of a new instrument is appropriate.

On derecognition of a financial asset, the difference between the carrying amount of the asset (or the carrying amount allocated to the portion of the asset derecognised) and the sum of the consideration received (including any new asset obtained less any new liability assumed) and any cumulative gain or loss that had been recognised in other comprehensive income is recognised in profit or loss except for equity instruments elected FVOCI (see above) and cumulative fair value adjustments attributable to the credit risk of a liability that are held in other comprehensive income.

Financial liabilities are derecognised when they are extinguished. A financial liability is extinguished when the obligation is discharged, cancelled or expires and this is evaluated both qualitatively and quantitatively. However, where a financial liability has been modified, it is derecognised if the difference between the modified cash flows and the original cash flows is more than 10 per cent.

If the Group purchases its own debt, it is derecognised and the difference between the carrying amount of the liability and the consideration paid is included in 'Other income' except for the cumulative fair value adjustments attributable to the credit risk of a liability that are held in other comprehensive income which are never recycled to the profit or loss.

Modified financial instruments

Financial assets and financial liabilities whose original contractual terms have been modified, including those loans subject to forbearance strategies, are considered to be modified instruments. Modifications may include changes to the tenor, cash flows and/or interest rates among other factors.

Where derecognition of financial assets is appropriate (see Derecognition), the newly recognised residual loans are assessed to determine whether the assets should be classified as purchased or originated credit-impaired assets (POCI).

Where derecognition is not appropriate, the gross carrying amount of the applicable instruments is recalculated as the present value of the renegotiated or modified contractual cash flows discounted at the original effective interest rate (or credit adjusted effective interest rate for POCI financial assets). The difference between the recalculated values and the pre-modified gross carrying values of the instruments are recorded as a modification gain or loss in the profit or loss.

Gains and losses arising from modifications for credit reasons are recorded as part of 'Credit impairment' (see credit Impairment policy). Modification gains and losses arising for non-credit reasons are recognised either as part of 'Credit impairment' or within income depending on whether there has been a change in the credit risk on the financial asset subsequent to the modification. Modification gains and losses arising on financial liabilities are recognised within income. The movements in the applicable expected credit loss loan positions are disclosed in further detail in Risk review.

Reclassifications

Financial liabilities are not reclassified subsequent to initial recognition. Reclassifications of financial assets are made when, and only when, the business model for those assets changes. Such changes are expected to be infrequent and arise as a result of significant external or internal changes such as the termination of a line of business or the purchase of a subsidiary whose business model is to realise the value of pre-existing held for trading financial assets through a hold to collect model.

Financial assets are reclassified at their fair value on the date of reclassification and previously recognised gains and losses are not restated. Moreover, reclassifications of financial assets between financial assets held at amortised cost and financial assets held at fair value through other comprehensive income do not affect effective interest rate or expected credit loss computations.

Reclassified from amortised cost

Where financial assets held at amortised cost are reclassified to financial assets held at fair value through profit or loss, the difference between the fair value of the assets at the date of reclassification and the previously recognised amortised cost is recognised in profit or loss.

For financial assets held at amortised cost that are reclassified to fair value through other comprehensive income, the difference between the fair value of the assets at the date of reclassification and the previously recognised gross carrying value is recognised in other comprehensive income. Additionally, the related cumulative expected credit loss amounts relating to the reclassified financial assets are reclassified from loan loss provisions to a separate reserve in other comprehensive income at the date of reclassification.

Reclassified from fair value through other comprehensive income

Where financial assets held at fair value through other comprehensive income are reclassified to financial assets held at fair value through profit or loss, the cumulative gain or loss previously recognised in other comprehensive income is transferred to the profit or loss.

For financial assets held at fair value through other comprehensive income that are reclassified to financial assets held at amortised cost, the cumulative gain or loss previously recognised in other comprehensive income is adjusted against the fair value of the financial asset such that the financial asset is recorded at a value as if it had always been held at amortised cost. In addition, the related cumulative expected credit losses held within other comprehensive income are reversed against the gross carrying value of the reclassified assets at the date of reclassification.

Reclassified from fair value through profit or loss

Where financial assets held at fair value through profit or loss are reclassified to financial assets held at fair value through other comprehensive income or financial assets held at amortised cost, the fair value at the date of reclassification is used to determine the effective interest rate on the financial asset going forward. In addition, the date of reclassification is used as the date of initial recognition for the calculation of expected credit losses. Where financial assets held at fair value through profit or loss are reclassified to financial assets held at amortised cost, the fair value at the date of reclassification becomes the gross carrying value of the financial asset. The Group's classification of its financial assets and liabilities is summarised in the following tables.

IFRS 9

Assets	Notes	Assets at fair value					Total financial assets at fair value \$million	Assets held at amortised cost \$million	Total \$million
		Trading \$million	Derivatives held for hedging \$million	Non-trading mandatorily at fair value through profit or loss \$million	Designated at fair value through profit or loss \$million	Fair value through other comprehensive income \$million			
Cash and balances at central banks		–	–	–	–	–	–	57,511	57,511
Financial assets held at fair value through profit or loss									
Loans and advances to banks ¹		146	–	3,622	–	–	3,768	–	3,768
Loans and advances to customers ¹		1,074	–	3,854	–	–	4,928	–	4,928
Reverse repurchase agreements and other similar secured lending	16	–	–	54,769	–	–	54,769	–	54,769
Debt securities and other eligible bills		21,246	–	393	337	–	21,976	–	21,976
Equity shares		1,347	–	233	111	–	1,691	–	1,691
		23,813	–	62,871	448	–	87,132	–	87,132
Derivative financial instruments	14	45,108	513	–	–	–	45,621	–	45,621
Loans and advances to banks ¹	15	–	–	–	–	–	–	61,414	61,414
of which: reverse repurchase agreements and other similar secured lending	16	–	–	–	–	–	–	3,815	3,815
Loans and advances to customers ¹	15	–	–	–	–	–	–	256,557	256,557
of which: reverse repurchase agreements and other similar secured lending	16	–	–	–	–	–	–	3,151	3,151
Investment securities									
Debt securities and other eligible bills		–	–	–	–	116,335	116,335	9,303	125,638
Equity shares		–	–	–	–	263	263	–	263
		–	–	–	–	116,598	116,598	9,303	125,901
Other assets	20	–	–	–	–	–	–	32,678	32,678
Assets held for sale	21	78	–	358	451	–	887	135	1,022
Total at 31 December 2018		68,999	513	63,229	899	116,598	250,238	417,598	667,836

1 Further analysed in Risk review and Capital review

IFRS 9

Assets	Notes	Assets at fair value							Total \$million
		Trading \$million	Derivatives held for hedging \$million	Non-trading mandatorily at fair value through profit or loss \$million	Designated at fair value through profit or loss \$million	Fair value through other comprehensive income \$million	Total financial assets at fair value \$million	Assets held at amortised cost \$million	
Cash and balances at central banks		—	—	—	—	—	—	58,864	58,864
Financial assets held at fair value through profit or loss									
Loans and advances to banks ¹		320	—	2,545	—	—	2,865	—	2,865
Loans and advances to customers ¹		1,689	—	2,179	39	—	3,907	—	3,907
Reverse repurchase agreements and other similar secured lending	16	—	—	45,518	—	—	45,518	—	45,518
Debt securities and other eligible bills		19,318	—	504	393	—	20,215	—	20,215
Equity shares		718	—	684	733	—	2,135	—	2,135
		22,045	—	51,430	1,165	—	74,640	—	74,640
Derivative financial instruments		46,333	698	—	—	—	47,031	—	47,031
Loans and advances to banks ¹		—	—	—	—	—	—	62,295	62,295
of which: reverse repurchase agreements and other similar secured lending	16	—	—	—	—	—	—	5,101	5,101
Loans and advances to customers ¹		—	—	—	—	—	—	251,507	251,507
of which: reverse repurchase agreements and other similar secured lending	16	—	—	—	—	—	—	4,566	4,566
Investment securities									
Debt securities and other eligible bills		—	—	—	—	108,411	108,411	7,188	115,599
Equity shares		—	—	—	—	214	214	—	214
		—	—	—	—	108,625	108,625	7,188	115,813
Other assets		—	—	—	—	—	—	29,922	29,922
Assets held for sale		—	—	—	466	—	466	62	528
Total at 1 January 2018		68,378	698	51,430	1,631	108,625	230,762	409,838	640,600

1 Further analysed in Risk review and Capital review

The table above is the representation as at 1 January 2018 of the balances after the implementation of IFRS 9.

IAS 39

Assets	Notes	Assets at fair value					Assets at amortised cost		
		Trading \$million	Derivatives held for hedging \$million	Designated at fair value through profit or loss \$million	Available- for-sale \$million	Total financial assets at fair value \$million	Loans and receivables \$million	Held-to- maturity \$million	Total \$million
Cash and balances at central banks		–	–	–	–	–	58,864	–	58,864
Financial assets held at fair value through profit or loss									
Loans and advances to banks ¹		320	–	2,252	–	2,572	–	–	2,572
Loans and advances to customers ¹		1,689	–	1,229	–	2,918	–	–	2,918
Reverse repurchase agreements and other similar secured lending	16	454	–	458	–	912	–	–	912
Debt securities and other eligible bills		19,318	–	393	–	19,711	–	–	19,711
Equity shares		718	–	733	–	1,451	–	–	1,451
		22,499	–	5,065	–	27,564	–	–	27,564
Derivative financial instruments	14	46,333	698	–	–	47,031	–	–	47,031
Loans and advances to banks ¹	15	–	–	–	–	–	78,188	–	78,188
of which: reverse repurchase agreements and other similar secured lending	16	–	–	–	–	–	20,694	–	20,694
Loans and advances to customers ¹	15	–	–	–	–	–	282,288	–	282,288
of which: reverse repurchase agreements and other similar secured lending	16	–	–	–	–	–	33,581	–	33,581
Investment securities									
Debt securities and other eligible bills		–	–	–	109,161	109,161	2,630	4,340	116,131
Equity shares		–	–	–	894	894	–	–	894
		–	–	–	110,055	110,055	2,630	4,340	117,025
Other assets	20	–	–	–	–	–	29,922	–	29,922
Assets held for sale	21	–	–	466	–	466	62	–	528
Total at 31 December 2017		68,832	698	5,531	110,055	185,116	451,954	4,340	641,410

1 Further analysed in Risk review and Capital review

IFRS 9

		Liabilities at fair value					
			Derivatives held for hedging	Designated at fair value through profit or loss	Total financial liabilities at fair value	Amortised cost	Total
Liabilities	Notes	Trading \$million	\$million	\$million	\$million	\$million	\$million
Financial liabilities held at fair value through profit or loss							
Deposits by banks		–	–	318	318	–	318
Customer accounts		–	–	6,751	6,751	–	6,751
Repurchase agreements and other similar secured borrowing	16	–	–	43,000	43,000	–	43,000
Debt securities in issue	22	–	–	7,405	7,405	–	7,405
Short positions		3,226	–	–	3,226	–	3,226
		3,226	–	57,474	60,700	–	60,700
Derivative financial instruments	14	45,580	1,629	–	47,209	–	47,209
Deposits by banks		–	–	–	–	29,715	29,715
Customer accounts		–	–	–	–	391,013	391,013
Repurchase agreements and other similar secured borrowing	16	–	–	–	–	1,401	1,401
Debt securities in issue	22	–	–	–	–	46,454	46,454
Other liabilities	23	–	–	–	–	37,945	37,945
Subordinated liabilities and other borrowed funds	27	–	–	–	–	15,001	15,001
Liabilities included in disposal groups held for sale	21	198	–	–	198	–	198
Total at 31 December 2018		49,004	1,629	57,474	108,107	521,529	629,636

IFRS 9

		Liabilities at fair value					
			Derivatives held for hedging \$million	Designated at fair value through profit or loss \$million	Total financial liabilities at fair value \$million	Amortised cost \$million	Total \$million
Liabilities	Notes	Trading \$million					
Financial liabilities held at fair value through profit or loss							
Deposits by banks		–	–	737	737	–	737
Customer accounts		–	–	5,236	5,236	–	5,236
Repurchase agreements and other similar secured borrowing	16	–	–	38,140	38,140	–	38,140
Debt securities in issue		–	–	7,023	7,023	–	7,023
Short positions		3,637	–	–	3,637	–	3,637
		3,637	–	51,136	54,773	–	54,773
Derivative financial instruments		46,558	1,543	–	48,101	–	48,101
Deposits by banks		–	–	–	–	30,945	30,945
Customer accounts		–	–	–	–	370,509	370,509
Repurchase agreements and other similar secured borrowing	16	–	–	–	–	1,639	1,639
Debt securities in issue		–	–	–	–	46,379	46,379
Other liabilities		–	–	–	–	34,982	34,982
Subordinated liabilities and other borrowed funds		–	–	–	–	17,176	17,176
Total at 1 January 2018		50,195	1,543	51,136	102,874	501,630	604,504

The table above is the representation as at 1 January 2018 of the balances after the implementation of IFRS 9.

Liabilities	Notes	Liabilities at fair value					Total \$million
		Trading \$million	Derivatives held for hedging \$million	Designated at fair value through profit or loss \$million	Total financial liabilities at fair value \$million	Amortised cost \$million	
Financial liabilities held at fair value through profit or loss							
Deposits by banks		–	–	737	737	–	737
Customer accounts		–	–	5,236	5,236	–	5,236
Debt securities in issue	22	–	–	7,023	7,023	–	7,023
Short positions		3,637	–	–	3,637	–	3,637
		3,637	–	12,996	16,633	–	16,633
Derivative financial instruments	14	46,558	1,543	–	48,101	–	48,101
Deposits by banks		–	–	–	–	30,945	30,945
Customer accounts		–	–	–	–	370,509	370,509
Repurchase agreements and other similar secured borrowing	16	–	–	–	–	39,783	39,783
Debt securities in issue	22	–	–	–	–	46,379	46,379
Other liabilities	23	–	–	–	–	34,982	34,982
Subordinated liabilities and other borrowed funds	27	–	–	–	–	17,176	17,176
Total at 31 December 2017		50,195	1,543	12,996	64,734	539,774	604,508

Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis, or to realise the asset and settle the liability simultaneously.

In practice, for credit mitigation, the Group is able to offset assets and liabilities which do not meet the IAS 32 netting criteria set out above. Such arrangements include master netting arrangements for derivatives and global master repurchase agreements for repurchase and reverse repurchase transactions. These agreements generally allow that all outstanding transactions with a particular counterparty can be offset but only in the event of default or other predetermined events.

In addition, the Group also receives and pledges readily realisable collateral for derivative transactions to cover net exposure in the event of a default. Under repurchase and reverse repurchase agreements the Group pledges (legally sells) and obtains (legally purchases) respectively, highly liquid assets which can be sold in the event of a default.

The following tables set out the impact of netting on the balance sheet. This comprises derivative transactions settled through an enforceable netting agreement where we have the intent and ability to settle net and which are offset on the balance sheet.

	31.12.18					
	Gross amounts of recognised financial instruments \$million	Impact of offset in the balance sheet \$million	Net amounts of financial instruments presented in the balance sheet \$million	Related amount not offset in the balance sheet		Net amount \$million
				Financial instruments \$million	Financial collateral \$million	
Assets						
Derivative financial instruments	55,274	(9,653)	45,621	(32,283)	(9,259)	4,079
Reverse repurchase agreements and other similar secured lending	65,191	(3,456)	61,735	–	(61,735)	–
At 31 December 2018	120,465	(13,109)	107,356	(32,283)	(70,994)	4,079
Liabilities						
Derivative financial instruments	56,862	(9,653)	47,209	(32,283)	(10,323)	4,603
Repurchase agreements and other similar secured borrowing	47,857	(3,456)	44,401	–	(44,401)	–
At 31 December 2018	104,719	(13,109)	91,610	(32,283)	(54,724)	4,603

31.12.17

	Gross amounts of recognised financial instruments \$million	Impact of offset in the balance sheet \$million	Net amounts of financial instruments presented in the balance sheet \$million	Related amount not offset in the balance sheet		Net amount \$million
				Financial instruments \$million	Financial collateral \$million	
Assets						
Derivative financial instruments	54,619	(7,588)	47,031	(29,135)	(9,825)	8,071
Reverse repurchase agreements and other similar secured lending	61,520	(6,333)	55,187	–	(55,187)	–
At 31 December 2017	116,139	(13,921)	102,218	(29,135)	(65,012)	8,071
Liabilities						
Derivative financial instruments	55,689	(7,588)	48,101	(29,135)	(9,513)	9,453
Repurchase agreements and other similar secured borrowing	46,116	(6,333)	39,783	–	(39,783)	–
At 31 December 2017	101,805	(13,921)	87,884	(29,135)	(49,296)	9,453

Related amounts not offset in the balance sheet comprises:

- Financial instruments not offset in the balance sheet, but covered by an enforceable netting arrangement. This comprises master netting arrangements held against derivative financial instruments and excludes the effect of over-collateralisation
- Financial collateral – this comprises cash collateral pledged and received for derivative financial instruments and collateral bought and sold for reverse repurchase and repurchase agreements respectively and excludes the effect of over-collateralisation

Loans and advances designated at fair value through profit or loss

The maximum exposure to credit risk for loans and advances to banks and customers and reverse repurchase and other similar secured lending designated at fair value through profit or loss was \$nil million (1 January 2018: \$39 million and 31 December 2017: \$3,939 million). The net fair value gain on loans and advances to banks and customers and reverse repurchase and other similar secured lending designated at fair value through profit or loss was \$nil million (1 January 2018: \$nil million and 31 December 2017: \$23 million). Of this, \$nil million (1 January 2018: \$nil million and 31 December 2017: \$1 million) relates to changes in credit risk. The cumulative fair value loss attributable to changes in credit risk was \$nil million (1 January 2018: \$nil million and 31 December 2017: \$1 million). Further details of the Group's valuation technique is described in this Note.

Financial liabilities designated at fair value through profit or loss

	31.12.18 (IFRS 9) \$million	01.01.18 (IFRS 9) \$million	31.12.17 (IAS 39) \$million
Carrying balance aggregate fair value	57,474	51,136	12,996
Amount contractually obliged to repay at maturity	57,974	51,192	13,052
Difference between aggregate fair value and contractually obliged to repay at maturity	(500)	(56)	(56)
Cumulative change in fair value accredited to credit risk difference	476	82	82

The net fair value gain on financial liabilities designated at fair value through profit or loss was \$30 million for the year (31 December 2017: net loss of \$202 million). Further details of the Group's own credit adjustment (OCA) valuation technique is described later in this Note.

Valuation of financial instruments

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date in the principal market or, in the absence of this, the most advantageous market to which the Group has access at that date. The fair value of a liability reflects the Group's non-performance risk. The fair value of financial instruments is generally measured on the basis of the individual financial instrument. However, when a group of financial assets and financial liabilities is managed on the basis of its net exposure to either market risks or credit risk, the fair value of the group of financial instruments is measured on a net basis.

The fair values of quoted financial assets and liabilities in active markets are based on current prices. A market is regarded as active if transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. Wherever possible, fair values have been calculated using unadjusted quoted market prices in active markets for identical instruments held by the Group. Where quoted market prices are not available, or are unreliable because of poor liquidity, fair values have been determined using valuation techniques which, to the extent possible, use market observable inputs, but in some cases use non-market observable inputs. Valuation techniques used include discounted cash flow analysis and pricing models and, where appropriate, comparison with instruments that have characteristics similar to those of the instruments held by the Group.

The Valuation Control function is responsible for independent price verification, oversight of fair value and prudent value adjustments and escalation of valuation issues. Independent price verification is the process of determining that the valuations incorporated into the financial statements are validated independent of the business area responsible for the product. The Valuation Control function has oversight of the fair value adjustments to ensure the financial instruments are priced to exit. These are key controls in ensuring the material accuracy of the valuations incorporated in the financial statements. The market data used for price verification may include data sourced from recent trade data involving external counterparties or third parties such as Bloomberg, Reuters, brokers and consensus pricing providers. Valuation Control performs a semi-annual review of the suitability of the market data used for price testing. Price verification uses independently sourced data that is deemed most representative of the market the instruments trade in. To determine the quality of the market data inputs, factors such as independence, relevance, reliability, availability of multiple data sources and methodology employed by the pricing provider are taken into consideration.

The Valuation and Benchmarks Committee (VBC) is the valuation governance forum consisting of representatives from Group Market Risk, Product Control, Valuation Control and the business, which meets monthly to discuss and approve the independent valuations of the inventory. For Principal Finance, the Investment Committee meeting is held on a quarterly basis to review investments and valuations.

Significant accounting estimates and judgements

The Group evaluates the significance of financial instruments and material accuracy of the valuations incorporated in the financial statements as they involve a high degree of judgement and estimation uncertainty in determining the carrying values of financial assets and liabilities at the balance sheet date.

- Fair value of financial instruments are determined using valuation techniques and estimates (see below) which, to the extent possible, use market observable inputs, but in some cases use non-market observable inputs. Changes in the observability of significant valuation inputs can materially affect the fair values of financial instruments
- When establishing the exit price of a financial instrument using a valuation technique, the Group estimates valuation adjustments in determining the fair value
- In determining the valuation of financial instruments, the Group makes judgements on the amounts reserved to cater for model and valuation risks, which cover both Level 2 and Level 3 assets, and the significant valuation judgements in respect of Level 3 instruments
- Where the estimate measurement of fair value is more judgemental in respect of Level 3 assets, these are valued based on models that use a significant degree of non-market-based unobservable inputs

Valuation techniques

Refer to the fair value hierarchy explanation – Level 1, 2 and 3

- Financial instruments held at fair value
 - Debt securities – asset-backed securities: Asset-backed securities are valued based on external prices obtained from consensus pricing providers, broker quotes, recent trades, arrangers' quotes, etc. Where an observable price is available for a given security, it is classified as Level 2. In instances where third-party prices are not available or reliable, the security is classified as Level 3. The fair value of Level 3 securities is estimated using market standard cash flow models with input parameter assumptions which include prepayment speeds, default rates, discount margins derived from comparable securities with similar vintage, collateral type, and credit ratings. Therefore, once external pricing has been verified, an assessment is made of whether each security is traded with significant liquidity based on its credit rating and sector. If a security is of high credit rating and is traded in a liquid sector, it will be classified as Level 2, otherwise it will be classified as Level 3
 - Debt securities in issue: These debt securities relate to structured notes issued by the Group. Where independent market data is available through pricing vendors and broker sources these positions are classified as Level 2. Where such liquid external prices are not available, valuations of these debt securities are implied using input parameters such as bond spreads and credit spreads, and are classified as Level 3. These input parameters are determined with reference to the same issuer (if available) or proxies from comparable issuers or assets
 - Derivatives: Derivative products are classified as Level 2 if the valuation of the product is based upon input parameters which are observable from independent and reliable market data sources. Derivative products are classified as Level 3 if there are significant valuation input parameters which are unobservable in the market, such as products where the performance is linked to more than one underlying variable. Examples are foreign exchange basket options, equity options based on the performance of two or more underlying indices and interest rate products with quanto payouts. In most cases these unobservable correlation parameters cannot be implied from the market, and methods such as historical analysis and comparison with historical levels or other benchmark data must be employed
 - Equity shares – private equity: The majority of private equity unlisted investments are valued based on earning multiples – Price-to-Earnings (P/E) or enterprise value to earnings before income tax, depreciation and amortisation (EV/EBITDA) ratios – of comparable listed companies. The two primary inputs for the valuation of these investments are the actual or forecast earnings of the investee companies and earning multiples for the comparable listed companies. To ensure comparability between these unquoted investments and the comparable listed companies, appropriate adjustments are also applied (for example, liquidity and size) in the valuation. In circumstances where an investment does not have direct comparables or where the multiples for the comparable companies cannot be sourced from reliable external sources, alternative valuation techniques (for example, discounted cash flow models), which use predominantly unobservable inputs or Level 3 inputs, may be applied. Even though earning multiples for the comparable listed companies can be sourced from third-party sources (for example, Bloomberg), and those inputs can be deemed Level 2 inputs, all unlisted investments (excluding those where observable inputs are available, for example, over-the-counter (OTC) prices) are classified as Level 3 on the basis that the valuation methods involve judgements ranging from determining comparable companies to discount rates where the discounted cash flow method is applied
 - Loans and advances: These primarily include loans in the global syndications business which were not syndicated as of the balance sheet date and other financing transactions within Financial Markets and loans and advances including reverse repurchase agreements that do not have SPPI cash flows or are managed on a fair value basis. These loans are generally bilateral in nature and, where available, their valuation is based on market observable credit spreads. If observable credit spreads are not available, proxy spreads based on comparable loans with similar credit grade, sector and region, are used. Where observable credit spreads and market standard proxy methods are available, these loans are classified as Level 2. Where there are no recent transactions or comparable loans, these loans are classified as Level 3
 - Other debt securities: These debt securities include convertible bonds, corporate bonds, credit and structured notes. Where quoted prices are available through pricing vendors, brokers or observable trading activities from liquid markets, these are classified as Level 2 and valued using such quotes. Where there are significant valuation inputs which are unobservable in the market, due to illiquid trading or the complexity of the product, these are classified as Level 3. The valuations of these debt securities are implied using input parameters such as bond spreads and credit spreads. These input parameters are determined with reference to the same issuer (if available) or proxied from comparable issuers or assets

- Financial instruments held at amortised cost

The following sets out the Group's basis for establishing fair values of amortised cost financial instruments and their classification between Levels 1, 2 and 3. As certain categories of financial instruments are not actively traded, there is a significant level of management judgement involved in calculating the fair values:

- Cash and balances at central banks: The fair value of cash and balances at central banks is their carrying amounts
- Debt securities in issue, subordinated liabilities and other borrowed funds: The aggregate fair values are calculated based on quoted market prices. For those notes where quoted market prices are not available, a discounted cash flow model is used based on a current market related yield curve appropriate for the remaining term to maturity
- Deposits and borrowings: The estimated fair value of deposits with no stated maturity is the amount repayable on demand. The estimated fair value of fixed interest-bearing deposits and other borrowings without quoted market prices is based on discounted cash flows using the prevailing market rates for debts with a similar credit risk and remaining maturity
- Investment securities: For investment securities that do not have directly observable market values, the Group utilises a number of valuation techniques to determine fair value. Where available, securities are valued using input proxies from the same or closely related underlying (for example, bond spreads from the same or closely related issuer) or input proxies from a different underlying (for example, a similar bond but using spreads for a particular sector and rating). Certain instruments cannot be proxies as set out above, and in such cases the positions are valued using non-market observable inputs. This includes those instruments held at amortised cost and predominantly relates to asset-backed securities. The fair value for such instruments is usually proxies from internal assessments of the underlying cash flows
- Loans and advances to banks and customers: For loans and advances to banks, the fair value of floating rate placements and overnight deposits is their carrying amount. The estimated fair value of fixed interest-bearing deposits is based on discounted cash flows using the prevailing money market rates for debts with a similar credit risk and remaining maturity. The Group's loans and advances to customers' portfolio is well diversified by geography and industry. Approximately a quarter of the portfolio reprices within one month, and approximately half re-prices within 12 months. Loans and advances are presented net of provisions for impairment. The fair value of loans and advances to customers with a residual maturity of less than one year generally approximates the carrying value. The estimated fair value of loans and advances with a residual maturity of more than one year represents the discounted amount of future cash flows expected to be received, including assumptions relating to prepayment rates and credit risk. Expected cash flows are discounted at current market rates to determine fair value. The Group has a wide range of individual instruments within its loans and advances portfolio and as a result providing quantification of the key assumptions used to value such instruments is impractical
- Other assets: Other assets comprise primarily of cash collateral and trades pending settlement. The carrying amount of these financial instruments is considered to be a reasonable approximation of fair value as they are either short-term in nature or reprice to current market rates frequently

Fair value adjustments

When establishing the exit price of a financial instrument using a valuation technique, the Group considers adjustments to the modelled price which market participants would make when pricing that instrument. The main valuation adjustments (described further below) in determining fair value for financial assets and financial liabilities are as follows:

	31.12.18 \$million	31.12.17 \$million
Bid-offer valuation adjustment	67	82
CVA	196	229
DVA	(143)	(66)
Model valuation adjustment	6	6
FVA	60	79
Others (including day one)	159	148
Total	345	478

- **Bid-offer valuation adjustment:** Where market parameters are marked on a mid-market basis in the revaluation systems, a bid-offer valuation adjustment is required to quantify the expected cost of neutralising the business' positions through dealing away in the market, thereby bringing long positions to bid and short positions to offer. The methodology to calculate the bid-offer adjustment for a derivative portfolio involves netting between long and short positions and the grouping of risk by strike and tenor based on the hedging strategy where long positions are marked to bid and short positions marked to offer in the systems
- **Credit valuation adjustment (CVA):** The Group makes CVA adjustment against the fair value of derivative products. CVA is an adjustment to the fair value of the transactions to reflect the possibility that our counterparties may default and we may not receive the full market value of the outstanding transactions. It represents an estimate of the adjustment a market participant would include when deriving a purchase price to acquire our exposures. CVA is calculated for each subsidiary, and within each entity for each counterparty to which the entity has exposure and takes account of any collateral we may hold. The Group calculates the CVA by using estimates of future positive exposure, market-implied probability of default (PD) and recovery rates. Where market-implied data is not readily available, we use market-based proxies to estimate the PD. Wrong-way risk occurs when the exposure to a counterparty is adversely correlated with the credit quality of that counterparty, and the Group has implemented a model to capture this impact for certain key wrong-way exposures. The Group also captures the uncertainties associated with wrong-way risk in its Prudential Valuation Adjustments
- **Day one profit and loss:** In certain circumstances the initial fair value may be based on a valuation technique which may lead to the recognition of profits or losses at the time of initial recognition. However, these profits or losses can only be recognised when the valuation technique used is based primarily on observable market data. In those cases where the initially recognised fair value is based on a valuation model that uses inputs which are not observable in the market, the difference between the transaction price and the valuation model is not recognised immediately in the income statement. The difference is amortised to the income statement until the inputs become observable, or the transaction matures or is terminated
- **Debit valuation adjustment (DVA):** The Group calculates DVA adjustments on its derivative liabilities to reflect changes in its own credit standing. The Group's DVA adjustments will increase if its credit standing worsens and conversely, decrease if its credit standing improves. For derivative liabilities, a DVA adjustment is determined by applying the Group's probability of default to the Group's negative expected exposure against the counterparty. The Group's probability of default and loss expected in the event of default is derived based on bond spreads associated with the Group's issuances and market standard recovery levels. The expected exposure is modelled based on the simulation of the underlying risk factors over the life of the deal booked against the particular counterparty. This simulation methodology incorporates the collateral posted by the Group and the effects of master netting agreements

- **Funding valuation adjustment (FVA):** The Group makes FVA adjustments against derivative products. FVA reflects an estimate of the adjustment to its fair value that a market participant would make to incorporate funding costs that could arise in relation to the exposure. FVA is calculated by determining the net expected exposure at a counterparty level and then applying a funding rate to those exposures that reflect the market cost of funding. The FVA for collateralised derivatives is based on discounting the expected future cash flows at the relevant overnight indexed swap (OIS) rate after taking into consideration the terms of the underlying collateral agreement with the counterparty. The FVA for uncollateralised (including partially collateralised) derivatives incorporates the estimated present value of the market funding cost or benefit associated with funding these transactions
- **Model valuation adjustment:** Valuation models may have pricing deficiencies or limitations that require a valuation adjustment. These pricing deficiencies or limitations arise due to the choice, implementation and calibration of the pricing model

In addition, the Group calculates own credit adjustment (OCA) on its issued debt designated at fair value, including structured notes, in order to reflect changes in its own credit standing. The Group's OCA adjustments will increase if its credit standing worsens and conversely, decrease if its credit standing improves. The Group's OCA adjustments will reverse over time as its liabilities mature. For issued debt and structured notes designated at fair value, an OCA adjustment is determined by discounting the contractual cash flows using a yield curve adjusted for market observed secondary senior unsecured credit spreads. The OCA at 31 December 2018 is \$476 million, other comprehensive income gain \$394 million (31 December 2017: \$82 million, other comprehensive income loss \$249 million).

Fair value hierarchy – financial instruments held at fair value

Assets and liabilities carried at fair value or for which fair values are disclosed have been classified into three levels according to the observability of the significant inputs used to determine the fair values. Changes in the observability of significant valuation inputs during the reporting period may result in a transfer of assets and liabilities within the fair value hierarchy. The Group recognises transfers between levels of the fair value hierarchy when there is a significant change in either its principal market or the level of observability of the inputs to the valuation techniques as at the end of the reporting period.

- **Level 1:** Fair value measurements are those derived from unadjusted quoted prices in active markets for identical assets or liabilities
- **Level 2:** Fair value measurements are those with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets and financial instruments valued using models where all significant inputs are observable
- **Level 3:** Fair value measurements are those where at least one input which could have a significant effect on the instrument's valuation is not based on observable market data

The following tables show the classification of financial instruments held at fair value into the valuation hierarchy:

IFRS 9

	Level 1 \$million	Level 2 \$million	Level 3 \$million	Total \$million
Assets				
Financial instruments held at fair value through profit or loss				
Loans and advances to banks	–	3,768	–	3,768
Loans and advances to customers	–	4,436	492	4,928
Reverse repurchase agreements and other similar secured lending	–	54,769	–	54,769
Debt securities and other eligible bills	8,097	13,562	317	21,976
Of which:				
Government bonds and treasury bills	6,699	6,851	–	13,550
Issued by corporates other than financial institutions	178	3,241	317	3,736
Issued by financial institutions	1,220	3,470	–	4,690
Equity shares	1,364	–	327	1,691
Derivative financial instruments	907	44,702	12	45,621
Of which:				
Foreign exchange	149	31,242	7	31,398
Interest rate	4	12,237	5	12,246
Commodity	754	882	–	1,636
Credit	–	252	–	252
Equity and stock index	–	89	–	89
Investment securities				
Debt securities and other eligible bills	67,624	48,299	412	116,335
Of which:				
Government bonds and treasury bills	52,329	17,928	412	70,669
Issued by corporates other than financial institutions	8,366	9,839	–	18,205
Issued by financial institutions	6,929	20,532	–	27,461
Equity shares	29	4	230	263
Total financial instruments at 31 December 2018¹	78,021	169,540	1,790	249,351
Liabilities				
Financial instruments held at fair value through profit or loss				
Deposits by banks	–	314	4	318
Customer accounts	–	6,751	–	6,751
Repurchase agreements and other similar secured borrowing	–	43,000	–	43,000
Debt securities in issue	–	6,966	439	7,405
Short positions	1,999	1,227	–	3,226
Derivative financial instruments	809	45,995	405	47,209
Of which:				
Foreign exchange	137	32,655	7	32,799
Interest rate	15	12,583	355	12,953
Commodity	657	452	–	1,109
Credit	–	273	8	281
Equity and stock index	–	32	35	67
Total financial instruments at 31 December 2018¹	2,808	104,253	848	107,909

1 The above table does not include held for sale assets of \$887 million and liabilities of \$198 million. These are reported in Note 21 together with their fair value hierarchy

There were no significant changes to valuation or levelling approaches in 2018.

There were no significant transfers of financial assets and liabilities measured at fair value between Level 1 and Level 2 during the year.

IFRS 9

	Level 1 \$million	Level 2 \$million	Level 3 \$million	Total \$million
Assets				
Financial instruments held at fair value through profit or loss				
Loans and advances to banks	–	2,794	71	2,865
Loans and advances to customers	–	3,190	717	3,907
Reverse repurchase agreements and other similar secured lending	–	45,518	–	45,518
Debt securities and other eligible bills	5,860	13,924	431	20,215
Of which:				
Government bonds and treasury bills	4,988	5,529	–	10,517
Issued by corporates other than financial institutions	171	4,115	280	4,566
Issued by financial institutions	701	4,280	151	5,132
Equity shares	1,035	–	1,100	2,135
Derivative financial instruments	402	46,589	40	47,031
Of which:				
Foreign exchange	97	35,641	17	35,755
Interest rate	2	10,065	7	10,074
Commodity	303	609	2	914
Credit	–	249	–	249
Equity and stock index	–	25	14	39
Investment securities				
Debt securities and other eligible bills	61,083	47,010	318	108,411
Of which:				
Government bonds and treasury bills	51,095	21,417	318	72,830
Issued by corporates other than financial institutions	5,647	7,061	–	12,708
Issued by financial institutions	4,341	18,532	–	22,873
Equity shares	59	5	150	214
Total financial instruments at 1 January 2018	68,439	159,030	2,827	230,296
Liabilities				
Financial instruments held at fair value through profit or loss				
Deposits by banks	–	668	69	737
Customer accounts	–	5,236	–	5,236
Repurchase agreements and other similar secured borrowing	–	38,140	–	38,140
Debt securities in issue	–	6,581	442	7,023
Short positions	1,495	2,142	–	3,637
Derivative financial instruments	470	47,606	25	48,101
Of which:				
Foreign exchange	90	36,149	–	36,239
Interest rate	9	9,851	18	9,878
Commodity	371	590	–	961
Credit	–	871	2	873
Equity and stock index	–	145	5	150
Total financial instruments at 1 January 2018	1,965	100,373	536	102,874

The table above is the representation as at 1 January 2018 of the balances after the implementation of IFRS 9.

IAS 39

	Level 1 \$million	Level 2 \$million	Level 3 \$million	Total \$million
Assets				
Financial instruments held at fair value through profit or loss				
Loans and advances to banks	–	2,501	71	2,572
Loans and advances to customers	–	2,792	126	2,918
Reverse repurchase agreements and other similar secured lending	–	912	–	912
Debt securities and other eligible bills	5,860	13,800	51	19,711
Of which:				
Government bonds and treasury bills	4,988	5,531	–	10,519
Issued by corporates other than financial institutions	171	4,017	48	4,236
Issued by financial institutions	701	4,252	3	4,956
Equity shares	725	–	726	1,451
Derivative financial instruments	402	46,589	40	47,031
Of which:				
Foreign exchange	97	35,641	17	35,755
Interest rate	2	10,065	7	10,074
Commodity	303	609	2	914
Credit	–	249	–	249
Equity and stock index	–	25	14	39
Investment securities				
Debt securities and other eligible bills	61,246	47,511	404	109,161
Of which:				
Government bonds and treasury bills	51,257	21,364	318	72,939
Issued by corporates other than financial institutions	5,648	7,590	86	13,324
Issued by financial institutions	4,341	18,557	–	22,898
Equity shares	369	5	520	894
Total financial instruments at 31 December 2017¹	68,602	114,110	1,938	184,650
Liabilities				
Financial instruments held at fair value through profit or loss				
Deposits by banks	–	668	69	737
Customer accounts	–	5,236	–	5,236
Debt securities in issue	–	6,581	442	7,023
Short positions	1,495	2,142	–	3,637
Derivative financial instruments	470	47,606	25	48,101
Of which:				
Foreign exchange	90	36,149	–	36,239
Interest rate	9	9,851	18	9,878
Commodity	371	590	–	961
Credit	–	871	2	873
Equity and stock index	–	145	5	150
Total financial instruments at 31 December 2017	1,965	62,233	536	64,734

1 The above table does not include held for sale assets of \$466 million. This is reported in Note 21 together with the fair value hierarchy

There were no significant changes to valuation or levelling approaches in 2017.

There were no significant transfers of financial assets and liabilities measured at fair value between Level 1 and Level 2 during 2017.

Fair value hierarchy – financial instruments measured at amortised cost

The following table shows the carrying amounts and incorporates the Group's estimate of fair values of those financial assets and liabilities not presented on the Group's balance sheet at fair value. These fair values may be different from the actual amount that will be received or paid on the settlement or maturity of the financial instrument. For certain instruments, the fair value may be determined using assumptions for which no observable prices are available.

IFRS 9

	Carrying value \$million	Fair value			Total \$million
		Level 1 \$million	Level 2 \$million	Level 3 \$million	
Assets					
Cash and balances at central banks ¹	57,511	–	57,511	–	57,511
Loans and advances to banks	61,414	–	61,357	–	61,357
of which: reverse repurchase agreements and other similar secured lending	3,815	–	3,842	–	3,842
Loans and advances to customers	256,557	–	18,514	238,797	257,311
of which: reverse repurchase agreements and other similar secured lending	3,151	–	2,409	744	3,153
Investment securities	9,303	–	8,953	8	8,961
Other assets ¹	32,678	–	32,673	–	32,673
Assets held for sale	135	–	135	–	135
At 31 December 2018	417,598	–	179,143	238,805	417,948
Liabilities					
Deposits by banks	29,715	–	29,715	–	29,715
Customer accounts	391,013	–	391,018	–	391,018
Repurchase agreements and other similar secured borrowing	1,401	–	1,401	–	1,401
Debt securities in issue	46,454	17,009	29,195	–	46,204
Subordinated liabilities and other borrowed funds	15,001	14,505	23	–	14,528
Other liabilities ¹	37,945	–	37,945	–	37,945
At 31 December 2018	521,529	31,514	489,297	–	520,811

IFRS 9

	Carrying value \$million	Fair value			Total \$million
		Level 1 \$million	Level 2 \$million	Level 3 \$million	
Assets					
Cash and balances at central banks ¹	58,864	–	58,864	–	58,864
Loans and advances to banks	62,295	–	62,273	4	62,277
of which: reverse repurchase agreements and other similar secured lending	5,101	–	5,107	–	5,107
Loans and advances to customers	251,507	–	17,684	234,568	252,252
of which: reverse repurchase agreements and other similar secured lending	4,566	–	2,399	2,174	4,573
Investment securities	7,188	–	7,133	86	7,219
Other assets ¹	29,922	–	29,911	–	29,911
Assets held for sale	62	–	62	–	62
At 1 January 2018	409,838	–	175,927	234,658	410,585
Liabilities					
Deposits by banks	30,945	–	30,939	–	30,939
Customer accounts	370,509	–	370,489	–	370,489
Repurchase agreements and other similar secured borrowing	1,639	–	1,639	–	1,639
Debt securities in issue	46,379	15,264	30,158	–	45,422
Subordinated liabilities and other borrowed funds	17,176	17,456	161	–	17,617
Other liabilities ¹	34,982	–	34,982	–	34,982
At 1 January 2018	501,630	32,720	468,368	–	501,088

1 The carrying amount of these financial instruments is considered to be a reasonable approximation of fair value as they are short-term in nature or reprice to current market rates frequently

The table above is the representation as at 1 January 2018 of the balances after the implementation of IFRS 9.

IAS 39

	Carrying value \$million	Level 1 \$million	Fair value		Total \$million
			Level 2 \$million	Level 3 \$million	
Assets					
Cash and balances at central banks ¹	58,864	–	58,864	–	58,864
Loans and advances to banks	78,188	–	78,069	23	78,092
of which: reverse repurchase agreements and other similar secured lending	20,694	–	20,681	19	20,700
Loans and advances to customers	282,288	–	17,031	266,011	283,042
of which: reverse repurchase agreements and other similar secured lending	33,581	–	2,387	31,199	33,586
Investment securities	6,970	–	6,955	36	6,991
Other assets ¹	29,922	–	29,922	–	29,922
Assets held for sale	62	–	62	–	62
At 31 December 2017	456,294	–	190,903	266,070	456,973
Liabilities					
Deposits by banks	30,945	–	30,939	–	30,939
Customer accounts	370,509	–	370,489	–	370,489
Repurchase agreements and other similar secured borrowing	39,783	–	39,783	–	39,783
Debt securities in issue	46,379	15,264	30,158	–	45,422
Subordinated liabilities and other borrowed funds	17,176	17,456	161	–	17,617
Other liabilities ¹	34,982	–	34,982	–	34,982
At 31 December 2017	539,774	32,720	506,512	–	539,232

¹ The carrying amount of these financial instruments is considered to be a reasonable approximation of fair value as they are short-term in nature or reprice to current market rates frequently

Loans and advances to customers by client segment¹

IFRS 9

	31.12.18					
	Carrying value			Fair value		
	Stage 3 \$million	Stage 1 and stage 2 \$million	Total \$million	Stage 3 \$million	Stage 1 and stage 2 \$million	Total \$million
Corporate & Institutional Banking	1,758	102,919	104,677	1,818	102,791	104,609
Retail Banking	436	100,799	101,235	447	101,810	102,257
Commercial Banking	539	26,220	26,759	652	25,989	26,641
Private Banking	135	13,481	13,616	134	13,442	13,576
Central & other items	–	10,270	10,270	–	10,228	10,228
At 31 December 2018	2,868	253,689	256,557	3,051	254,260	257,311

IFRS 9

	01.01.18					
	Carrying value			Fair value		
	Stage 3 \$million	Stage 1 and stage 2 \$million	Total \$million	Stage 3 \$million	Stage 1 and stage 2 \$million	Total \$million
Corporate & Institutional Banking	2,355	96,823	99,178	3,729	95,528	99,257
Retail Banking	429	101,617	102,046	465	102,232	102,697
Commercial Banking	587	27,049	27,636	687	26,970	27,657
Private Banking	116	13,207	13,323	116	13,196	13,312
Central & other items	–	9,324	9,324	–	9,329	9,329
At 1 January 2018	3,487	248,020	251,507	4,997	247,255	252,252

¹ Loans and advances includes reverse repurchase agreements and other similar secured lending: carrying value \$3,151 million and fair value \$3,153 million (1 January 2018: \$4,566 million and \$4,573 million; 31 December 2017: \$33,581 million and \$33,586 million respectively)

	31.12.17					
	Carrying value			Fair value		
	Impaired \$million	Not impaired \$million	Total \$million	Impaired \$million	Not impaired \$million	Total \$million
Corporate & Institutional Banking	2,465	126,224	128,689	2,491	126,695	129,186
Retail Banking	420	102,593	103,013	422	102,828	103,250
Commercial Banking	596	27,296	27,892	646	27,269	27,915
Private Banking	140	13,211	13,351	140	13,202	13,342
Central & other items	–	9,343	9,343	–	9,349	9,349
At 31 December 2017	3,621	278,667	282,288	3,699	279,343	283,042

1 Loans and advances includes reverse repurchase agreements and other similar secured lending: carrying value \$3,151 million and fair value \$3,153 million (1 January 2018: \$4,566 million and \$4,573 million; 31 December 2017: \$33,581 million and \$33,586 million respectively)

Level 3 summary and significant unobservable inputs

The following table presents the Group's primary Level 3 financial instruments which are held at fair value. The table also presents the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and the weighted average of those inputs:

Instrument	Value at 31 December 2018		Principal valuation technique	Significant unobservable inputs	Range ¹	Weighted average ²
	Assets \$million	Liabilities \$million				
Loans and advances to customers	492	–	Comparable pricing/yield	Price/yield	N/A	N/A
			Discounted cash flows	Recovery rates	25.5% – 100%	94.7%
Debt securities	73	–	Comparable pricing/yield	Price/yield	5.4% – 6.3%	5.6%
Asset-backed securities	244	–	Discounted cash flows	Price/yield	1.0% – 11.0%	3.4%
Deposits by banks	–	4	Discounted cash flows	Credit spreads	1.0% – 1.0%	1.0%
Debt securities in issue	–	439	Discounted cash flows	Credit spreads	0.4% – 4.0%	1.4%
	–	–	Internal pricing model	Equity correlation	4.5% – 89.5%	N/A
	–	–		Equity-FX correlation	-80.0% – 80.0%	N/A
Government bonds and treasury bills	412	–	Discounted cash flows	Price/yield	2.9% – 38.1%	11.2%
Derivative financial instruments of which:						
Foreign exchange	7	7	Option pricing model	Foreign exchange option implied volatility	5.2% – 5.4%	5.4%
			Discounted cash flows	Foreign exchange curves	-0.4% – 3.7%	0.4%
Interest rate	5	355	Discounted cash flows	Interest rate curves	6.4% – 16.8%	8.3%
Credit	–	8	Discounted cash flows	Credit spreads	0.3% – 3.0%	0.9%
Equity	–	35	Internal pricing model	Equity correlation	4.5% – 89.5%	N/A
				Equity-FX correlation	-80.0% – 80.0%	N/A
Equity shares (includes private equity investments) ³	557	–	Comparable pricing/yield	EV/EBITDA multiples	5.2x – 9.1x	8.5x
				P/E multiples	14.5x	14.5x
				P/B multiples	0.6x – 1.0x	1.0x
				P/S multiples	N/A	N/A
				Liquidity discount	10.0% – 20.0%	14.8%
			Discounted cash flows	Discount rates	7.3% – 13.2%	9.6%
Total	1,790	848				

1 The ranges of values shown in the above table represent the highest and lowest levels used in the valuation of the Group's Level 3 financial instruments as at 31 December 2018. The ranges of values used are reflective of the underlying characteristics of these Level 3 financial instruments based on the market conditions at the balance sheet date. However, these ranges of values may not represent the uncertainty in fair value measurements of the Group's Level 3 financial instruments

2 Weighted average for non-derivative financial instruments has been calculated by weighting inputs by the relative fair value. Weighted average for derivatives has been provided by weighting inputs by the risk relevant to that variable. N/A has been entered for the cases where weighted average is not a meaningful indicator

3 The Group has an equity investment in the Series B preferred shares of Ripple Labs, Inc., which owns a digital currency (XRP) and is being carried at a fair value based on the shares' initial offering price. The shares will continue to be valued at the initial offering price until such time as a reliable means of valuing the cash flows and underlying assets is possible or additional sales are observable

The following section describes the significant unobservable inputs identified in the valuation technique table:

- Commodities correlation: This refers to the correlation between two commodity underlyings over a specified time
- Comparable price/yield is a valuation methodology in which the price of a comparable instrument is used to estimate the fair value where there are no direct observable prices. Yield is the interest rate that is used to discount the future cash flows in a discounted cash flow model. Valuation using comparable instruments can be done by calculating an implied yield (or spread over a liquid benchmark) from the price of a comparable instrument, then adjusting that yield (or spread) to derive a value for the instrument. The adjustment should account for relevant differences in the financial instruments such as maturity and/or credit quality. Alternatively, a price-to-price basis can be assumed between the comparable instrument and the instrument being valued in order to establish the value of the instrument (for example, deriving a fair value for a junior unsecured bond from the price of a senior secured bond). An increase in price, in isolation, would result in a favourable movement in the fair value of the asset. An increase in yield, in isolation, would result in an unfavourable movement in the fair value of the asset
- Correlation is the measure of how movement in one variable influences the movement in another variable. An equity correlation is the correlation between two equity instruments while an interest rate correlation refers to the correlation between two swap rates
- Credit spread represents the additional yield that a market participant would demand for taking exposure to the credit risk of an instrument
- Discount rate refers to the rate of return used to convert expected cash flows into present value
- EV/EBITDA ratio multiples: This is the ratio of Enterprise Value (EV) to Earnings Before Interest, Taxes, Depreciation and Amortisation (EBITDA). EV is the aggregate market capitalisation and debt minus the cash and cash equivalents. An increase in EV/EBITDA multiples in isolation, will result in a favourable movement in the fair value of the unlisted firm
- Interest rate curves is the term structure of interest rates and measure of future interest rates at a particular point in time
- Liquidity discounts in the valuation of unlisted investments: A liquidity discount is primarily applied to the valuation of unlisted firms' investments to reflect the fact that these stocks are not actively traded. An increase in liquidity discount will result in unfavourable movement in the fair value of the unlisted firm
- Price-Book (P/B) multiple: This is the ratio of the market value of equity to the book value of equity. An increase in P/B multiple will result in a favourable movement in the fair value of the unlisted firm
- Price-Earnings (P/E) multiples: This is the ratio of the market capitalisation to the net income after tax. The multiples are determined from multiples of listed comparables, which are observable. An increase in P/E multiple will result in a favourable movement in the fair value of the unlisted firm
- Price-Sales (P/S) multiple: This is the ratio of the market value of equity to sales. An increase in P/S multiple will result in a favourable movement in the fair value of the unlisted firm
- Recovery rates are the expectation of the rate of return resulting from the liquidation of a particular loan. As the probability of default increases for a given instrument, the valuation of that instrument will increasingly reflect its expected recovery level assuming default. An increase in the recovery rate, in isolation, would result in a favourable movement in the fair value of the loan
- Volatility represents an estimate of how much a particular instrument, parameter or index will change in value over time. Generally, the higher the volatility, the more expensive the option will be

Level 3 movement tables – financial assets

The table below analyses movements in Level 3 financial assets carried at fair value.

Assets	Held at fair value through profit or loss					Investment securities			
	Loans and advances to banks \$million	Loans and advances to customers \$million	Reverse repurchase agreements and other similar secured lending \$million	Debt securities and other eligible bills \$million	Equity shares \$million	Derivative financial instruments \$million	Debt securities and other eligible bills \$million	Equity shares \$million	Total \$million
At 31 December 2017 – IAS 39	71	126	–	51	726	40	404	520	1,938
Transfer due to IFRS 9 ¹	–	591	–	380	374	–	(86)	(370)	889
At 1 January 2018 – IFRS 9	71	717	–	431	1,100	40	318	150	2,827
Total gains/(losses) recognised in income statement	2	13	–	(44)	(10)	(3)	22	–	(20)
Net trading income	2	13	–	(44)	(10)	(3)	–	–	(42)
Other operating income	–	–	–	–	–	–	22	–	22
Total (losses)/gains recognised in other comprehensive income (OCI)	–	–	–	–	–	–	(2)	40	38
Fair value through OCI reserve	–	–	–	–	–	–	–	41	41
Exchange difference	–	–	–	–	–	–	(2)	(1)	(3)
Purchases	–	328	55	120	143	70	445	38	1,199
Sales	–	(254)	–	(215)	(176)	(40)	–	(5)	(690)
Settlements	(71)	(261)	–	(6)	–	(14)	(210)	–	(562)
Transfers out ²	(101)	(112)	(55)	(8)	(743)	(43)	(161)	(1)	(1,224)
Transfers in ³	99	61	–	39	13	2	–	8	222
At 31 December 2018	–	492	–	317	327	12	412	230	1,790
Total unrealised (losses)/gains recognised in the income statement, within net trading income, relating to change in fair value of assets held at 31 December 2018	–	(2)	–	–	22	(3)	–	–	17

1 The increase in Level 3 instruments is a result of loans and debt securities that failed SPPI, with unobservable valuation inputs. Further, Level 3 equity shares which were classified as available-for-sale equity under IAS 39 are now classified as fair value through profit or loss under IFRS 9

2 Transfers out include loans and advances, reverse repurchase agreements, debt securities and other eligible bills, equity shares and derivative financial instruments where the valuation parameters became observable during the year, and were transferred to Level 1 and Level 2. Transfers out further relates to \$743 million equity shares held for sale

3 Transfers in primarily relate to loans and advances, debt securities and other eligible bills, equity shares and derivative financial instruments where the valuation parameters become unobservable during the year

The table below analyses movements in Level 3 financial assets carried at fair value.

	Held at fair value through profit or loss				Investment securities			Total \$million
	Loans and advances to banks \$million	Loans and advances to customers \$million	Debt securities and other eligible bills \$million	Equity shares \$million	Derivative financial instruments \$million	Debt securities and other eligible bills \$million	Equity shares \$million	
Assets								
At 1 January 2017	–	179	4	995	360	199	549	2,286
Total (losses)/gains recognised in income statement	(1)	(11)	(2)	121	(4)	(15)	(9)	79
Net interest income	–	–	–	–	–	(15)	–	(15)
Net trading income	(1)	(11)	(2)	121	(4)	–	(1)	102
Other operating income	–	–	–	–	–	–	9	9
Impairment charge	–	–	–	–	–	–	(17)	(17)
Total gains recognised in other comprehensive income	–	–	–	–	–	7	54	61
Available-for-sale reserve	–	–	–	–	–	–	41	41
Exchange difference	–	–	–	–	–	7	13	20
Purchases	–	–	94	111 ³	6	399	22	632
Sales	–	–	(20)	(254)	(13)	(1)	(91)	(379)
Settlements	–	–	–	–	(250)	(169)	–	(419)
Transfers out ¹	–	(72)	(25)	(247) ³	(61)	(16)	(5)	(426)
Transfers in ²	72	30	–	–	2	–	–	104
At 31 December 2017	71	126	51	726	40	404	520	1,938
Total unrealised losses recognised in the income statement, within net interest income, relating to change in fair value of assets held at 31 December 2017	–	–	–	–	–	(15)	–	(15)
Total unrealised (losses)/gains recognised in the income statement, within net trading income, relating to change in fair value of assets held at 31 December 2017	(1)	(5)	(2)	65	(7)	–	(1)	49
Total unrealised losses recognised in the income statement, within impairment charges at 31 December 2017	–	–	–	–	–	–	(17)	(17)

1 Transfers out include debt securities, equity shares and derivative financial instruments where the valuation parameters became observable during the year, and were transferred to Level 1 and Level 2. Transfers out further relate to equity shares and debt securities held at fair value through profit or loss which are now presented under held for sale

2 Transfers in during the year primarily relate to loans and advances and derivative financial instruments where the valuation parameters become unobservable during the year

3 When an entity is consolidated through a step up in ownership, the additional equity shares acquired are disclosed in the Purchases line. Subsequently these shares are eliminated on consolidation and disclosed in the Transfers out line. Any underlying Level 3 financial instruments which are recognised as a result of the consolidation are disclosed in the Transfers in line

Level 3 movement tables – financial liabilities

	31.12.18			
	Deposits by banks \$million	Debt securities in issue \$million	Derivative financial instruments \$million	Total \$million
At 1 January 2018	69	442	25	536
Total losses/(gains) recognised in income statement – net trading income	1	(22)	30	9
Issues	4	167	439	610
Settlements	(70)	(148)	(103)	(321)
Transfers out ¹	–	–	(2)	(2)
Transfers in ²	–	–	16	16
At 31 December 2018	4	439	405	848
Total unrealised (gains)/losses recognised in the income statement, within net trading income, relating to change in fair value of liabilities held at 31 December 2018	–	(5)	8	3

	31.12.17			
	Deposits by banks \$million	Debt securities in issue \$million	Derivative financial instruments \$million	Total \$million
At 1 January 2017	–	530	316	846
Total gains recognised in income statement – net trading income	–	(9)	(24)	(33)
Issues	79	274	1	354
Settlements	(10)	(353)	(266)	(629)
Transfers out ¹	–	–	(2)	(2)
At 31 December 2017	69	442	25	536
Total unrealised gains recognised in the income statement, within net trading income, relating to change in fair value of liabilities held at 31 December 2017	–	–	(17)	(17)

1 Transfers out during the year primarily relate to derivative financial instruments where the valuation parameters became observable during the year and were transferred to Level 2 financial liabilities

2 Transfers in during the year primarily relate to derivative financial instruments where the valuation parameters become unobservable during the year

Sensitivities in respect of the fair values of Level 3 assets and liabilities

Sensitivity analysis is performed on products with significant unobservable inputs. The Group applies a 10 per cent increase or decrease on the values of these unobservable inputs, to generate a range of reasonably possible alternative valuations. The percentage shift is determined by statistical analyses performed on a set of reference prices based on the composition of our Level 3 assets. Favourable and unfavourable changes are determined on the basis of changes in the value of the instrument as a result of varying the levels of the unobservable parameters. This Level 3 sensitivity analysis assumes a one-way market move and does not consider offsets for hedges.

	Held at fair value through profit or loss			Fair value through other comprehensive income/available-for-sale		
	Net exposure \$million	Favourable changes \$million	Unfavourable changes \$million	Net exposure \$million	Favourable changes \$million	Unfavourable changes \$million
Financial instruments held at fair value						
Debt securities and other eligible bills	317	339	295	412	415	409
Equity shares	327	360	294	230	253	207
Loans and advances	492	498	481	–	–	–
Derivative financial instruments	(393)	(376)	(410)	–	–	–
Deposits by banks	(4)	(4)	(4)	–	–	–
Debt securities in issue	(439)	(417)	(461)	–	–	–
At 31 December 2018	300	400	195	642	668	616
Financial instruments held at fair value						
Debt securities and other eligible bills	51	56	46	404	415	393
Equity shares	726	799	653	520	572	468
Loans and advances	197	201	194	–	–	–
Derivative financial instruments	15	17	12	–	–	–
Deposits by banks	(69)	(68)	(70)	–	–	–
Debt securities in issue	(442)	(434)	(450)	–	–	–
At 31 December 2017	478	571	385	924	987	861

The reasonably possible alternatives could have increased or decreased the fair values of financial instruments held at fair value through profit or loss and those classified as fair value through other comprehensive income by the amounts disclosed below.

Financial instruments	Fair value changes	31.12.18 \$million	31.12.17 \$million
Held at fair value through profit or loss	Possible increase	100	93
	Possible decrease	(105)	(93)
Fair value through other comprehensive income/available-for-sale	Possible increase	26	63
	Possible decrease	(26)	(63)

14. Derivative financial instruments

Accounting policy

Accounting for derivatives: Derivatives are financial instruments that derive their value in response to changes in interest rates, financial instrument prices, commodity prices, foreign exchange rates, credit risk and indices. Derivatives are categorised as trading unless they are designated as hedging instruments.

Derivatives are initially recognised and subsequently measured at fair value, with revaluation gains recognised in profit or loss (except where cash flow or net investment hedging has been achieved, in which case the effective portion of changes in fair value is recognised within other comprehensive income).

Fair values may be obtained from quoted market prices in active markets, recent market transactions, and valuation techniques, including discounted cash flow models and option pricing models, as appropriate. Where the initially recognised fair value of a derivative contract is based on a valuation model that uses inputs which are not observable in the market, it follows the same initial recognition accounting policy as for other financial assets and liabilities. All derivatives are carried as assets when fair value is positive and as liabilities when fair value is negative.

The tables below analyse the notional principal amounts and the positive and negative fair values of derivative financial instruments. Notional principal amounts are the amounts of principal underlying the contract at the reporting date.

Derivatives	31.12.18			31.12.17		
	Notional principal amounts \$million	Assets \$million	Liabilities \$million	Notional principal amounts \$million	Assets \$million	Liabilities \$million
Foreign exchange derivative contracts:						
Forward foreign exchange contracts	2,080,513	16,457	17,264	1,825,488	18,905	19,702
Currency swaps and options	856,660	14,941	15,535	724,021 ¹	16,850	16,537
Exchange traded futures and options	—	—	—	100	—	—
	2,937,173	31,398	32,799	2,549,609	35,755	36,239
Interest rate derivative contracts:						
Swaps	3,693,897	10,800	11,331	2,831,025	8,603	8,414
Forward rate agreements and options	489,943	1,325	1,511	153,697	1,351	1,364
Exchange traded futures and options	775,518	121	111	637,883	120	100
	4,959,358	12,246	12,953	3,622,605	10,074	9,878
Credit derivative contracts	39,343	252	281	34,772	249	873
Equity and stock index options	2,960	89	67	2,520	39	150
Commodity derivative contracts	69,601	1,636	1,109	74,133	914	961
Total derivatives	8,008,435	45,621	47,209	6,283,639	47,031	48,101

1 Currency swaps and options were previously reported on a gross basis. In line with industry practice, these are now reported on a single leg basis. Prior year comparatives have been re-presented accordingly

The Group limits exposure to credit losses in the event of default by entering into master netting agreements with certain market counterparties. As required by IAS 32, exposures are only presented net in these accounts where they are subject to legal right of offset and intended to be settled net in the ordinary course of business.

The Derivatives and Hedging sections of the Risk review and Capital review explain the Group's risk management of derivative contracts and application of hedging.

Derivatives held for hedging

Hedge accounting: The method of recognising the resulting fair value gain or loss depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as either:

- a) Hedges of the fair value of recognised assets or liabilities or firm commitments (fair value hedge)
- b) Hedges of highly probable future cash flows attributable to a recognised asset or liability, or a forecasted transaction (cash flow hedge)
- c) Hedges of the net investment of a foreign operation (net investment hedges)

Hedge accounting is used for derivatives designated in this way, provided certain criteria are met.

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective in offsetting changes in fair values or cash flows of hedged items. Expected effectiveness should be close to 100 per cent and actual results of the hedge using regression analysis, are expected to be within a range of 80-125 per cent.

The Group may enter into economic hedges that do not qualify for IAS 39 hedge accounting treatment. Where these economic hedges use derivatives to offset risk, the derivatives are fair valued, with fair value changes recognised in profit or loss.

Fair value hedge: Changes in the fair value of derivatives that are designated and qualify as fair value hedging instruments are recorded in the income statement, within trading income, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk. If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is amortised to the income statement over the period to maturity or derecognition.

The Group's approach to managing market risk, including interest rate and currency risk is discussed in Market risk.

Included in the table above are derivatives held for hedging purposes as follows:

	31.12.18			31.12.17		
	Notional principal amounts \$million	Assets \$million	Liabilities \$million	Notional principal amounts \$million	Assets \$million	Liabilities \$million
Derivatives designated as fair value hedges:						
Interest rate swaps	63,675	306	573	45,420	456	272
Currency swaps	8,963	30	942	14,395 ¹	174	899
	72,638	336	1,515	59,815	630	1,171
Derivatives designated as cash flow hedges:						
Interest rate swaps	10,733	59	67	13,348	43	48
Forward foreign exchange contracts	184	–	18	356	2	29
Currency swaps	2,701	57	22	2,987	23	107
	13,618	116	107	16,691	68	184
Derivatives designated as net investment hedges:						
Forward foreign exchange contracts	5,200	61	7	3,470	–	188
Total derivatives held for hedging	91,456	513	1,629	79,976	698	1,543

1 Currency swaps were previously reported on a gross basis. In line with industry practice, these are now reported on a single leg basis. Prior year comparatives have been re-presented accordingly

Fair value hedges

The Group uses interest rate swaps to exchange fixed rates for floating rates on funding to match floating rates received on assets, or exchange fixed rates on assets to match floating rates paid on funding. These include fixed rate issued notes, loans and advances to customer and debt securities and other eligible bills.

For qualifying hedges, the fair value changes of the derivative are substantially matched by corresponding fair value changes of the hedged item, both of which are recognised in profit or loss. All qualifying hedges were effective. Included in net losses and net gains below is an adjustment in respect of hedge ineffectiveness. The main source of hedge ineffectiveness is due to basis risk on hedged currencies.

At 31 December 2018 the Group held the following interest rate swaps as hedging instruments in fair value hedges of interest risk.

Maturity of hedging instruments

Risk category	31.12.18				Total \$million
	Less than one month \$million	More than one month and less than one year \$million	One to five years \$million	More than five years \$million	
Interest rate and currency risk					
Hedge of issued notes					
Notional amount of issued notes	1,030	2,160	15,298	7,937	26,461
Hedge of loans and advances, debt securities and other eligible bills					
Notional of loans and advances	—	489	1,206	62	1,757
Notional of debt securities and other eligible bills	322	14,495	28,744	859	44,420
Total derivatives designated as fair value hedges	1,352	17,144	55,248	8,894	72,638

Effects on hedge accounting on financial position and performance

Hedging instruments and ineffectiveness

	31.12.18				
	Notional \$million	Carrying Amount		Change in fair value used to calculate hedge ineffectiveness \$million	Ineffectiveness recognised in profit or loss \$million
Interest rate and currency risk		Asset \$million	Liability \$million		
Interest rate swaps – issued notes	19,112	270	311	(73)	—
Cross currency swaps – subordinated notes issued	7,350	—	937	(622)	(93)
Interest rate swaps – loans and advances	309	1	2	(2)	—
Cross currency swaps – loans and advances	1,448	3	5	(4)	—
Interest rate swaps – debt securities and other eligible bills	42,805	32	256	(164)	(3)
Cross currency swaps – debt securities and other eligible bills	1,614	30	4	14	1
Total interest and currency risk derivatives	72,638	336	1,515	(851)	(95)

Hedged items

	31.12.18				
	Carrying amount		Accumulated amount of fair value hedge adjustments included in the carrying amount		Accumulated amortising amount of fair value hedge adjustments no longer designated as hedges \$million
	Asset \$million	Liability \$million	Asset \$million	Liability \$million	
Issued notes	—	26,646	—	982	443
Debt securities and other eligible bills	44,885	—	129	—	37
Loans and advances to customers	1,147	—	5	—	7
Total assets and liabilities being hedged in fair value hedges	46,032	26,646	134	982	487

Net trading income impact

	31.12.18 \$million	31.12.17 \$million
Net losses on hedging instruments	(449)	(154)
Net gains on hedged items ¹	358	81

1 Includes amortisation of fair value adjustments in respect of hedges no longer qualifying for hedge accounting

Cash flow hedges

The Group uses interest rate swaps to manage the variability in future cash flows on assets and liabilities that have floating rates of interest by exchanging the floating rates for fixed rates. It also uses foreign exchange contracts and currency swaps to manage the variability in future exchange rates on its assets and liabilities and costs in foreign currencies.

Gains and losses arising on the effective portion of the hedges are deferred in equity until the variability on the cash flow affects profit or loss, at which time the gains or losses are transferred to profit or loss.

Hedging instruments and ineffectiveness

	31.12.18						
	Notional \$million	Carrying amount		Change in fair value used to calculate hedge ineffectiveness \$million	Changes in the value of the hedging instrument recognised in OCI \$million	Ineffectiveness recognised in profit or loss \$million	Amount reclassified from reserves to income \$million
Interest rate risk							
Interest rate swaps	10,733	59	67	17	17	—	(1)
Currency risk							
Forward foreign exchange contract	184	—	18	9	9	—	—
Cross currency swaps	2,701	57	22	57	57	—	8
Total derivatives designated as cash flow hedges	13,618	116	107	83	83	—	7

Hedged items

	31.12.18		
	Change in the value used for calculating hedge ineffectiveness \$million	Cash flow hedge reserve \$million	Balances remaining in the cash flow hedge reserve from hedging relationships for which hedge accounting is no longer applied \$million
Customer accounts	(66)	18	33
Debt securities and other eligible bills	(9)	(3)	(1)
Loans and advances to customers	(9)	(39)	(12)
Total change in assets and liabilities designated in cash flow hedges	(84)	(24)	20

Impact on profit and loss and other comprehensive income

	31.12.18 \$million	31.12.17 \$million
Losses reclassified from reserves to income statement	(7)	(11)
Losses recognised in operating costs	—	(4)
Gains recognised in other comprehensive income	34	35

The Group has hedged the following cash flows which are expected to impact the income statement in the following years:

	31.12.18						Total \$million
	Less than one year \$million	One to two years \$million	Two to three years \$million	Three to four years \$million	Four to five years \$million	Over five years \$million	
Forecast receivable cash flows	78	30	25	11	2	–	146
Forecast payable cash flows	(199)	(76)	(60)	(57)	(43)	(125)	(560)
Total expected cash flows by maturity	(121)	(46)	(35)	(46)	(41)	(125)	(414)

	31.12.17						Total \$million
	Less than one year \$million	One to two years \$million	Two to three years \$million	Three to four years \$million	Four to five years \$million	Over five years \$million	
Forecast receivable cash flows	122	40	30	22	8	–	222
Forecast payable cash flows	(97)	(83)	(51)	(49)	(48)	(134)	(462)
Total expected cash flows by maturity	25	(43)	(21)	(27)	(40)	(134)	(240)

Net investment hedges

A foreign currency exposure arises from a net investment in subsidiaries that have a different functional currency from that of the Group. This risk arises from the fluctuation in spot exchange rates between the functional currency of the subsidiaries and the Group's functional currency, which causes the amount of the investment to vary.

The Group uses a combination of foreign exchange contracts and non-derivative financial assets to manage the variability in future exchange rates on its net investments in foreign currencies. Gains and losses arising on the effective portion of the hedges are deferred in equity until the net investment is disposed of.

Hedging instruments and ineffectiveness

	31.12.18						Amount reclassified from reserves to income \$million
	Notional \$million	Carrying amount \$million		Change in fair value used to calculate hedge ineffectiveness \$million	Changes in the value of the hedging instrument recognised in OCI \$million	Ineffectiveness recognised in profit or loss \$million	
Derivative forward currency contracts ¹	5,200	61	7	54	54	–	–

¹ These derivative forward currency contracts have a maturity of less than one year

Hedged items

	31.12.18		
	Change in the value used for calculating hedge ineffectiveness \$million	Translation reserve \$million	Balances remaining in the translation reserve from hedging relationships for which hedge accounting is no longer applied \$million
Net investments	(54)	54	–

Impact on other comprehensive income

	31.12.18 \$million	31.12.17 \$million
Gains/(losses) recognised in other comprehensive income	282	(288)

15. Loans and advances to banks and customers

Accounting policy

Refer to Note 13 Financial instruments for the relevant accounting policy.

	31.12.18 \$million	31.12.17 \$million
Loans and advances to banks	61,420	78,193
Individual impairment provision	–	(4)
Portfolio impairment provision	–	(1)
Expected credit loss	(6)	–
	61,414	78,188
Loans and advances to customers	261,455	287,990
Individual impairment provision	–	(5,237)
Portfolio impairment provision	–	(465)
Expected credit loss	(4,898)	–
	256,557	282,288
Total loans and advances to banks and customers	317,971	360,476

The Group has outstanding residential mortgage loans to Korea residents of \$16.9 billion (31 December 2017: \$18.5 billion) and Hong Kong residents of \$27.8 billion (31 December 2017: \$28.3 billion).

Analysis of loans and advances to customers by geographic region and client segments and related impairment provisions as set out within the Risk review and Capital review.

16. Reverse repurchase and repurchase agreements including other similar secured lending and borrowing

Accounting policy

The Group purchases securities (a reverse repurchase agreement – ‘reverse repo’) typically with financial institutions subject to a commitment to resell or return the securities at a predetermined price. These securities are not included in the balance sheet as the Group does not acquire the risks and rewards of ownership, however they are recorded off-balance sheet as collateral received. Consideration paid (or cash collateral provided) is accounted for as a loan asset at amortised cost, unless it is managed on a fair value basis or designated at fair value through profit or loss.

The Group also sells securities (a repurchase agreement – ‘repo’) subject to a commitment to repurchase or redeem the securities at a predetermined price. The securities are retained on the balance sheet as the Group retains substantially all the risks and rewards of ownership and these securities are disclosed as pledged collateral. Consideration received (or cash collateral received) is accounted for as a financial liability at amortised cost, unless it is either mandatorily classified as fair value through profit or loss or irrevocably designated at fair value through profit or loss at initial recognition.

Financial assets are pledged as collateral as part of sales and repurchases, securities borrowing and securitisation transactions under terms that are usual and customary for such activities. The Group is obliged to return equivalent securities.

Repo and reverse repo transactions typically entitle the Group and its counterparties to have recourse to assets similar to those provided as collateral in the event of a default. Securities sold subject to repos, either by way of a Global Master Repurchase Agreement (GMRA), or through a securities sale and Total Return Swap (TRS) continue to be recognised on the balance sheet as the Group retains substantially the associated risks and rewards of the securities (the TRS is not recognised). The counterparty liability is included in deposits by banks or customer accounts, as appropriate. Assets sold under repurchase agreements are considered encumbered as the Group cannot pledge these to obtain funding.

Reverse repurchase agreements and other similar secured lending

	31.12.18 \$million	01.01.18 \$million	31.12.17 \$million
Banks	20,698	21,257	21,259
Customers	41,037	33,928	33,928
	61,735	55,185	55,187
Of which:			
Fair value through profit or loss	54,769	45,518	912
Banks	16,883	16,157	565
Customers	37,886	29,361	347
Held at amortised cost	6,966	9,667	54,275
Banks	3,815	5,101	20,694
Customers	3,151	4,566	33,581

Under reverse repurchase and securities borrowing arrangements, the Group obtains securities on terms which permit it to repledge or resell the securities to others. Amounts on such terms are:

	31.12.18 \$million	01.01.18 \$million	31.12.17 \$million
Securities and collateral received (at fair value)	84,557	75,088	75,088
Securities and collateral which can be repledged or sold (at fair value)	82,534	72,982	72,982
Amounts repledged/transferred to others for financing activities, to satisfy liabilities under sale and repurchase agreements (at fair value)	40,552	34,018	34,018

Repurchase agreements and other similar secured borrowing

	31.12.18 \$million	01.01.18 \$million	31.12.17 \$million
Banks	4,984	3,804	3,804
Customers	39,417	35,975	35,979
	44,401	39,779	39,783
Of which:			
Fair value through profit or loss	43,000	38,140	—
Banks	4,777	3,352	—
Customers	38,223	34,788	—
Held at amortised cost	1,401	1,639	39,783
Banks	207	451	3,804
Customers	1,194	1,188	35,979

The tables below set out the financial assets provided as collateral for repurchase and other secured borrowing transactions:

	31.12.18				
	Fair value through profit or loss \$million	Fair value through other comprehensive income \$million	Amortised cost \$million	Off-balance sheet \$million	Total \$million
Collateral pledged against repurchase agreements					
On-balance sheet					
Debt securities and other eligible bills	2,060	1,974	49	—	4,083
Off-balance sheet					
Repledged collateral received	—	—	—	40,552	40,552
At 31 December 2018	2,060	1,974	49	40,552	44,635

01.01.18					
	Fair value through profit or loss \$million	Fair value through other comprehensive income \$million	Amortised cost \$million	Off-balance sheet \$million	Total \$million
Collateral pledged against repurchase agreements					
On-balance sheet					
Debt securities and other eligible bills	2,178	3,618	—	—	5,796
Off-balance sheet					
Repledged collateral received	—	—	—	34,018	34,018
At 1 January 2018	2,178	3,618	—	34,018	39,814

31.12.17					
	Fair value through profit or loss \$million	Available for sale \$million	Loans and receivables \$million	Off-balance sheet \$million	Total \$million
Collateral pledged against repurchase agreements					
On-balance sheet					
Debt securities and other eligible bills	2,178	3,618	—	—	5,796
Off-balance sheet					
Repledged collateral received	—	—	—	34,018	34,018
At 31 December 2017	2,178	3,618	—	34,018	39,814

17. Goodwill and intangible assets

Accounting policy

Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the identifiable net assets and contingent liabilities of the acquired subsidiary, associate or joint venture at the date of acquisition. Goodwill on acquisitions of subsidiaries is included in Intangible assets. Goodwill on acquisitions of associates is included in Investments in associates. Goodwill included in intangible assets is assessed at each balance sheet date for impairment and carried at cost less any accumulated impairment losses. Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold. Detailed calculations are performed based on discounting expected cash flows of the relevant cash generating units (CGUs) and discounting these at an appropriate discount rate, the determination of which requires the exercise of judgement. Goodwill is allocated to CGUs for the purpose of impairment testing. CGUs represent the lowest level within the Group which generate separate cash inflows and at which the goodwill is monitored for internal management purposes. These are equal to or smaller than the Group's reportable segments (as set out in Note 2) as the Group views its reportable segments on a global basis. The major CGUs to which goodwill has been allocated are set out in the CGU table.

Significant accounting estimates and judgements

The carrying amount of goodwill is based on the application of judgements including the basis of goodwill impairment calculation assumptions. Judgement is also applied in determination of cash generating units.

Estimates include forecasts used for determining cash flows for CGUs and discount rates which factor in country risk free rates and applicable risk premiums. The Group undertakes an annual assessment to evaluate whether the carrying value of goodwill on-balance sheet is impaired. The estimation of future cash flows and the level to which they are discounted is inherently uncertain and requires significant judgement and subject to potential change over time.

Acquired intangibles

At the date of acquisition of a subsidiary or associate, intangible assets which are deemed separable and that arise from contractual or other legal rights are capitalised and included within the net identifiable assets acquired. These intangible assets are initially measured at fair value, which reflects market expectations of the probability that the future economic benefits embodied in the asset will flow to the entity, and are amortised on the basis of their expected useful lives (4 to 16 years). At each balance sheet date, these assets are assessed for indicators of impairment. In the event that an asset's carrying amount is determined to be greater than its recoverable amount, the asset is written down immediately.

Computer software

Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. Direct costs of the development of separately identifiable internally generated software are capitalised where it is probable that future economic benefits attributable to the asset will flow from its use (internally generated software). These costs include salaries and wages, materials, service providers and contractors, and directly attributable overheads. Costs incurred in the ongoing maintenance of software are expensed immediately when incurred. Internally generated software is amortised over a three to five year time period.

	31.12.18				31.12.17			
	Goodwill \$million	Acquired intangibles \$million	Computer software \$million	Total \$million	Goodwill \$million	Acquired intangibles \$million	Computer software \$million	Total \$million
Cost								
At 1 January	3,252	578	2,529	6,359	3,456	505	1,881	5,842
Exchange translation differences	(105)	(24)	(67)	(196)	85	38	152	275
Additions	–	1	695	696	31	44	704	779
Disposals	–	–	–	–	–	–	(2)	(2)
Impairment	–	–	–	–	(320)	–	–	(320)
Amounts written off	–	(5)	(322)	(327)	–	(9)	(206)	(215)
Classified as held for sale	(31)	(40)	–	(71)	–	–	–	–
At 31 December	3,116	510	2,835	6,461	3,252	578	2,529	6,359
Provision for amortisation								
At 1 January	–	470	876	1,346	–	431	692	1,123
Exchange translation differences	–	(22)	(21)	(43)	–	35	42	77
Amortisation	–	10	363	373	–	11	320	331
Impairment charge	–	–	46	46	–	2	21	23
Disposals	–	–	–	–	–	–	(2)	(2)
Amounts written off	–	–	(317)	(317)	–	(9)	(197)	(206)
At 31 December	–	458	947	1,405	–	470	876	1,346
Net book value	3,116	52	1,888	5,056	3,252	108	1,653	5,013

At 31 December 2018, accumulated goodwill impairment losses incurred from 1 January 2005 amounted to \$2,801 million (31 December 2017: \$2,801 million), of which \$nil million was recognised in 2018 (31 December 2017: \$320 million).

Goodwill

CGU structure

When considering the generation of independent cash inflows and appropriate level of management, Corporate Finance, Private Banking and Transaction Banking are managed on a global basis, while Retail Banking, Commercial Banking, Central and others including Treasury Market activities are managed on a country basis.

Testing of goodwill for impairment

An annual assessment is made as to whether the current carrying value of goodwill is impaired. For the purposes of impairment testing, goodwill is allocated at the date of acquisition to a CGU. Goodwill is considered to be impaired if the carrying amount of the relevant CGU exceeds its recoverable amount. Indicators of impairment include changes in the economic performance and outlook of the region including geopolitical changes, changes in market value of regional investments, large credit defaults and strategic decisions to exit certain regions. The recoverable amounts for all the CGUs were measured based on value-in-use (ViU). The calculation of ViU for each CGU is calculated using five-year cash flow projections and an estimated terminal value based on a perpetuity value after year five. The cash flow projections are based on forecasts approved by management up to 2023. The perpetuity terminal value amount is calculated using year five cash flows using long-term GDP growth rates. All cash flows are discounted using discount rates which reflect market rates appropriate to the CGU.

The goodwill allocated to each CGU and key assumptions used in determining the recoverable amounts are set out below and are solely estimates for the purposes of assessing impairment of acquired goodwill.

	31.12.18			31.12.17		
Cash generating unit	Goodwill \$million	Pre-tax discount rate per cent	Long-term forecast GDP growth rates per cent	Goodwill \$million	Pre-tax discount rate per cent	Long-term forecast GDP growth rates per cent
Country CGUs						
Greater China & North Asia	887			913		
Hong Kong	357	13.2	3.0	357	14.9	3.0
Taiwan	530	13.0	2.1	556	13.9	2.1
Africa & Middle East	520			569		
Pakistan	194	22.8	3.4	242	21.3	5.8
UAE	204	9.0	3.3	204	10.8	3.2
Others (5) ¹	122	10.6–19.0	2.6–5.3	123	11.5–19.6	2.0–6.1
ASEAN & South Asia	734			790		
India	262	19.9	7.7	289	18.9	7.9
Singapore	339	15.9	2.7	343	11.8	2.6
Others (6) ²	133	15.4–20.5	4.4–7.0	158	15.2–19.0	4.0–7.0
Global CGUs	975			980		
Global Private Banking	84	10.3	3.6	84	10.2	3.7
Global Corporate Finance	213	10.3	3.6	219	10.3	3.7
Global Transaction Banking	678	10.3	3.6	677	10.3	3.7
	3,116			3,252		

1 Bahrain, Ghana, Jordan, Oman and Qatar

2 Bangladesh, Brunei, Indonesia, Nepal, Sri Lanka and Vietnam

The Group has performed sensitivity analysis on the key assumptions for each CGU's recoverable amount. None of the CGUs are sensitive to reasonable adverse changes in key assumptions (10 per cent fall in cash flow, 1 per cent increase in the discount rate or 1 per cent fall in GDP rates). The following CGUs are considered sensitive to the key variables and any movements up to the levels disclosed below would eliminate the current headroom.

CGU	Goodwill	Cash flow reduction	Discount rate increase	GDP growth rate decline
Taiwan	530	26%	3%	5%
India	262	33%	3%	5%
Pakistan	194	30%	5%	10%

Acquired intangibles

These primarily comprise those items recognised as part of the acquisitions of Union Bank (now amalgamated into Standard Chartered Bank (Pakistan) Limited), Hsinchu (now amalgamated into Standard Chartered Bank (Taiwan) Limited), Pembroke, American Express Bank and ABSA's custody business in Africa. Maintenance intangible assets represent the value in the difference between the contractual right under acquired leases to receive aircraft in a specified maintenance condition at the end of the lease and the actual physical condition of the aircraft at the date of acquisition.

The acquired intangibles are amortised over periods from four years to a maximum of 16 years. The constituents are as follows:

	31.12.18 \$million	31.12.17 \$million
Acquired intangibles comprise:		
Aircraft maintenance	24	24
Brand names	–	31
Core deposits	2	2
Customer relationships	19	32
Licences	7	19
Net book value	52	108

18. Property, plant and equipment

Accounting policy

All property, plant and equipment is stated at cost less accumulated depreciation and impairment losses. Cost includes expenditure that is directly attributable to the acquisition of the assets. Subsequent costs are included in the asset's carrying amount or are recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably.

At each balance sheet date the assets' residual values and useful lives are reviewed, and adjusted if appropriate, including assessing for indicators of impairment. In the event that an asset's carrying amount is determined to be greater than its recoverable amount, the asset is written down to the recoverable amount. Gains and losses on disposals are included in the income statement.

Repairs and maintenance are charged to the income statement during the financial period in which they are incurred.

Land and buildings comprise mainly branches and offices. Freehold land is not depreciated although it is subject to impairment testing.

Depreciation on other assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

- Buildings up to 50 years
- Leasehold improvements life of lease up to 50 years
- Equipment and motor vehicles three to 15 years
- Aircraft up to 18 years
- Ships up to 15 years

Where the Group is a lessee under finance leases, the leased assets are capitalised and included in Property, plant and equipment with a corresponding liability to the lessor recognised in Other liabilities. Finance charges payable are recognised over the period of the lease based on the interest rate implicit in the lease to give a constant periodic rate of return.

All other repairs and maintenance are charged to the income statement during the financial period in which they are incurred.

	31.12.18				31.12.17			
	Premises \$million	Equipment \$million	Operating lease assets \$million	Total \$million	Premises \$million	Equipment \$million	Operating lease assets \$million	Total \$million
Cost or valuation								
At 1 January	2,216	767	7,000	9,983	2,117	699	6,982	9,798
Exchange translation differences	(80)	(38)	(8)	(126)	119	31	2	152
Additions	46 ¹	125 ¹	866	1,037	61	104	1,603	1,768
Disposals and fully depreciated assets written off	(92) ²	(87) ²	(1,244)	(1,423)	(75)	(66)	(1,587)	(1,728)
Transfers to assets held for sale	(20)	(1)	(291)	(312)	(6)	(1)	–	(7)
As at 31 December	2,070	766	6,323	9,159	2,216	767	7,000	9,983
Depreciation								
Accumulated at 1 January	753	513	1,506	2,772	713	474	1,359	2,546
Exchange translation differences	(25)	(26)	(9)	(60)	27	21	1	49
Charge for the year	86	94	304	484	85	85	328	498
Impairment (release)/charge	(5)	–	155 ³	150	(8)	–	145	137
Attributable to assets sold, transferred or written off	(91) ²	(86) ²	(358)	(535)	(58)	(65)	(327)	(450)
Transfers to assets held for sale	(12)	(1)	(129)	(142)	(6)	(2)	–	(8)
Accumulated at 31 December	706	494	1,469	2,669	753	513	1,506	2,772
Net book amount at 31 December	1,364	272	4,854	6,490	1,463	254	5,494	7,211

1 Refer to the cash flow statement premises and equipment under the investing activities segment \$171 million (31 December 2017: \$165 million) for purchase of property, plant and equipment

2 Disposals for property, plant and equipment during the period \$85 million (31 December 2017: \$29 million) in the cash flow statement would include the gains and losses incurred as part of other operating income (Note 6) on disposal of assets during the period and the net book value disposed

3 During the year, an impairment charge of \$155 million (31 December 2017: \$145 million) was recognised in respect of aircraft and ships held as operating lease assets, as the VIU or current market value (CMV) of the assets was lower than the net book value

Operating lease assets

Assets leased to customers under operating leases consist of commercial aircraft and ships which are included within property, plant and equipment. At 31 December 2018, these assets had a net book value of \$4,854 million (31 December 2017: \$5,494 million).

	31.12.18 Minimum lease receivables under operating leases falling due: \$million	31.12.17 Minimum lease receivables under operating leases falling due: \$million
Within one year	527	564
Later than one year and not later than five years	1,712	1,881
After five years	997	1,228
	3,236	3,673

19. Operating lease commitments

Accounting policy

The leases entered into by the Group are primarily operating leases. An operating lease is a lease where substantially all of the risks and rewards of the leased assets remain with the lessor. The Group leases various premises under non-cancellable lease arrangements. The total payments made under operating leases are charged to the income statement on a straight-line basis over the period of the lease. When an operating lease is terminated before the lease period has expired, any payment required to be made to the lessor by way of penalty is recognised as an expense in the period in which the termination takes place.

If an operating lease contains a reinstatement clause, a provision will be raised for the best estimate of the expenses to be incurred at the end of the lease to reinstate the property to its original condition. This cost is amortised over the life of the lease.

	31.12.18		31.12.17	
	Premises \$million	Equipment \$million	Premises \$million	Equipment \$million
Commitments under non-cancellable operating leases expiring:				
Within one year	266	2	255	2
Later than one year and not later than five years	498	1	603	3
After five years	140	—	189	—
	904	3	1,047	5

During the year \$288 million (31 December 2017: \$340 million) was recognised as an expense in the income statement in respect of operating leases. The Group leases various premises and equipment under non-cancellable operating lease agreements. The leases have various terms, escalation clauses and renewal rights. The total future minimum sublease payments expected to be received under non-cancellable subleases at 31 December 2018 is \$12 million (31 December 2017: \$9 million).

20. Other assets

Accounting policy

Refer to Note 13 Financial instruments for the relevant accounting policy.

Commodities represent physical holdings where the Group has title and exposure to the market risk associated with the holding. Commodities are fair valued with the fair value derived from observable spot or short-term futures prices from relevant exchanges.

Other assets include:

	31.12.18 \$million	31.12.17 \$million
Financial assets held at amortised cost (Note 13):		
Hong Kong SAR Government certificates of indebtedness (Note 23) ¹	5,964	5,417
Cash collateral	10,323	9,513
Acceptances and endorsements	4,923	5,096
Unsettled trades and other financial assets	11,468	9,896
	32,678	29,922
Non-financial assets:		
Commodities ²	2,488	3,263
Other assets	235	305
	35,401	33,490

¹ The Hong Kong SAR Government certificates of indebtedness are subordinated to the claims of other parties in respect of bank notes issued

² Commodities are carried at fair value and classified as Level 2

21. Assets held for sale and associated liabilities

Accounting policy

Financial instruments can be reclassified as held for sale if they are non-current assets or if they are part of a disposal group; however, the measurement provisions for the financial instruments remain governed by the requirements of IFRS 9 Financial Instruments: Recognition and Measurement. Refer to Note 13 Financial instruments for the relevant accounting policy.

Non-current assets are classified as held for sale and measured at the lower of their carrying amount and fair value less cost to sell when:

- a) Their carrying amounts will be recovered principally through sale
- b) They are available for immediate sale in their present condition
- c) Their sale is highly probable

Immediately before the initial classification as held for sale, the carrying amounts of the assets are measured in accordance with the applicable accounting policies related to the asset or liability before reclassification as held for sale.

The assets below have been presented as held for sale following the approval of Group management and the transactions are expected to complete in 2019.

The financial assets held at fair value through profit or loss reported below are classified under Level 1 \$82 million, Level 2 \$14 million and Level 3 \$791 million (31 December 2017: \$466 million).

	31.12.18 \$million	31.12.17 \$million
Assets held for sale		
Debt securities	14	47
Equity shares	873	419
Financial assets held at fair value through profit or loss ¹	887	466
Loans and advances to banks	112	–
Loans and advances to customers	23	2
Debt securities held at amortised cost	–	60
Financial assets held at amortised cost	135	62
Goodwill and intangible assets	71	–
Property, plant and equipment ²	170	13
Others	65	4
	1,328	545

1 Principal Finance assets of \$887 million (31 December 2017: \$216 million), classified as financial assets held at fair value through profit or loss comprising of debt securities (\$14 million) and equity shares (\$873 million), is expected to be disposed of by the end of 2019

2 Aircraft classified as held for sale by Pembroke Air Leasing Finance for \$162 million (31 December 2017: nil) is included within property, plant and equipment

Reported below are the associated financial liabilities held for sale of the Principal Finance business amounting to \$198 million (31 December 2017: nil), all of which are classified under Level 3. The transactions are expected to complete in 2019.

	31.12.18 \$million	31.12.17 \$million
Liabilities held for sale		
Derivative financial instruments ¹	198	–
Financial liabilities held at fair value through profit or loss	198	–
Other liabilities	48	–
Provisions for liabilities and charges	1	–
	247	–

1 The derivative liability is a fixed price forward sale contract to sell the Principal Finance assets

22. Debt securities in issue

Accounting policy

Refer to Note 13 Financial instruments for the relevant accounting policy.

	31.12.18			31.12.17		
	Certificates of deposit of \$100,000 or more \$million	Other debt securities in issue \$million	Total \$million	Certificates of deposit of \$100,000 or more \$million	Other debt securities in issue \$million	Total \$million
Debt securities in issue	20,949	25,505	46,454	20,460	25,919	46,379
Debt securities in issue included within:						
Financial liabilities held at fair value through profit or loss (Note 13)	–	7,405	7,405	117	6,906	7,023
Total debt securities in issue	20,949	32,910	53,859	20,577	32,825	53,402

In 2018, the Company issued a total of \$4.6 billion senior notes for general business purposes of the Group as shown below:

Securities	\$million
\$1,400 million callable fixed rate senior notes due 2023	1,400
\$1,250 million callable fixed rate senior notes due 2024	1,250
JPY 111 billion callable fixed rate senior notes due 2024	1,011
\$600 million callable floating rate senior notes due 2023	600
JPY 18.9 billion fixed rate senior notes due 2025	172
\$28 million fixed rate senior notes due 2026	28
JPY 10 billion callable fixed rate senior notes due 2029	91

23. Other liabilities

Accounting policy

Refer to Note 13 Financial instruments for the relevant accounting policy.

	31.12.18 \$million	31.12.17 \$million
Financial liabilities held at amortised cost (Note 13)		
Notes in circulation ¹	5,964	5,417
Acceptances and endorsements	4,923	5,096
Cash collateral	9,259	9,825
Unsettled trades and other financial liabilities	17,799	14,644
	37,945	34,982
Non-financial liabilities		
Cash-settled share-based payments	32	39
Other liabilities	332	236
	38,309	35,257

1 Hong Kong currency notes in circulation of \$5,964 million (31 December 2017: \$5,417 million) that are secured by the Government of Hong Kong SAR certificates of indebtedness of the same amount included in other assets (Note 20)

24. Provisions for liabilities and charges

Accounting policy

The Group recognises a provision for a present legal or constructive obligation resulting from a past event when it is more likely than not that it will be required to transfer economic benefits to settle the obligation and the amount of the obligation can be estimated reliably. Where a liability arises based on participation in a market at a specified date, the obligation is recognised in the financial statements on that date and is not accrued over the period.

Significant accounting estimates and judgements

The recognition and measurement of provisions for liabilities and charges requires significant judgement and the use of estimates about uncertain future conditions or events.

Estimates include the best estimate of the probability of outflow of economic resources, cost of settling a provision and timing of settlement. Judgements are required for inherently uncertain areas such as legal decisions (including external advice obtained), and outcome of regulator reviews.

	31.12.18			31.12.17		
	Provision for credit commitments \$million	Other provisions \$million	Total \$million	Provision for credit commitments \$million	Other provisions \$million	Total \$million
At 31 December IAS 39	83	100	183	109	104	213
IFRS 9 expected credit loss	176	—	176	—	—	—
At 1 January IFRS 9	259	100	359	109	104	213
Exchange translation differences	(9)	(1)	(10)	(2)	1	(1)
Transfer	—	39	39	—	—	—
Charge/(release) against profit	39	956	995	(23)	83	60
Provisions utilised	(8)	(45)	(53)	(1)	(88)	(89)
At 31 December	281	1,049	1,330	83	100	183

Provision for credit commitment comprises those undrawn contractually committed facilities where there is doubt as to the borrowers' ability to meet their repayment obligations.

Other provisions consists mainly of provisions for regulatory settlements and legal claims (including provisions for potential penalties relating to the US investigation, the FCA decision and the previously disclosed foreign exchange trading issues), the nature of which are described in Note 26.

25. Contingent liabilities and commitments

Accounting policy

Contingent liabilities are possible obligations arising from past events, whose existence will be confirmed only by uncertain future events or present obligations arising from past events that are not recognised because either an outflow of economic benefits is not probable or the amount of the obligation cannot be reliably measured. Contingent liabilities are not recognised but information about them is disclosed unless the possibility of any outflow of economic benefits in settlement is remote.

Where the Group undertakes to make a payment on behalf of its customers for guarantees issued such as for performance bonds or as irrevocable letters of credit as part of the Group's Transaction Banking business, for which an obligation to make a payment has not arisen at the reporting date, those are included in these financial statements as contingent liabilities.

Other contingent liabilities primarily include revocable letters of credit and bonds issued on behalf of customers to customs officials, for bids or offers and as shipping guarantees.

Commitments are where the Group has confirmed its intention to provide funds to a customer or on behalf of a customer in the form of loans, overdrafts, future guarantees whether cancellable or not or letters of credit and the Group has not made payments at the balance sheet date; those instruments are included in these financial statement as commitments.

Capital commitments are contractual commitments the Group has entered into to purchase non-financial assets.

The table below shows the contract or underlying principal amounts and risk-weighted amounts of unmatured off-balance sheet transactions at the balance sheet date. The contract or underlying principal amounts indicate the volume of business outstanding and do not represent amounts at risk.

	31.12.18 \$million	31.12.17 ¹ \$million
Contingent liabilities		
Guarantees and irrevocable letters of credit	36,511	31,429
Other contingent liabilities	5,441	6,210
	41,952	37,639
Commitments		
Documentary credits and short-term trade-related transactions	3,982	5,808
Undrawn formal standby facilities, credit lines and other commitments to lend		
One year and over	71,467	77,033
Less than one year	37,041	30,122
Unconditionally cancellable	39,220	40,823
	151,710	153,786

¹ Contingent liabilities and commitments have been restated, as a result of the availability of more reliable, centralised information following the implementation of IFRS 9. The ageing of commitments is now based on residual rather than original maturity

Capital commitments

Contracted capital expenditure approved by the directors but not provided for in these accounts ¹	450	468
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¹ of which: the Group has commitments totalling \$439 million to purchase aircraft for delivery in 2019 (31 December 2017: \$458 million). Pre-delivery payments of \$5 million have been made to date in respect of these aircraft

The Group's share of contingent liabilities and commitments relating to joint ventures is \$0.2 billion (31 December 2017: \$0.2 billion). As set out in Note 26, the Group has contingent liabilities in respect of certain legal and regulatory matters for which it is not practicable to estimate the financial impact as there are many factors that may affect the range of possible outcomes.

26. Legal and regulatory matters

Accounting policy

Where appropriate, the Group recognises a provision for liabilities when it is probable that an outflow of economic resources embodying economic benefits will be required and for which a reliable estimate can be made of the obligation. The uncertainties inherent in legal and regulatory matters affect the amount and timing of any potential outflows with respect to which provisions have been established.

Claims and other proceedings

The Group receives legal claims against it in a number of jurisdictions and is subject to regulatory investigations and proceedings arising in the normal course of business.

Apart from the matters described below, the Group currently considers none of these claims, investigations or proceedings to be material. However, in light of the uncertainties involved in such matters there can be no assurance that the outcome of a particular matter or matters currently not considered to be material may not ultimately be material to the Group's results in a particular reporting period depending on, among other things, the amount of the loss resulting from the matter(s) and the results otherwise reported for such period.

2012 Settlements with certain US authorities

In 2012, the Group reached settlements with certain US authorities regarding US sanctions compliance in the period 2001 to 2007, involving a Consent Order by the New York Department of Financial Services (NYDFS), a Cease and Desist Order by the Board of Governors of the Federal Reserve System (Fed), Deferred Prosecution Agreements (DPAs) with each of the Department of Justice (DOJ) and the New York County District Attorney's Office (DANY) and a Settlement Agreement with the Office of Foreign Assets Control (together, the 'Settlements' and together the foregoing authorities, the 'US authorities'). In addition to the civil penalties totalling \$667 million, the terms of these Settlements include a number of conditions and ongoing obligations with regard to improving sanctions, Anti-Money Laundering (AML) and Bank Secrecy Act (BSA) controls such as remediation programmes, reporting requirements, compliance reviews and programmes, banking transparency requirements, training measures, audit programmes, disclosure obligations and, in connection with the NYDFS Consent Order, the appointment of an independent monitor (Monitor).

In December 2014, the Group announced that the DOJ, DANY and the Group had agreed to a three-year extension of the DPAs, resulting in the subsequent retention of the Monitor to evaluate and make recommendations regarding the Group's sanctions compliance programme. The DPAs (and the term of the independent monitor) have been subject to subsequent extensions and currently expire on 31 March 2019.

2014 Settlement with NYDFS

In August 2014, the Group announced that it had reached a final settlement with the NYDFS regarding deficiencies in the AML transaction surveillance system in its New York branch (the 'Branch'). The system, which is separate from the sanctions screening process, is one part of the Group's overall financial crime controls and is designed to alert the Branch to unusual transaction patterns that require further investigation on a post-transaction basis.

The settlement provisions included a civil monetary penalty of \$300 million; various remediation requirements and the appointment of the Monitor which eventually expired on 31 December 2018.

In November 2018, the Group announced it had agreed to engage an independent consultant selected by the NYDFS for up to one year with a possible extension for up to one additional year to provide guidance in connection with tasks necessary to complete the remediation contemplated by the 2012 and 2014 Consent Orders.

2019 Settlement relating to FX trading

In January 2019, the Group reached a settlement with the NYDFS regarding past control failures and improper conduct related to the Group's FX trading and sales business between 2007 and 2013. As part of this settlement the Group agreed to pay a civil monetary penalty of \$40 million to the NYDFS. A provision has been made in these financial statements for the previously disclosed investigations relating to the FX trading issues including the January 2019 settlement with the NYDFS.

Investigations into legacy financial crime controls issues

The Group has received a decision notice from the Regulatory Decisions Committee of the Financial Conduct Authority (FCA) relating to the previously disclosed investigation by the FCA concerning the Group's historical financial crime control issues, and is considering its options in relation to this decision notice, including the possibility of an appeal. The decision notice imposes a penalty of £102 million (net of early settlement discount) on the Group. This investigation had been focused on the effectiveness and governance of those historical financial crime controls from 2009 through 2014 within the correspondent banking business carried out by the Group's London branch, particularly in relation to the business carried on with respondent banks from outside the European Economic Area, and the effectiveness and governance of those controls in one of the Group's overseas branches and the oversight exercised at Group level over those controls.

The Group continues its discussions relating to the potential resolution of an investigation by the US authorities relating to historical violations of US sanctions laws and regulations. In contrast to the 2012 settlements, which focused on the period before the Group's 2007 decision to stop doing new business with known Iranian parties, this investigation is focused on examining the extent to which conduct and control failures permitted clients with Iranian interests to conduct transactions through Standard Chartered Bank after 2007. The vast majority of the issues under investigation pre-date 2012 and none occurred after 2014.

The resolution of the US investigation may involve a range of civil and criminal penalties including substantial monetary penalties combined with other compliance measures such as remediation requirements and/or business restrictions.

A provision has been made in these financial statements for the penalty in the FCA decision notice and potential penalties relating to the investigation by the US authorities. This provision reflects management's current view of the appropriate level of provision. Resolution of the US investigation and the FCA process might ultimately result in a different level of penalties.

Other proceedings

Since November 2014, seven lawsuits have been filed in the United States District Courts for the Southern and Eastern Districts of New York against a number of banks (including Standard Chartered Bank) on behalf of plaintiffs who are, or are relatives of, victims of various terrorist attacks in Iraq. Five of the lawsuits were filed in late December 2018. The plaintiffs allege that the defendant banks aided and abetted the unlawful conduct of US sanctioned parties in breach of the US Anti-Terrorism Act. The lawsuits are at an early procedural stage, with motions to dismiss pending in two of the seven lawsuits. Based on the facts currently known, it is not possible for the Group to predict the outcome of these lawsuits.

The Director of Public Prosecutions (DPP) and related agencies in Kenya are investigating Standard Chartered Kenya Limited (SCBK) and other banks in connection with the alleged theft of funds from Kenya's State Department of Public Service, Youth and Gender Affairs. This investigation follows fines being imposed on those banks, including SCBK, by the Central Bank of Kenya regarding adequacy of controls related to the processing of the allegedly stolen funds. The DPP has announced that it has received recommendations from the Kenyan Directorate of Criminal Investigations that charges should be brought against a number of banks, including SCBK, bank officials and other individuals. The Group does not know whether any charges will be brought, but there may be penalties or other financial consequences for SCBK in connection with this investigation.

27. Subordinated liabilities and other borrowed funds

Accounting policy

Subordinated liabilities and other borrowed funds are classified as financial instruments. Refer to Note 13 Financial instruments for the accounting policy.

All subordinated liabilities are unsecured, unguaranteed and subordinated to the claims of other creditors including without limitation, customer deposits and deposits by banks. The Group has the right to settle these debt instruments in certain circumstances as set out in the contractual agreements.

	31.12.18 \$million	31.12.17 \$million
Subordinated loan capital – issued by subsidiary undertakings		
£700 million 7.75 per cent subordinated notes 2018 ¹	–	956
£675 million 5.375 per cent undated step up subordinated notes (callable 2020) ¹	296	327
£200 million 7.75 per cent subordinated notes (callable 2022) ¹	53	221
\$750 million 5.875 per cent subordinated notes 2020 ²	754	768
\$700 million 8.0 per cent subordinated notes 2031 ¹	405	426
BWP 127.26 million 8.2 per cent subordinated notes 2022 (callable) ³	12	13
BWP 70 million floating rate subordinated notes 2021 (callable) ³	7	7
BWP 50 million floating rate notes 2022 (callable) ³	5	5
JPY 10 billion 3.35 per cent subordinated notes 2023 (callable 2018) ¹	–	89
KRW 90 billion 6.05 per cent subordinated debt 2018 ⁴	–	85
SGD 450 million 5.25 per cent subordinated notes 2023 (callable 2018) ¹	–	339
	1,532	3,236
Subordinated loan capital – issued by the Company ⁵		
Primary capital floating rate notes:		
\$400 million	16	16
\$300 million (Series 2)	69	69
\$400 million (Series 3)	50	50
\$200 million (Series 4)	26	26
£150 million	15	16
£900 million 5.125 per cent subordinated debt 2034	797	1,498
\$2 billion 5.7 per cent subordinated debt 2044	2,387	2,395
\$2 billion 3.95 per cent subordinated debt 2023	1,941	1,959
\$1 billion 5.7 per cent subordinated notes 2022	1,003	1,004
\$1 billion 5.2 per cent subordinated debt 2024	1,001	1,014
\$750 million 5.3 per cent subordinated debt 2043	787	787
€1.25 billion 4 per cent subordinated debt 2025 (callable 2020)	1,472	1,565
€750 million 3.625 per cent subordinated notes 2022	907	958
€500 million 3.125 per cent subordinated debt 2024	587	613
SGD 700 million 4.4 per cent subordinated notes 2026 (callable 2021)	516	531
\$1.25 billion 4.3 per cent subordinated debt 2027	1,129	1,144
\$500 million 4.886 per cent subordinated debt 2033	498	–
Other subordinated borrowings – issued by the Company ⁶	268	295
	13,469	13,940
Total for Group	15,001	17,176

1 Issued by Standard Chartered Bank

2 Issued by Standard Chartered Bank (Hong Kong) Limited

3 Issued by Standard Chartered Bank Botswana Limited

4 Issued by Standard Chartered Bank Korea Limited

5 In the balance sheet of the Company the amount recognised is \$13,436 million (2017: \$13,882 million), with the difference being the effect of hedge accounting achieved on a Group basis

6 Other subordinated borrowings includes irredeemable preference shares (Note 28)

	31.12.18				
	USD \$million	GBP \$million	EUR \$million	Others \$million	Total \$million
Fixed rate subordinated debt	9,905	1,414	2,966	528	14,813
Floating rate subordinated debt	161	15	—	12	188
Total	10,066	1,429	2,966	540	15,001

	31.12.17				
	USD \$million	GBP \$million	EUR \$million	Others \$million	Total \$million
Fixed rate subordinated debt	9,497	3,297	3,136	1,057	16,987
Floating rate subordinated debt	161	16	—	12	189
Total	9,658	3,313	3,136	1,069	17,176

Redemptions and repurchases during the period

On 19 March 2018, Standard Chartered Bank Korea Limited redeemed KRW90 billion 6.05 per cent subordinated debt 2018 on its maturity.

On 3 April 2018, Standard Chartered Bank redeemed £700m 7.75 per cent subordinated notes 2018 on its maturity.

On 10 April 2018, Standard Chartered Bank exercised its right to redeem SGD450 million 5.25 per cent subordinated notes 2023 (callable 2018).

On 18 April 2018, Standard Chartered Bank exercised its right to redeem JPY10 billion 3.35 per cent subordinated notes 2023 (callable 2018).

On 14 June 2018, Standard Chartered Bank repurchased in part, £95.1 million of its £200 million 7.75 per cent subordinated notes (callable 2022).

On 14 June 2018, Standard Chartered PLC repurchased in part, £372.5 million of its £900 million 5.125 per cent subordinated debt 2034.

Issuances during the period

On 15 March 2018, Standard Chartered PLC issued \$500 million 4.866 per cent subordinated debt 2033 (callable 2028).

28. Share capital, other equity instruments and reserves

Accounting policy

Financial instruments issued are classified as equity when there is no contractual obligation to transfer cash, other financial assets or issue available number of own equity instruments. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Securities which carry a discretionary coupon and have no fixed maturity or redemption date are classified as other equity instruments. Interest payments on these securities are recognised, net of tax, as distributions from equity in the period in which they are paid.

Where the Company or other members of the consolidated Group purchase the Company's equity share capital, the consideration paid is deducted from the total shareholders' equity of the Group and/or of the Company as treasury shares until they are cancelled. Where such shares are subsequently sold or reissued, any consideration received is included in shareholders' equity of the Group and/or the Company.

	Number of ordinary shares millions	Ordinary share capital ¹ millions	Share premium ² millions	Total share capital and share premium millions	Other equity instruments millions
At 1 January 2017	3,284	1,642	5,449	7,091	3,969
Shares issued	12	6	—	6	992
At 31 December 2017	3,296	1,648	5,449	7,097	4,961
Capitalised on scrip dividend	2	1	(1)	—	—
Shares issued	10	5	9	14	—
At 31 December 2018	3,308	1,654	5,457	7,111	4,961

1 Issued and fully paid ordinary shares of 50 cents each

2 Includes \$1,494 million of share premium relating to preference capital

Ordinary share capital

In accordance with the Companies Act 2006 the Company does not have authorised share capital. The nominal value of each ordinary share is 50 cents.

On 17 May 2018, the Company issued 1,354,700 new ordinary shares instead of the 2017 final dividend. On 22 October 2018, the Company issued 876,126 new ordinary shares instead of the 2018 interim dividend.

During the period 10,008,515 shares were issued under employee share plans at prices between nil and 620 pence.

Preference share capital

At 31 December 2018, the Company has 15,000 \$5 non-cumulative redeemable preference shares in issue, with a premium of \$99,995 making a paid up amount per preference share of \$100,000. The preference shares are redeemable at the option of the Company and are classified in equity.

The available profits of the Company are distributed to the holders of the issued preference shares in priority to payments made to holders of the ordinary shares and in priority to, or pari passu with, any payments to the holders of any other class of shares in issue. On a winding up, the assets of the Company are applied to the holders of the preference shares in priority to any payment to the ordinary shareholders and in priority to, or pari passu with, the holders of any other shares in issue, for an amount equal to any dividends accrued and/or payable and the nominal value of the shares together with any premium as determined by the Board. The redeemable preference shares are redeemable at the paid up amount (which includes premium) at the option of the Company in accordance with the terms of the shares. The holders of the preference shares are not entitled to attend or vote at any general meeting except where any relevant dividend due is not paid in full or where a resolution is proposed varying the rights of the preference shares.

Other equity instruments

On 2 April 2015, Standard Chartered PLC issued \$2,000 million Fixed Rate Resetting Perpetual Subordinated Contingent Convertible Securities as Additional Tier 1 (AT1) securities, raising \$1,987 million after issue costs. On 18 August 2016, Standard Chartered PLC issued a further \$2,000 million Fixed Rate Resetting Perpetual Subordinated Contingent Convertible Securities as AT1 securities, raising \$1,982 million after issue costs. On 18 January 2017, Standard Chartered PLC issued a further \$1,000 million Fixed Rate Resetting Perpetual Subordinated Contingent Convertible Securities as AT1 securities, raising \$992 million after issue costs. All the issuances were made for general business purposes and to increase the regulatory capital base of the Group.

The principal terms of the AT1 securities are described below:

- The securities are perpetual and redeemable, at the option of Standard Chartered PLC in whole but not in part, on the first interest reset date and each date falling five years after the first reset date
- The securities are also redeemable for certain regulatory or tax reasons on any date at 100 per cent of their principal amount together with any accrued but unpaid interest up to (but excluding) the date fixed for redemption. Any redemption is subject to Standard Chartered PLC giving notice to the relevant regulator and the regulator granting permission to redeem
- The interest rate in respect of the securities issued on 2 April 2015 for the period from (and including) the issue date to (but excluding) 2 April 2020 is a fixed rate of 6.50 per cent per annum. The first reset date for the interest rate is 2 April 2020 and each date falling five, or an integral multiple of five years after the first reset date
- The interest rate in respect of the securities issued on 18 August 2016 for the period from (and including) the issue date to (but excluding) 2 April 2022 is a fixed rate of 7.50 per cent per annum. The first reset date for the interest rate is 2 April 2022 and each date falling five years, or an integral multiple of five years, after the first reset date
- The interest rate in respect of the securities issued on 18 January 2017 for the period from (and including) the issue date to (but excluding) 2 April 2023 is a fixed rate of 7.75 per cent per annum. The first reset date for the interest rate is 2 April 2023 and each date falling five years, or an integral multiple of five years, after the first reset date
- The interest on each of the securities will be payable semi-annually in arrears on 2 April and 2 October in each year, accounted for as a dividend
- Interest on the securities is due and payable only at the sole and absolute discretion of Standard Chartered PLC, subject to certain additional restrictions set out in the terms and conditions. Accordingly, Standard Chartered PLC may at any time elect to cancel any interest payment (or part thereof) which would otherwise be payable on any interest payment date

- The securities convert into ordinary shares of Standard Chartered PLC, at a pre-determined price, should the fully loaded Common Equity Tier 1 ratio of the Group fall below 7.0 per cent. Approximately 572 million ordinary shares would be required to satisfy the conversion of all the securities mentioned above

The securities rank behind the claims against Standard Chartered PLC of (a) unsubordinated creditors, (b) which are expressed to be subordinated to the claims of unsubordinated creditors of Standard Chartered PLC but not further or otherwise; or (c) which are, or are expressed to be, junior to the claims of other creditors of Standard Chartered PLC, whether subordinated or unsubordinated, other than claims which rank, or are expressed to rank, *pari passu* with, or junior to, the claims of holders of the AT1 securities in a winding-up occurring prior to the conversion trigger.

Reserves

The constituents of the reserves are summarised as follows:

- The capital reserve represents the exchange difference on redenomination of share capital and share premium from sterling to US dollars in 2001. The capital redemption reserve represents the nominal value of preference shares redeemed
- Merger reserve represents the premium arising on shares issued using a cash box financing structure, which required the Company to create a merger reserve under section 612 of the Companies Act 2006. Shares were issued using this structure in 2005 and 2006 to assist in the funding of certain acquisitions, in 2008, 2010 and 2015 for the shares issued by way of a rights issue, and for the shares issued in 2009 in the placing. The funding raised by the 2008 and 2010 rights issues and 2009 share issue was fully retained within the Company
- Own credit adjustment reserve represents the cumulative gains and losses on financial liabilities designated at fair value through profit or loss relating to own credit. Following the Group's decision to early apply this IFRS 9 requirement the cumulative OCA component of financial liabilities designated at fair value through profit or loss has been transferred from opening retained earnings to the OCA reserve. Gains and losses on financial liabilities designated at fair value through profit or loss relating to own credit in the year have been taken through other comprehensive income into this reserve. On derecognition of applicable instruments the balance of any OCA will not be recycled to the income statement, but will be transferred within equity to retained earnings
- Fair value through OCI debt reserve represents the unrealised fair value gains and losses in respect of financial assets classified as fair value through OCI, net of expected credit losses and taxation. Gains and losses are deferred in this reserve and are reclassified to the income statement when the underlying asset is sold, matures or becomes impaired. Fair value through OCI equity reserve represents unrealised fair value gains and losses in respect of financial assets classified as fair value through OCI, net of taxation. Gains and losses are recorded in this reserve and never recycled to the income statement
- Cash flow hedge reserve represents the effective portion of the gains and losses on derivatives that meet the criteria for these types of hedges. Gains and losses are deferred in this reserve and are reclassified to the income statement when the underlying hedged item affects profit and loss or when a forecast transaction is no longer expected to occur
- Translation reserve represents the cumulative foreign exchange gains and losses on translation of the net investment of the Group in foreign operations. Since 1 January 2004, gains and losses are deferred to this reserve and are reclassified to the income statement when the underlying foreign operation is disposed. Gains and losses arising from derivatives used as hedges of net investments are netted against the foreign exchange gains and losses on translation of the net investment of the foreign operations
- Retained earnings represents profits and other comprehensive income earned by the Group and Company in the current and prior periods, together with the after tax increase relating to equity-settled share options, less dividend distributions and own shares held (treasury shares)

A substantial part of the Group's reserves are held in overseas subsidiary undertakings and branches, principally to support local operations or to comply with local regulations. The maintenance of local regulatory capital ratios could potentially restrict the amount of reserves which can be remitted. In addition, if these overseas reserves were to be remitted, further unprovided taxation liabilities might arise.

As at 31 December 2018, the distributable reserves of Standard Chartered PLC (the Company) were \$15.1 billion (31 December 2017: \$15.1 billion). These comprised retained earnings and \$12.5 billion of the merger reserve account. Distribution of reserves is subject to maintaining minimum capital requirements.

Own shares

Computershare Trustees (Jersey) Limited is the trustee of the 2004 Employee Benefit Trust ('2004 Trust') and Ocorian Trustees (Jersey) Limited (formerly known as Bedell Trustees Limited) is the trustee of the 1995 Employees' Share Ownership Plan Trust ('1995 Trust'). The 2004 Trust is used in conjunction with the Group's employee share schemes and the 1995 Trust is used for the delivery of other employee share-based payments (such as upfront shares and fixed pay allowances). Group companies fund these trusts from time to time to enable the trustees to acquire shares to satisfy these arrangements.

Except as disclosed, neither the Company nor any of its subsidiaries has bought, sold or redeemed any securities of the Company listed on The Stock Exchange of Hong Kong Limited during the period. Details of the shares purchased and held by the trusts are set out below.

	1995 Trust		2004 Trust		Total	
Number of shares	31.12.18	31.12.17	31.12.18	31.12.17	31.12.18	31.12.17
Shares purchased during the period	1,017,941	–	–	–	1,017,941	–
Market price of shares purchased (\$million)	8	–	–	–	8	–
Shares held at the end of the period	2,354,820	3,769,011	16,755	18,004	2,371,575	3,787,015
Maximum number of shares held during the period					3,787,015	6,182,467

29. Non-controlling interests

Accounting policy

Non-controlling interests are measured either at fair value or at the non-controlling interest's proportionate share of the acquiree's identifiable net assets.

	\$million
At 1 January 2017	321
Income in equity attributable to non-controlling interests	1
Other profits attributable to non-controlling interests	49
Comprehensive income for the year	50
Distributions	(51)
Other increases ¹	21
At 31 December 2017	341
Expected credit loss, net	(8)
At 1 January 2018	333
Income in equity attributable to non-controlling interests	(21)
Other profits attributable to non-controlling interests	55
Comprehensive income for the year	34
Distributions	(97)
Other increases ²	3
At 31 December 2018	273

¹ Mainly due to additional shares issued including the premium by Nepal of \$12 million and \$9 million with respect to an acquisition during 2017

² Mainly due to additional shares issued by Angola

30. Retirement benefit obligations

Accounting policy

The Group operates pension and other post-retirement benefit plans around the world, which can be categorised into defined contribution plans and defined benefit plans.

For defined contribution plans, the Group pays contributions to publicly or privately administered pension plans on a statutory or contractual basis, and such amounts are charged to operating expenses. The Group has no further payment obligations once the contributions have been paid.

For funded defined benefit plans, the liability recognised in the balance sheet is the present value of the defined benefit obligation at the balance sheet date less the fair value of plan assets. For unfunded defined benefit plans the liability recognised at the balance sheet date is the present value of the defined benefit obligation.

The defined benefit obligation is calculated annually by independent actuaries using the projected unit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using an interest rate equal to the yield on high-quality corporate bonds of the same currency and term as the benefit payments.

Actuarial gains and losses that arise are recognised in shareholders' equity and presented in the statement of other comprehensive income in the period they arise. The Group determines the net interest expense on the net defined benefit liability for the year by applying the discount rate used to measure the defined benefit obligation at the beginning of the annual period to the net defined benefit liability, taking into account any changes in the net defined benefit liability during the year as a result of contributions and benefit payments. Net interest expense, the cost of the accrual of new benefits, benefit enhancements (or reductions) and administration expenses met directly from plan assets are recognised in the income statement.

Significant accounting estimates and judgements

There are many factors that affect the measurement of the retirement benefit obligations of the UK Fund and Overseas Plans. This measurement requires the use of estimates, such as discount rates, inflation, pension increases, salary increases, and life expectancies which are inherently uncertain; the sensitivity of the liabilities to changes in these assumptions is shown in the Note below.

Retirement benefit obligations comprise:

	31.12.18 \$million	31.12.17 \$million
Defined benefit plans obligation	386	443
Defined contribution plans obligation	13	12
Net obligation	399	455

Retirement benefit charge comprises:

	31.12.18 \$million	31.12.17 \$million
Defined benefit plans	81	98
Defined contribution plans	284	259
Charge against profit/(loss) (Note 7)	365	357

The Group operates over 50 defined benefit plans across its geographies, many of which are closed to new entrants who now join defined contribution arrangements. The aim of all these plans is to give employees the opportunity to save appropriately for retirement in a way that is consistent with local regulations, taxation requirements and market conditions. The defined benefit plans expose the Group to currency risk, interest rate risk, investment risk and actuarial risks such as longevity risk.

The material holdings of government and corporate bonds partially hedge movements in the liabilities resulting from interest rate changes. Setting aside movements from other drivers such as currency fluctuation, the increases in discount rates in most geographies over 2018 have led to lower liabilities. These have been somewhat offset by falls in the value of bonds held and poor stock market performance. These movements are shown as actuarial gains versus losses respectively in the tables below. Contributions into a number of plans in excess of the amounts required to fund benefits accruing have also helped to reduce the net deficit over the year.

The disclosures required under IAS 19 have been calculated by independent qualified actuaries based on the most recent full actuarial valuations updated, where necessary, to 31 December 2018.

UK Fund

The Standard Chartered Pension Fund (the 'UK Fund') is the Group's largest pension plan, representing 58 per cent (31 December 2017: 60 per cent) of total pension liabilities, and provides pensions based on 1/60th of final salary per year of service, normally payable from age 60. The UK Fund is set up under a trust that is legally separate from the Bank (its formal sponsor) and, as required by UK legislation, at least one third of the trustee directors are nominated by members; the remainder are appointed by the Bank. The trustee directors have a fiduciary duty to members and are responsible for governing the UK Fund in accordance with its Trust Deed and Rules.

The financial position of the UK Fund is regularly assessed by an independent qualified actuary. The funding valuation as at 31 December 2017 was completed in December 2018 by the Scheme Actuary, A Zegleman of Willis Towers Watson, using assumptions different from those disclosed, and agreed with the UK Fund trustee. It revealed a past service deficit of \$203 million (£159 million). To repair the deficit, four annual cash payments of \$42.0 million (£32.9 million) were agreed, with the first of these paid in December 2018. The agreement allows that if the funding position improves to being at or near a surplus in future years the three payments from December 2019 will be reduced or eliminated. In addition, an escrow account of \$140 million (£110 million) exists to provide security for future contributions.

With effect from 1 July 1998, the UK Fund was closed to new entrants and new employees are offered membership of a defined contribution plan. With effect from 1 April 2018 the UK Fund was closed to further accrual of benefits for the 91 active members remaining at that time. There is no accounting impact as a result of the closure as the liabilities represented by the benefits already accrued are not expected to be significantly altered by the closure.

As at 31 December 2018, the weighted average duration of the UK Fund was 14 years (31 December 2017: 15 years).

A judgement in respect of Lloyds Bank on 26 October 2018 addressed the requirement to equalise the impact of Guaranteed Minimum Pensions (GMP) for males and females. The impact on the UK Fund of this judgement was estimated by the Scheme Actuary to be \$2 million. This impact has been recognised as a past service cost in the income statement.

The Group is not required to recognise any additional liability under IFRIC 14 or the 2015 exposure draft of proposed amendments to it, as the Bank has control of any pension surplus under the Trust Deed and Rules.

Overseas plans

The principal overseas defined benefit arrangements operated by the Group are in Germany, Hong Kong, India, Jersey, Korea, Taiwan, United Arab Emirates (UAE) and the United States of America (US).

Key assumptions

The principal financial assumptions used at 31 December 2018 were:

	Funded plans			
	UK Fund		Overseas Plans ¹	
	31.12.18 %	31.12.17 %	31.12.18 %	31.12.17 %
Discount rate	2.8	2.5	0.9 – 7.6	1.0 – 7.2
Price Inflation	2.1	2.1	1.0 – 5.0	1.0 – 5.0
Salary increases	n/a	2.1	2.1 – 7.0	2.1 – 7.0
Pension increases	2.1	2.1	0.0 – 3.2	1.6 – 3.2

¹ The range of assumptions shown is for the main defined benefit overseas plans in Germany, Hong Kong, India, Jersey, Korea, Taiwan, UAE and the US. These comprise over 90 per cent of the total liabilities of overseas defined benefit plans

The principal non-financial assumptions are those made for UK life expectancy. The assumptions for life expectancy for the UK Fund are that a male member currently aged 60 will live for 28 years (31 December 2017: 28 years) and a female member for 29 years (31 December 2017: 29 years) and a male member currently aged 40 will live for 30 years (31 December 2017: 30 years) and a female member for 30 years (31 December 2017: 30 years) after their 60th birthdays.

Both financial and non-financial assumptions can be expected to change in the future, which would affect the value placed on the liabilities. For example, changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below:

- If the discount rate increased by 25 basis points the liability would reduce by approximately \$55 million for the UK Fund (31 December 2017: \$65 million) and \$30 million for the other plans (31 December 2017: \$30 million)
- If the rate of inflation increased by 25 basis points the liability, allowing for the consequent impact on pension and salary increases would increase by approximately \$40 million for the UK Fund (31 December 2017: \$45 million) and \$20 million for the other plans (31 December 2017: \$20 million)
- If the rate salaries increase compared to inflation increased by 25 basis points the liability would increase by nil for the UK Fund (31 December 2017: \$2 million) and approximately \$15 million for the other plans (31 December 2017: \$15 million)
- If longevity expectations increased by one year the liability would increase by approximately \$45 million for the UK Fund (31 December 2017: \$55 million) and \$15 million for the other plans (31 December 2017: \$15 million)

Although this analysis does not take account of the full distribution of cash flows expected under the UK Fund, it does provide an approximation of the sensitivity to the main assumptions. While changes in other assumptions would also have an impact, the effect would not be as significant.

	Unfunded plans			
	US post-retirement medical ¹		Other ²	
	31.12.18 %	31.12.17 %	31.12.18 %	31.12.17 %
Discount rate	4.4	3.8	2.7 – 7.6	2.3 – 7.2
Price inflation	2.5	2.5	2.0 – 5.0	1.9 – 5.0
Salary increases	4.0	N/A	3.5 – 7.0	2.1 – 7.0
Pension increases	N/A	N/A	0.0 – 2.1	0.0 – 2.1
Post-retirement medical rate	9% in 2018 reducing by 1% per annum to 5% in 2022	8% in 2017 reducing by 1% per annum to 5% in 2020	N/A	N/A

1 The US post-retirement medical plan was closed to new entrants and eligibility for benefits tightened in 2017. This is reflected in the pension cost table below

2 The range of assumptions shown is for the main unfunded plans in India, Korea, Thailand, UAE and the UK. They comprise around 85 per cent of the total liabilities of unfunded plans

Fund values:

The fair value of assets and present value of liabilities of the plans attributable to defined benefit members were:

	31.12.18				31.12.17			
	Funded plans		Unfunded plans		Funded plans		Unfunded plans	
	UK Fund \$million	Overseas plans \$million	Post- retirement medical \$million	Other \$million	UK Fund \$million	Overseas plans \$million	Post- retirement medical \$million	Other \$million
At 31 December								
Equities	166	310	N/A	N/A	180	354	N/A	N/A
Government bonds	762	176	N/A	N/A	752	191	N/A	N/A
Corporate bonds	147	87	N/A	N/A	140	87	N/A	N/A
Absolute Return Fund	147	–	N/A	N/A	177	–	N/A	N/A
Hedge funds ¹	110	–	N/A	N/A	190	2	N/A	N/A
Insurance linked funds ¹	36	–	N/A	N/A	38	–	N/A	N/A
Opportunistic credit ¹	15	–	N/A	N/A	60	–	N/A	N/A
Property	44	14	N/A	N/A	64	13	N/A	N/A
Derivatives	(7)	3	N/A	N/A	5	4	N/A	N/A
Cash and equivalents	136	221	N/A	N/A	91	195	N/A	N/A
Others ¹	9	34	N/A	N/A	10	39	N/A	N/A
Total fair value of assets ²	1,565	845	N/A	N/A	1,707	885	N/A	N/A
Present value of liabilities	(1,615)	(974)	(17)	(190)	(1,827)	(996)	(18)	(194)
Net pension (liability)/asset	(50)	(129)	(17)	(190)	(120)	(111)	(18)	(194)

1 Unquoted assets

2 Self-investment is monitored closely and is less than \$1 million of Standard Chartered equities and bonds for 2018 (31 December 2017: \$2 million). Self-investment is only allowed where it is not practical to exclude it – for example through investment in index-tracking funds where the Group is a constituent of the relevant index

The pension cost for defined benefit plans was:

	Funded plans		Unfunded plans		Total \$million
	UK Fund \$million	Overseas plans \$million	Post- retirement medical \$million	Other \$million	
31.12.18					
Current service cost	1	54	—	12	67
Past service cost and curtailments ¹	2	—	—	—	2
Settlement cost ²	—	—	—	1	1
Interest income on pension plan assets	(41)	(27)	—	—	(68)
Interest on pension plan liabilities	44	29	1	5	79
Total charge to profit before deduction of tax	6	56	1	18	81
Losses/(gains) on plan assets excluding interest income ³	67	46	—	—	113
Losses/(gains) on liabilities	(76)	(17)	(2)	1	(94)
Total losses/(gains) recognised directly in statement of comprehensive income before tax	(9)	29	(2)	1	19
Deferred taxation	2	(8)	—	—	(6)
Total losses/(gains) after tax	(7)	21	(2)	1	13

1 The past service cost in the UK Fund is due to the impact of the Lloyds judgement on 26 October 2018 confirming the requirement for UK defined benefit pension schemes to equalise the impact of Guaranteed Minimum Pensions (GMPs) for males and females

2 The costs arise primarily from the settlement of benefits in Thailand

3 The actual return on the UK Fund assets was a loss of \$26 million and on overseas plan assets was a loss of \$19 million

	Funded plans		Unfunded plans		Total \$million
	UK Fund \$million	Overseas plans \$million	Post- retirement medical \$million	Other \$million	
31.12.17					
Current service cost	4	53	—	16	73
Past service cost and curtailments ¹	(6)	7	(4)	—	(3)
Settlement cost ²	—	(1)	—	8	7
Interest income on pension plan assets	(43)	(23)	—	—	(66)
Interest on pension plan liabilities	46	28	1	12	87
Total charge/(credit) to profit before deduction of tax	1	64	(3)	36	98
Return on plan assets excluding interest income ³	(30)	(83)	—	—	(113)
Losses/(gains) on liabilities	41	51	—	(11)	81
Total losses/(gains) recognised directly in statement of comprehensive income before tax	11	(32)	—	(11)	(32)
Deferred taxation	28	7	—	—	35
Total losses/(gains) after tax	39	(25)	—	(11)	3

1 The gain in the UK Fund is due to the lower 2017 discretionary pension increase awarded. Costs arising in funded overseas schemes arise primarily in India from the expected statutory increase in the gratuity payment ceiling, an early retirement severance plan and a discretionary increase to minimum pensions. The gain in the post-retirement medical plan arises due to the reduction in eligibility criteria in the US plan

2 The costs arise primarily from the settlement of benefits in Thailand

3 The actual return on the UK Fund assets was a loss of \$73 million and on overseas plan assets was a gain of \$106 million

Movement in the defined benefit pension plans and post-retirement medical deficit during the year comprise:

	Funded plans		Unfunded plans		Total \$million
	UK Fund \$million	Overseas plans \$million	Post- retirement medical \$million	Other \$million	
Deficit at 1 January 2018	(120)	(111)	(18)	(194)	(443)
Contributions	62	64	—	17	143
Current service cost	(1)	(54)	—	(12)	(67)
Past service cost and curtailments	(2)	—	—	—	(2)
Settlement costs and transfers impact	—	—	—	(1)	(1)
Net interest on the net defined benefit asset/liability	(3)	(2)	(1)	(5)	(11)
Actuarial (losses)/gains	9	(29)	2	(1)	(19)
Exchange rate adjustment	5	3	—	6	14
Deficit at 31 December 2018 ¹	(50)	(129)	(17)	(190)	(386)

1 The deficit total of \$386 million is made up of plans in deficit of \$421 million (31 December 2017: \$483 million) net of plans in surplus with assets totalling \$35 million (31 December 2017: \$40 million)

	Funded plans		Unfunded plans		Total \$million
	UK Fund \$million	Overseas plans \$million	Post- retirement medical \$million	Other \$million	
Deficit at 1 January 2017	(116)	(159)	(22)	(198)	(495)
Contributions	19	92	1	31	143
Current service cost	(4)	(53)	–	(16)	(73)
Past service cost and curtailments	6	(7)	4	–	3
Settlement costs and transfers impact	–	1	–	(8)	(7)
Net interest on the net defined benefit asset/liability	(3)	(5)	(1)	(12)	(21)
Actuarial (losses)/gains	(11)	32	–	11	32
Adjustment for Indonesia scheme ¹	–	(4)	–	4	–
Exchange rate adjustment	(11)	(8)	–	(6)	(25)
Deficit at 31 December 2017 ²	(120)	(111)	(18)	(194)	(443)

1 During 2017 the Indonesian plan (with liabilities of \$8 million) was partially funded with a Company contribution of \$4 million. The scheme has moved from the unfunded to funded category in the tables

2 The deficit total of \$443 million is made up of plans in deficit of \$483 million (2016: \$513 million) net of plans in surplus with assets totalling \$40 million (2016: \$18 million)

The Group's expected contribution to its defined benefit pension plans in 2019 is \$112 million.

	31.12.18			31.12.17		
	Assets \$million	Obligations \$million	Total \$million	Assets \$million	Obligations \$million	Total \$million
At 1 January	2,592	(3,035)	(443)	2,260	(2,755)	(495)
Contributions ¹	144	(1)	143	144	(1)	143
Current service cost ²	–	(67)	(67)	–	(73)	(73)
Past service cost and curtailments	–	(2)	(2)	–	3	3
Settlement costs	–	(1)	(1)	(14)	7	(7)
Interest cost on pension plan liabilities	–	(79)	(79)	–	(87)	(87)
Interest income on pension plan assets	68	–	68	66	–	66
Benefits paid out ²	(168)	168	–	(152)	152	–
Actuarial (losses)/gains ³	(113)	94	(19)	113	(81)	32
Exchange rate adjustment	(113)	127	14	175	(200)	(25)
At 31 December	2,410	(2,796)	(386)	2,592	(3,035)	(443)

1 Includes employee contributions of \$1 million (31 December 2017: \$1 million)

2 Includes administrative expenses paid out of plan assets of \$2 million (31 December 2017: \$1 million)

3 Actuarial gain on obligation comprises \$114 million gain (31 December 2017: \$81 million loss) from financial assumption changes, nil gain (31 December 2017: \$30 million gain) from demographic assumption changes and \$20 million loss (31 December 2017: \$30 million gain) from experience

31. Share-based payments

Accounting policy

The Group operates equity-settled and cash-settled share-based compensation plans. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. For deferred share awards granted as part of an annual performance award, the expense is recognised over the period from the start of the performance period to the vesting date. For example, the expense for awards granted in 2018 in respect of 2017 performance, which vest in 2019-2021, is recognised as an expense over the period from 1 January 2017 to the vesting dates in 2019-2021. For all other awards, the expense is recognised over the period from the date of grant to the vesting date.

For equity-settled awards, the total amount to be expensed over the vesting period is determined by reference to the fair value of the options at the date of grant, which excludes the impact of any non-market vesting conditions (for example, profitability and growth targets). The fair value of equity instruments granted is based on market prices, if available, at the date of grant. In the absence of market prices, the fair value of the instruments is estimated using an appropriate valuation technique, such as a binomial option pricing model. Non-market vesting conditions are included in assumptions about the number of options that are expected to vest.

At each balance sheet date, the Group revises its estimates of the number of options that are expected to vest. It recognises the impact of the revision of original estimates, if any, in the income statement, and a corresponding adjustment to equity over the remaining vesting period. Forfeitures prior to vesting attributable to factors other than the failure to satisfy a non-market vesting condition are treated as a cancellation and the remaining unamortised charge is debited to the income statement at the time of cancellation. The proceeds received net of any directly attributable transaction costs are credited to share capital (nominal value) and share premium when the options are exercised.

Cash-settled awards are revalued at each balance sheet date and a liability recognised on the balance sheet for all unpaid amounts, with any changes in fair value charged or credited to staff costs in the income statement until the awards are exercised. Where forfeitures occur prior to vesting that are attributable to factors other than a failure to satisfy market-based performance conditions, the cumulative charge incurred up to the date of forfeiture is credited to the income statement. Any revaluation related to cash-settled awards is recorded as an amount due from subsidiary undertakings.

The Group operates a number of share-based arrangements for its executive directors and employees. Details of the share-based payment charge are set out below.

	31.12.18 ¹			31.12.17 ¹		
	Cash \$million	Equity \$million	Total \$million	Cash \$million	Equity \$million	Total \$million
Deferred share awards	3	89	92	14	71	85
Other share awards	(3)	77	74	9	58	67
Total share-based payments	–	166	166	23	129	152

1 No forfeiture assumed

2011 Standard Chartered Share Plan (the '2011 Plan')

The 2011 Plan was approved by shareholders in May 2011 and is the Group's main share plan. Since approval, it has been used to deliver various types of share awards:

- Long Term Incentive Plan (LTIP) awards: granted with vesting subject to performance measures. Performance measures attached to awards granted previously include: total shareholder return (TSR); return on equity (RoE) with a Common Equity Tier 1 (CET1) underpin; strategic measures; earnings per share (EPS) growth; and return on risk-weighted assets (RoRWA). Each measure is assessed independently over a three-year period. Awards granted from 2016 have an individual conduct gateway that results in the award lapsing if not met
- Deferred awards are used to deliver the deferred portion of variable remuneration, in line with both market practice and regulatory requirements. These awards vest in instalments on anniversaries of the award date specified at the time of grant. Deferred awards are not subject to any plan limit. This enables the Group to meet regulatory requirements relating to deferral levels, and is in line with market practice
- Restricted share awards, made outside of the annual performance process as replacement buy-out awards to new joiners who forfeit awards on leaving their previous employers, vest in instalments on the anniversaries of the award date specified at the time of grant. This enables the Group to meet regulatory requirements relating to buy-outs, and is in line with market practice. In line with similar plans operated by our competitors, restricted share awards are not subject to an annual limit and do not have any performance measures
- Underpin shares are subject to a combination of two performance measures: EPS growth and RoRWA. The weighting between the two elements is split equally, one-half of the award depending on each measure, assessed independently. These awards vest after three or five years. Underpin shares formed part of the variable remuneration awarded to executive directors and senior management in respect of 2014 performance

Under the 2011 Plan, no grant price is payable to receive an award. The remaining life of the 2011 Plan during which new awards can be made is three years.

Valuation – LTIP awards

The vesting of awards granted in both 2017 and 2018 is subject to the satisfaction of RoE (subject to a capital underpin) and relative TSR performance measures and achievement of a strategic scorecard. The fair value of the TSR component is calculated using the probability of meeting the measures over a three-year performance period, using a Monte Carlo simulation model. The number of shares expected to vest is evaluated at each reporting date, based on the expected performance against the RoE and strategic measures in the scorecard, to determine the accounting charge.

Dividend equivalents accrue on the 2017 awards during the vesting period, so no discount is applied. However, for the 2018 awards, no dividend equivalents accrue and the fair value takes this into account, calculated by reference to market consensus dividend yield.

	31.12.18	31.12.17
Grant date	9 March	13 March
Share price at grant date (£)	7.78	7.43
Vesting period (years)	3-7	3-7
Expected dividend yield (%)	5.00	N/A
Fair value (RoE) (£)	2.59, 2.59	2.48, 2.48
Fair value (TSR) (£)	1.14, 1.11	1.81, 1.38
Fair value (Strategic) (£)	2.59, 2.59	2.48, 2.48

Valuation – deferred shares and restricted shares

The fair value for deferred awards which are not granted to material risk takers is based on 100 per cent of the face value of the shares at the date of grant as the share price will reflect expectations of all future dividends. For awards granted to material risk takers in 2018, the fair value of awards takes into account the lack of dividend equivalents, calculated by reference to market consensus dividend yield.

Deferred shares and underpin shares accrue dividend equivalent payments during the vesting period. Details of deferred, underpin and LTIP awards for executive directors can be found in the Annual report.

Deferred share awards

	31.12.18			
Grant date	18 June		9 March	
Share price at grant date (£)	7.12		7.78	
Vesting period	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)
1-3 years	N/A, 5.0, 5.0	7.12, 6.45, 6.15	N/A, 5.0, 5.0	7.78, 7.06, 6.73
1-5 years	5.0	6.00	5.0, 5.0	6.74, 6.58
3-7 years	–	–	5.0, 5.0	6.11, 5.82

	31.12.17					
Grant date	15 June		15 June		13 March	
Share price at grant date (£)	7.56		7.69		7.43	
Vesting period	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)
1-3 years	N/A	7.56	N/A	7.69	N/A	7.43
1-5 years	–	–	–	–	N/A	7.43
3-7 years	–	–	–	–	N/A	7.43

Other restricted share awards

31.12.18								
Grant date	28 November		2 October		18 June		9 March	
Share price at grant date (£)	6.11		6.16		7.12		7.78	
Vesting period	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)
6 months	–	–	–	–	–	–	–	–
1 year	5.0	5.82	5.0	5.86	5.0	6.78, 6.45	5.0	7.41
2 years	5.0	5.54	5.0	5.58	5.0	6.45, 6.15	5.0	7.06
2-3 years	5.0	5.41	–	–	–	–	–	–
3 years	5.0	5.28	5.0	5.32	5.0	6.15, 5.85	5.0	6.72
4 years	–	–	5.0	5.06	5.0	5.57	5.0	6.40
5 years	–	–	5.0	4.82	–	–	5.0	6.10
6 years	–	–	–	–	–	–	–	–

31.12.17								
Grant date	29 November		3 October		15 June		13 March	
Share price at grant date (£)	7.43		7.56		7.69		7.43	
Vesting period	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)	Expected dividend yield (%)	Fair value (£)
6 months	–	–	–	–	–	–	–	7.43
1 year	–	7.43	–	7.56	–	7.69	–	7.43
2 years	–	7.43	–	7.56	0.5	7.61	0.5	7.35
2-3 years	–	–	–	–	–	–	1.9	7.08
3 years	1.6	7.08	1.6	7.21	2.1	7.23	2.1	6.99
4 years	2.2	6.80	2.2	6.92	2.5	6.96	2.5	6.72
5 years	2.4	6.58	2.4	6.70	–	–	–	–
6 years	2.6	6.36	2.6	6.47	–	–	–	–

2001 Performance Share Plan (2001 PSP) – now closed to new grants:

The Group's previous plan for delivering performance shares was the 2001 PSP and there remain outstanding vested awards. Under the 2001 PSP half the award was dependent upon TSR performance and the balance was subject to a target of defined EPS growth. Both measures used the same three-year period and were assessed independently.

2006 Restricted Share Scheme (2006 RSS)/2007 Supplementary Restricted Share Scheme (2007 SRSS):

The Group's previous plans for delivering restricted shares were the 2006 RSS and 2007 SRSS, both now replaced by the 2011 Plan. There remain outstanding vested awards under these plans. Awards were generally in the form of nil cost options and did not have any performance measures. Generally deferred restricted share awards vested equally over three years and for non-deferred awards half vested two years after the date of grant and the balance after three years. No further awards will be granted under the 2006 RSS and 2007 SRSS.

2013 Sharesave Plan:

Under the 2013 Sharesave Plan, employees may open a savings contract. Within a period of six months after the third anniversary, employees may purchase ordinary shares in the Company at a discount of up to 20 per cent on the share price at the date of invitation (this is known as the option exercise price). There are no performance measures attached to options granted under the 2013 Sharesave Plan and no grant price is payable to receive an option. In some countries in which the Group operates, it is not possible to operate Sharesave plans, typically due to securities law and regulatory restrictions. In these countries, where possible, the Group offers an equivalent cash-based plan to its employees.

The 2013 Sharesave Plan was approved by Shareholders in May 2013 and all future Sharesave invitations are made under this plan. The remaining life of the 2013 Sharesave Plan is four years.

Valuation – Sharesave:

Options under the Sharesave plans are valued using a binomial option-pricing model. The same fair value is applied to all employees including executive directors. The fair value per option granted and the assumptions used in the calculation are as follows:

All Employee Sharesave Plan (Sharesave)

	31.12.18	31.12.17
Grant date	2 October	3 October
Share price at grant date (£)	6.16	7.71
Exercise price (£)	5.13	6.20
Vesting period (years)	3	3
Expected volatility (%)	33.8	34.9
Expected option life (years)	3.33	3.33
Risk-free rate (%)	0.87	0.47
Expected dividend yield (%)	5.00	1.87
Fair value (£)	1.39	2.32

The expected volatility is based on historical volatility over the last three years, or three years prior to grant. The expected life is the average expected period to exercise. The risk-free rate of return is the yield on zero-coupon UK Government bonds of a term consistent with the assumed option life. The expected dividend yield is based on historical dividend for three years prior to grant.

Reconciliation of option movements for the year to 31 December 2018

	2011 Plan ¹						Weighted average exercise price (£)
	Performance shares	Deferred/restricted shares	PSP ¹	RSS ¹	SRSS ¹	Sharesave	
Outstanding as at 1 January	25,477,368	23,311,221	17,222	185,943	1,249	12,818,234	6.06
Granted ^{2,3}	2,481,485	13,649,191				4,769,917	5.13
Lapsed	(935,037)	(1,375,715)	(553)	(50,484)		(2,995,333)	7.36
Exercised	(20,483)	(8,971,717)	(12,399)	(135,459)	(1,249)	(868,457)	5.57
Outstanding as at 31 December	27,003,333	26,612,980	4,270	–	–	13,724,361	5.48
Exercisable as at 31 December	43,241	3,657,278	4,270	–	–	3,483,196	5.57
Range of exercise prices (£) ²						– 5.13 – 6.20	
Intrinsic value of vested but not exercised options (\$ million)	0.04	2.59	0.02	–	–	–	
Weighted average contractual remaining life (years)	7.43	8.18	0.48	0	0	2.04	
Weighted average share price for options exercised during the period (£)	7.18	7.17	6.76	7.84	7.85	6.20	

1 Employees do not contribute towards the cost of these awards

2 12,508,120 (DRSA/RSA) granted on 9 March 2018, 39,945 (notional dividend) granted on 11 March 2018, 63,350 (notional dividend) granted on 13 March 2018, 37,774 (notional dividend) granted on 19 March 2018, 2,076,370 (LTIP) granted on 9 March 2018, 216,127 (notional dividend) granted on 11 March 2018, 22,317 (notional dividend) granted on 13 March 2018, 815 (notional dividend) granted on 19 March 2018, 246,367 (DRSA/RSA) granted on 18 June 2018, 165,856 (LTIP) and 75755 (DRSA/RSA) granted on 22 Aug 2018, and 423,038 (DRSA/RA) and 4,769,917 (Sharesave) granted on 2 October 2018, and 254,842 (DRSA/RSA) granted on 28 November 2018

3 For Sharesave granted in 2018 the exercise price is £5.13 per share, which was the average of the closing prices over the five days to the invitation date of 3 September. The closing share price on 31 August 2018 was £6.271

Reconciliation of option movements for the year to 31 December 2017

	2011 Plan ¹						Weighted average exercise price (£)
	Performance shares	Deferred/restricted shares	PSP ¹	RSS ¹	SRSS ¹	Sharesave	
Outstanding as at 1 January	28,740,614	24,208,988	76,977	701,603	80,299	13,291,261	6.72
Granted ^{2,3}	2,347,184	12,066,323	—	—	—	3,097,250	6.20
Lapsed	(5,550,569)	(1,233,517)	(14,821)	(118,531)	(18,741)	(3,529,783)	8.67
		(11,730,573)					
Exercised	(59,861)	)	(44,934)	(397,129)	(60,309)	(40,494)	5.55
Outstanding as at 31 December	25,477,368	23,311,221	17,222	185,943	1,249	12,818,234	6.06
Exercisable as at 31 December	65,429	4,526,848	17,222	185,943	1,249	1,364,426	9.38
Range of exercise prices (£) ²	—	—	—	—	—	5.30 -9.38	—
Intrinsic value of vested but not exercised options (\$ million)	0.1	3.6	0.0	0.2	0.0	0.0	—
Weighted average contractual remaining life (years)	8.29	8.09	1.13	0.19	0.19	2.05	—
Weighted average share price for options exercised during the period (£)	7.44	7.43	7.73	7.43	7.35	7.62	—

1 Employees do not contribute towards the cost of these awards

2 For Sharesave granted in 2017 the exercise price is £6.20 per share, which was the average of the closing prices over the five days to the invitation date of 4 September. The closing share price on 1 September 2017 was £7.7390

3 Performance shares comprise 2,347,184 (LTIP) granted on 13 March 2017. Deferred/restricted shares comprise 10,055,740 (RSA/DRSA) granted on 13 March 2017, 366,830 (RSA/DRSA) granted on 15 June 2017, 871,760 (RSA) granted on 03 October 2017 and 771,993 (RSA) granted on 29 November 2017

32. Investments in subsidiary undertakings, joint ventures and associates

Accounting policy

Subsidiaries

Subsidiaries are all entities, including structured entities, which the Group controls. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the investee. The assessment of power is based on the Group's practical ability to direct the relevant activities of the entity unilaterally for the Group's own benefit and is subject to reassessment if and when one or more of the elements of control change. Subsidiaries are fully consolidated from the date on which the Group effectively obtains control. They are deconsolidated from the date that control ceases, and where any interest in the subsidiary remains, this is remeasured to its fair value and the change in carrying amount is recognised in the income statement.

Associates and joint arrangements

Joint arrangements are where two or more parties either have rights to the assets, and obligations of the joint arrangement (joint operations), or have rights to the net assets of the joint arrangement (joint venture). The Group evaluates the contractual terms of joint arrangements to determine whether a joint arrangement is a joint operation or a joint venture. As at 31 December 2017, the Group did not have any contractual interest in joint operations.

An associate is an entity over which the Group has significant influence.

Investments in associates and joint ventures are accounted for by the equity method of accounting and are initially recognised at cost. The Group's investment in associates and joint ventures includes goodwill identified on acquisition (net of any accumulated impairment loss).

The Group's share of its associates' and joint ventures' post-acquisition profits or losses is recognised in the income statement, and its share of post-acquisition movements in other comprehensive income is recognised in reserves. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group's share of losses in an associate or a joint venture equals or exceeds its interest in the associate, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate or joint venture.

Unrealised gains and losses on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. At each balance sheet date the Group assesses whether there is any objective evidence of impairment in the investment in associates and joint ventures. Such evidence includes a significant or prolonged decline in the fair value of the Group's investment in an associate or joint venture below its cost, among other factors.

Significant accounting estimates and judgements

The Group applies judgement in determining if it has control, joint control or significant influence over subsidiaries, joint ventures and associates respectively. These judgements are based upon identifying the relevant activities of counterparties, being those activities that significantly affect the entities returns, and further making a decision of if the Group has control over those entities, joint control, or has significant influence (being the power to participate in the financial and operating policy decisions but not control them).

These judgements are at times determined by equity holdings, and the voting rights associated with those holdings. However, further considerations including but not limited to board seats, advisory committee members and specialist knowledge of some decision-makers are also taken into account.

Impairment testing of investments in associates and joint arrangements is based on estimates including forecasting the expected cash flows from the investments and the discount rate used in calculation of the present values of those cash flows. The estimation of future cash flows and the level to which they are discounted is inherently uncertain and requires significant judgement.

Business combinations

The acquisition method of accounting is used to account for the acquisition of subsidiaries by the Group. The cost of an acquisition is measured as the fair value of the assets given, equity instruments issued and liabilities incurred or assumed at the date of exchange, together with the fair value of any contingent consideration payable. The excess of the cost of acquisition over the fair value of the Group's share of the identifiable net assets and contingent liabilities acquired is recorded as goodwill (see Note 17 for details on goodwill recognised by the Group). If the cost of acquisition is less than the fair value of the net assets and contingent liabilities of the subsidiary acquired, the difference is recognised directly in the income statement.

Where the fair values of the identifiable net assets and contingent liabilities acquired have been determined provisionally, or where contingent or deferred consideration is payable, adjustments arising from their subsequent finalisation are not reflected in the income statement if (i) they arise within 12 months of the acquisition date (or relate to acquisitions completed before 1 January 2014) and (ii) the adjustments arise from better information about conditions existing at the acquisition date (measurement period adjustments). Such adjustments are applied as at the date of acquisition and, if applicable, prior year amounts are restated. All changes that are not measurement period adjustments are reported in income other than changes in contingent consideration not classified as financial instruments, which are accounted for in accordance with the appropriate accounting policy, and changes in contingent consideration classified as equity, which is not remeasured.

Changes in ownership interest in a subsidiary, which do not result in a loss of control, are treated as transactions between equity holders and are reported in equity. Where a business combination is achieved in stages, the previously held equity interest is remeasured at the acquisition date fair value with the resulting gain or loss recognised in the income statement.

In the Company's financial statements, investment in subsidiaries, associates and joint ventures are held at cost less impairment and dividends from pre-acquisition profits received prior to 1 January 2009, if any. Inter-company transactions, balances and unrealised gains and losses on transactions between Group companies are eliminated in the Group accounts.

	31.12.18 \$million	31.12.17 \$million
Investments in subsidiary undertakings		
As at 1 January	34,853	33,853
Additions	–	1,000
As at 31 December	34,853	34,853

At 31 December 2018, the principal subsidiary undertakings, all indirectly held and principally engaged in the business of banking and provision of other financial services, were as follows:

Country and place of incorporation or registration	Main areas of operation	Group interest in ordinary share capital %
Standard Chartered Bank, England and Wales	United Kingdom, Middle East, South Asia, Asia Pacific, Americas and, through Group companies, Africa	100
Standard Chartered Bank (China) Limited, China	China	100
Standard Chartered Bank (Hong Kong) Limited, Hong Kong	Hong Kong	100
Standard Chartered Bank Korea Limited, Korea	Korea	100
Standard Chartered Bank Malaysia Berhad, Malaysia	Malaysia	100
Standard Chartered Private Equity Limited, Hong Kong	Hong Kong	100
Standard Chartered Bank Nigeria Limited, Nigeria	Nigeria	100
Standard Chartered Bank (Singapore) Limited, Singapore	Singapore	100
Standard Chartered Bank (Taiwan) Limited, Taiwan	Taiwan	100
Standard Chartered Bank (Pakistan) Limited, Pakistan	Pakistan	98.99
Standard Chartered Bank (Thai) Public Company Limited, Thailand	Thailand	99.87
Standard Chartered Bank Kenya Limited, Kenya	Kenya	74.30

A complete list of subsidiary undertaking is included in Note 40.

The Group does not have any material non-controlling interests in any of its subsidiaries except the 25.7 per cent non-controlling interests amounting to \$108 million (31 December 2017: \$105 million) in Standard Chartered Bank Kenya Limited. This contributes 3.2 per cent of the Group's Operating Profit and 0.4 per cent of the Group's assets.

While the Group's subsidiaries are subject to local statutory capital and liquidity requirements in relation to foreign exchange remittance, these restrictions arise in the normal course of business and do not significantly restrict the Group's ability to access or use assets and settle liabilities of the Group.

The Group does not have significant restrictions on its ability to access or use its assets and settle its liabilities other than those resulting from the regulatory framework within which the banking subsidiaries operate. These frameworks require banking operations to keep certain levels of regulatory capital, liquid assets, exposure limits and comply with other required ratios. These restrictions are summarised below:

Regulatory and liquidity requirements

The Group's subsidiaries are required to maintain minimum capital, leverage ratios, liquidity and exposure ratios which therefore restrict the ability of these subsidiaries to distribute cash or other assets to the parent company.

The subsidiaries are also required to maintain balances with central banks and other regulatory authorities in the countries in which they operate. At 31 December 2018, the total cash and balances with central banks was \$58 billion (31 December 2017: \$59 billion) of which \$8 billion (31 December 2017: \$10 billion) is restricted.

Statutory requirements

The Group's subsidiaries are subject to statutory requirements not to make distributions of capital and unrealised profits to the parent company, generally to maintain solvency. These requirements restrict the ability of subsidiaries to remit dividends to the Group. Certain subsidiaries are also subject to local exchange control regulations which provide for restrictions on exporting capital from the country other than through normal dividends.

Contractual requirements

The encumbered assets in the balance sheet of the Group's subsidiaries are not available for transfer around the Group. Encumbered assets are disclosed in Risk review and Capital review.

Share of profit from investment in associates and joint ventures comprises:

	31.12.18 \$million	31.12.17 \$million
Profit from investment in joint ventures	29	29
Profit from investment in associates	212	239
Total	241	268

Interests in joint ventures

	31.12.18 \$million	31.12.17 \$million
As at 1 January	783	713
Exchange translation difference	(49)	(1)
Expected credit loss, net ¹	(33)	–
Additions	–	44
Share of profit	29	29
Disposals	(11)	–
Share of FVOCI and other reserves	(2)	(2)
As at 31 December	717	783

1 IFRS 9 transition impact from joint venture is reported here

The Group's principal joint venture is PT Bank Permata Tbk (Permata). The Group has a 44.56 per cent (31 December 2017: 44.56 per cent) equity investment in Permata. The Group has determined that it has joint control of Permata through its shareholding, which is held alongside a third-party that holds the same percentage. The Group has made the judgement that through these equity holdings, and in making decisions pertaining to Permata that both parties require each other's unanimous consent when making decisions over the relevant activities of Permata. Permata is based in Indonesia and provides financial services to consumer and commercial banking clients. The Group's share of profit of Permata amounts to \$26 million (31 December 2017: \$29 million) and the Group's share of net assets was \$717 million (31 December 2017: \$775 million). On 16 February 2017, Permata announced plans for an IDR3 trillion (approximately \$225 million) rights issue to drive growth. The Group invested an additional \$44 million during 2017 as part of the rights issue. Permata is listed on the Indonesia Stock Exchange with a share price of IDR625 as at 31 December 2018 resulting in a share capitalisation value of the Group's investment of \$540 million.

The following table sets out the summarised financial statements of PT Bank Permata Tbk prior to the Group's share of joint ventures being applied:

	31.12.18 \$million	31.12.17 \$million
Current assets	6,001	5,626
Non-current assets	4,439	5,193
Current liabilities	(8,342)	(8,415)
Non-current liabilities	(657)	(924)
Net assets	1,441	1,480
Operating income	517	641
Of which:		
Interest income	779	837
Interest expense	(399)	(447)
Expenses	(312)	(334)
Impairment	(117)	(224)
Operating profit	88	83
Taxation	(23)	(18)
Profit after tax	65	65
The financial statements of PT Bank Permata Tbk includes the following		
Cash and cash equivalents	1,445	1,207
Other comprehensive loss for the year	(8)	(5)
Total comprehensive income for the year	57	60

In December 2016 Permata established a portfolio of non-performing loans that were beyond its risk appetite which were to be liquidated. This resulted in an incremental impairment of \$140 million, representing the difference between the carrying amount of the liquidation portfolio on a hold to collect basis and the amount expected to be realised upon liquidation. This is consistent with the Group's restructuring actions. Accordingly, in 2016 the Group has recorded its \$62 million share of this incremental impairment as restructuring and this was normalised from the underlying results of the Group. In 2017 a gain of \$59 million has been recognised in restructuring as a result of recoveries on these non-performing loans.

Current assets primarily represent cash and short-term receivable balances. Non-current assets are primarily loans to customers. Current liabilities are primarily customer deposits based on contractual maturities, while non-current liabilities are longer-term payables such as subordinated debt.

Reconciliation of the net assets above to the carrying amount of the investments in PT Bank Permata Tbk recognised in the consolidated financial statements:

	31.12.18 \$million	31.12.17 \$million
Net assets of PT Bank Permata Tbk	1,441	1,480
Proportion of the Group's ownership interest in joint ventures	642	659
Notional goodwill	108	116
Other adjustments ¹	(33)	—
Carrying amount of the Group's interest in PT Bank Permata Tbk	717	775

1 Relates to IFRS 9 transition adjustments

The Group's interest in Permata was tested for impairment. The recoverable amount is based on estimates including forecasting the expected cash flows from the investments and the discount rate used in calculation of the present values of those cash flows. At 31 December 2018, the recoverable amount of the interest in Permata exceeded its carrying amount, and no impairment provision was required.

Interests in associates

	China Bohai Bank		Other		Total	
	31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million
As at 1 January	1,489	1,182	35	34	1,524	1,216
Exchange translation differences	(95)	96	—	—	(95)	96
Expected credit loss, net ¹	(19)	—	—	—	(19)	—
Share of profits	205	229	7	10	212	239
Disposals	—	—	—	37	—	37
Dividends received	(64)	—	(3)	(2)	(67)	(2)
Share of fair value through other comprehensive income/available-for-sale and Other reserves	35	(18)	—	(39)	35	(57)
Others	—	—	—	(5) ²	—	(5)
As at 31 December	1,551	1,489	39	35	1,590	1,524

1 IFRS 9 transition impact from associates is reported here

2 Relates to Asia Commercial Bank disposed in 2017

A complete list of the Group's interest in associates is included in Note 40. The Group's principal associate is:

Associate	Nature of activities	Main areas of operation	Group interest in ordinary share capital %
China Bohai Bank	Banking	China	19.99

The Group's investment in China Bohai Bank is less than 20 per cent but it is considered to be an associate because of the significant influence the Group is able to exercise over the management and financial and operating policies. The Group applies the equity method of accounting for investments in associates. The reported financials up to November 2018 of this associate are within three months of the Group's reporting date.

The following table sets out the summarised financial statements of China Bohai Bank prior to the Group's share of the associates being applied:

	China Bohai Bank	
	30 Nov 2018 \$million	30 Nov 2017 \$million
Current assets	62,212	52,056
Non-current assets	85,547	104,479
Current liabilities	(65,731)	(82,293)
Non-current liabilities	(74,269)	(66,794)
Net assets	7,759	7,448
Operating income	3,427	3,854
Of which:		
Interest income	6,699	6,014
Interest expense	(4,430)	(3,452)
Expenses	(1,273)	(1,388)
Impairment	(971)	(1,056)
Operating profit	1,183	1,410
Taxation	(160)	(263)
Profit after tax	1,023	1,147
The financial statements of China Bohai bank include the following:		
Other comprehensive profit/(loss) for the year	175	(91)
Total comprehensive income for the year	1,198	1056

Non-current assets are primarily loans to customers and current liabilities are primarily customer deposits based on contractual maturities.

During the year, there were no indicators of impairment for the Group's investment in China Bohai Bank. The carrying value of the investment as of 31 December 2018 was \$1,551 million (31 December 2017: \$1,590 million).

33. Structured entities

Accounting policy

A structured entity is an entity that has been designed so that voting or similar rights are not the dominant factor in deciding who controls the entity. Contractual arrangements determine the rights and therefore relevant activities of the structured entity. Structured entities are generally created to achieve a narrow and well-defined objective with restrictions around their activities. Structured entities are consolidated when the substance of the relationship between the Group and the structured entity indicates the Group has power over the contractual relevant activities of the structured entity, is exposed to variable returns, and can use that power to affect the variable return exposure.

In determining whether to consolidate a structured entity to which assets have been transferred, the Group takes into account its ability to direct the relevant activities of the structured entity. These relevant activities are generally evidenced through a unilateral right to liquidate the structured entity, investment in a substantial proportion of the securities issued by the structured entity or where the Group holds specific subordinate securities that embody certain controlling rights. The Group may further consider relevant activities embedded within contractual arrangements such as call options which give the practical ability to direct the entity, special relationships between the structured entity and investors, and if a single investor has a large exposure to variable returns of the structured entity.

Judgement is required in determining control over structured entities. The purpose and design of the entity is considered, along with a determination of what the relevant activities are of the entity and who directs these. Further judgements are made around which investor is exposed to, and absorbs the variable returns of the structured entity. The Group will have to weigh up all of these facts to consider whether the Group, or another involved party is acting as a principal in its own right or as an agent on behalf of others. Judgement is further required in the ongoing assessment of control over structured entities, specifically if market conditions have an effect on the variable return exposure of different investors.

The Group has involvement with both consolidated and unconsolidated structured entities, which may be established by the Group as a sponsor or by a third-party.

Interests in consolidated structured entities: A structured entity is consolidated into the Group's financial statements where the Group controls the structured entity, as per the determination in the accounting policy above.

The following table presents the Group's interests in consolidated structured entities.

	31.12.18 \$million	31.12.17 \$million
Aircraft and ship leasing	4,854	5,494
Principal and other structured finance	1,452	2,534
Total	6,306	8,028

Interests in unconsolidated structured entities: Unconsolidated structured entities are all structured entities that are not controlled by the Group. The Group enters into transactions with unconsolidated structured entities in the normal course of business to facilitate customer transactions and for specific investment opportunities. An interest in a structured entity is contractual or non-contractual involvement which creates variability of the returns of the Group arising from the performance of the structured entity.

The table below presents the carrying amount of the assets recognised in the financial statements relating to variable interests held in unconsolidated structured entities, the maximum exposure to loss relating to those interests and the total assets of the structured entities. Maximum exposure to loss is primarily limited to the carrying amount of the Group's on-balance sheet exposure to the structured entity. For derivatives, the maximum exposure to loss represents the on-balance sheet valuation and not the notional amount. For commitments and guarantees, the maximum exposure to loss is the notional amount of potential future losses.

	31.12.18					31.12.17				
	Asset-backed securities \$million	Structured finance \$million	Principal Finance funds \$million	Other activities \$million	Total \$million	Asset-backed securities \$million	Structured finance \$million	Principal Finance funds \$million	Other activities \$million	Total \$million
Group's interest – assets										
Financial assets held at fair value through profit or loss	1,094	–	72	247	1,413	885	–	389	98	1,372
Loans and advances/investment securities at amortised cost	2,556	1,403	252	190	4,401	1,437	1,527	439	–	3,403
Investment securities (fair value through other comprehensive income/available-for-sale)	3,812	–	–	–	3,812	4,105	–	56	–	4,161
Other assets	–	–	336	–	336	–	–	19	–	19
Total assets	7,462	1,403	660	437	9,962	6,427	1,527	903	98	8,955
Off-balance sheet	116	553	79	–	748	86	501	262	–	849
Group's maximum exposure to loss	7,578	1,956	739	437	10,710	6,513	2,028	1,165	98	9,804
Total assets of structured entities	205,837	2,785	3,395	11,872	223,889	295,468	3,747	5,052	106	304,373

The main types of activities for which the Group utilises unconsolidated structured entities cover synthetic credit default swaps for managed investment funds (including specialised Principal Finance funds), portfolio management purposes, structured finance and asset-backed securities. These are detailed as follows:

- Asset-backed securities (ABS): The Group also has investments in asset-backed securities issued by third-party structured entities as set out in the Risk review and Capital review. For the purpose of market making and at the discretion of ABS trading desk, the Group may hold an immaterial amount of debt securities from structured entities originated by credit portfolio management. This is disclosed in the ABS column above

- **Portfolio management (Group sponsored entities):** For the purposes of portfolio management, the Group purchased credit protection via synthetic credit default swaps from note-issuing structured entities. The referenced assets remain on the Group's balance sheet as they are not assigned to these structured entities. The Group continues to own or hold all of the risks and returns relating to these assets. The credit protection obtained from the regulatory-compliant securitisation only serves to protect the Group against losses upon the occurrence of eligible credit events and the underlying assets are not derecognised from the Group's balance sheet. The Group does not hold any equity interests in the structured entities, but may hold an insignificant amount of the issued notes for market making purposes. This is disclosed in the ABS section above. The proceeds of the notes' issuance are typically held as cash collateral in the issuer's account operated by a trustee or invested in AAA-rated government-backed securities to collateralise the structured entities swap obligations to the Group, and to repay the principal to investors at maturity. The structured entities reimburse the Group on actual losses incurred, through the use of the cash collateral or realisation of the collateral security. Correspondingly, the structured entities write down the notes issued by an equal amount of the losses incurred, in reverse order of seniority. All funding is committed for the life of these vehicles and the Group has no indirect exposure in respect of the vehicles' liquidity position. The Group has reputational risk in respect of certain portfolio management vehicles and investment funds either because the Group is the arranger and lead manager or because the structured entities have Standard Chartered branding
- **Structured finance:** Structured finance comprises interests in transactions that the Group or, more usually, a customer has structured, using one or more structured entities, which provide beneficial arrangements for customers. The Group's exposure primarily represents the provision of funding to these structures as a financial intermediary, for which it receives a lender's return. The transactions largely relate to the provision of aircraft leasing and ship finance
- **Principal Finance funds:** The Group's exposure to Principal Finance funds represents committed or invested capital in unleveraged investment funds, primarily investing in pan-Asian infrastructure, real estate and private equity
- **Other activities:** Other activities include structured entities created to support margin financing transactions, the refinancing of existing credit and debt facilities, as well as setting up of bankruptcy remote structured entities

34. Cash flow statement

Adjustment for non-cash items and other adjustments included within income statement

	Group		Company	
	31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million
Amortisation of discounts and premiums of investment securities	(375)	(292)	–	–
Interest expense on subordinated liabilities	767	748	673	563
Interest expense on senior debt securities in issue	606	465	503	381
Other non-cash items	796	541	91	63
Pension costs for defined benefit schemes	81	98	–	–
Share-based payment costs	166	152	–	–
Impairment losses on loans and advances and other credit risk provisions	653	1,362	–	–
Dividend income from subsidiaries	–	–	(1,035)	(392)
Other impairment	182	499	–	–
Net gain on derecognition of investment in associate	–	(64)	–	–
Profit from associates and joint ventures	(241)	(268)	–	–
Total	2,635	3,241	232	615

Change in operating assets

	Group		Company	
	31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million
Decrease in derivative financial instruments	1,051	19,246	61	459
Decrease/(Increase) in debt securities, treasury bills and equity shares held at fair value through profit or loss	4,171	(5,373)	—	—
Increase in loans and advances to banks and customers	(16,883)	(26,085)	—	—
Net increase in prepayments and accrued income	(252)	(19)	—	—
Net increase in other assets	(924)	(1,394)	—	—
Total	(12,837)	(13,625)	61	459

Change in operating liabilities

	Group		Company	
	31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million
(Decrease)/increase in derivative financial instruments	(493)	(18,405)	636	(1,049)
Net increase/(decrease) in deposits from banks, customer accounts, debt securities in issue, Hong Kong notes in circulation and short positions	31,216	23,877	(22)	1,599
Increase/(decrease) in accruals and deferred income	3	68	6	(7)
Net increase/(decrease) in other liabilities	3,133	279	(1,082)	32
Total	33,859	5,819	(462)	575

Disclosures

	Group		Company	
	31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million
Subordinated debt (including accrued interest):				
Opening balance	17,550	19,913	14,109	14,821
Proceeds from the issue	500	—	500	—
Interest paid	(602)	(743)	(507)	(353)
Repayment	(2,097)	(2,984)	(474)	(1,249)
Foreign exchange movements	(220)	701	(237)	536
Fair value changes	(373)	11	(248)	93
Other	469	652	505	261
Closing balance	15,227	17,550	13,648	14,109
Senior debt (including accrued interest):				
Opening balance	19,738	19,800	16,307	17,265
Proceeds from the issue	9,766	2,292	4,552	1,501
Interest paid	(507)	(896)	(355)	(825)
Repayment	(7,030)	(4,162)	(3,141)	(3,237)
Foreign exchange movements	(347)	882	(199)	659
Fair value changes	(904)	26	(182)	21
Other	1,282	1,796	379	923
Closing balance	21,998	19,738	17,361	16,307

35. Cash and cash equivalents

Accounting policy

For the purposes of the cash flow statement, cash and cash equivalents comprise cash, on demand and overnight balances with central banks (unless restricted) and balances with less than three months' maturity from the date of acquisition, including treasury bills and other eligible bills, loans and advances to banks, and short-term government securities.

The following balances with less than three months' maturity from the date of acquisition have been identified by the Group as being cash and cash equivalents.

	Group		Company	
	31.12.18 \$million	31.12.17 \$million	31.12.18 \$million	31.12.17 \$million
Cash and balances at central banks	57,511	58,864	—	—
Less: restricted balances	(8,152)	(9,761)	—	—
Treasury bills and other eligible bills	15,393	9,384	—	—
Loans and advances to banks	30,449	25,729	—	—
Trading securities	2,299	3,015	—	—
Amounts owed by and due to subsidiary undertakings	—	—	17,606	15,714
Total	97,500	87,231	17,606	15,714

Restricted balances comprise minimum balances required to be held at central banks.

36. Related party transactions

Directors and officers

Details of directors' remuneration and interests in shares are disclosed in the Directors' remuneration report.

IAS 24 Related party disclosures requires the following additional information for key management compensation. Key management comprises non-executive directors, executive directors of Standard Chartered PLC, the Court directors of Standard Chartered Bank and the persons discharging managerial responsibilities (PDMR) of Standard Chartered PLC.

	31.12.18 \$million	31.12.17 \$million
Salaries, allowances and benefits in kind	33	35
Share-based payments	29	29
Bonuses paid or receivable	10	11
Total	72	75

Transactions with directors and others

At 31 December 2018, the total amounts to be disclosed under the Companies Act 2006 (the Act) and the Listing Rules of the Hong Kong Stock Exchange Limited (HK Listing Rules) about loans to directors were as follows:

	31.12.18		31.12.17	
	Number	\$million	Number	\$million
Directors	1	—	1	—

The loan transaction provided to the directors of Standard Chartered PLC was a connected transaction under Chapter 14A of the HK Listing Rules. It was fully exempt as financial assistance under Rule 14A.87(1), as it was provided in our ordinary and usual course of business and on normal commercial terms.

As at 31 December 2018, Standard Chartered Bank had created a charge over \$83 million (31 December 2017: \$75 million) of cash assets in favour of the independent trustee of its employer financed retirement benefit scheme.

Other than as disclosed in the Annual Report and Accounts, there were no other transactions, arrangements or agreements outstanding for any director, connected person or officer of the Company which have to be disclosed under the Act, the rules of the UK Listing Authority or the HK Listing Rules.

Company

The Company has received \$953 million (31 December 2017: \$848 million) of interest income from Standard Chartered Bank. The Company issues debt externally and lends proceeds to Group companies. At 31 December 2018, it had amounts due from Standard Chartered Bank of \$14,380 million (31 December 2017: \$12,580 million), derivative financial assets of \$9 million (31 December 2017: \$70 million) and \$1,094 million derivative financial liabilities (31 December 2017: \$492 million) with Standard Chartered Bank, amounts due from Standard Chartered Holdings Limited of \$80 million (31 December 2017: \$80 million). At 31 December 2018, it had amounts due from Standard Chartered IH Limited of \$298 million (31 December 2017: \$298 million).

The Company has an agreement with Standard Chartered Bank that in the event of Standard Chartered Bank defaulting on its debt coupon interest payments, where the terms of such debt requires it, the Company shall issue shares as settlement for non-payment of the coupon interest.

Associate and joint ventures

The following transactions with related parties are on an arm's-length basis.

	31.12.18				31.12.17		
	China Bohai Bank \$million	Clifford Capital \$million	PT Bank Permata \$million	Seychelles International Mercantile Banking Corporation Limited \$million	China Bohai Bank \$million	Clifford Capital \$million	PT Bank Permata \$million
Assets							
Loans and advances	—	22	58	—	—	50	95
Debt securities	—	—	—	—	—	27	—
Derivative assets	2	—	—	—	1	—	—
Total assets	2	22	58	—	1	77	95
Liabilities							
Deposits	266	—	35	11	219	—	29
Debt securities issued	—	—	—	—	15	—	—
Total liabilities	266	—	35	11	234	—	29
Total net income	6	—	6	—	5	—	6

37. Post balance sheet events

A final dividend for 2018 of 15 cents per ordinary share was declared by the directors after 31 December 2018.

On 21 February 2019 the Board of the Company approved an entity reorganisation in which it will acquire the direct ownership of Standard Chartered Bank (Hong Kong) Limited currently held by wholly owned subsidiary undertakings Standard Chartered Bank and Standard Chartered Holdings Limited. This common control transaction will have no financial impact on the consolidated accounts of the Group. In the Company only accounts, Investments in Subsidiaries will increase with a corresponding increase in equity being the dividend in specie utilised to achieve the reorganisation. The transaction is subject to Standard Chartered Bank and Standard Chartered Holdings Limited passing necessary resolutions for the dividends in specie and completing the necessary transfers, which are expected to be completed in March 2019.

38. Auditor's remuneration

Auditor's remuneration is included within other general administration expenses. The amounts paid by the Group to their principal auditor, KPMG LLP and its associates (together KPMG), are set out below. All services are approved by the Group Audit Committee and are subject to controls to ensure the external auditor's independence is unaffected by the provision of other services.

	31.12.18 \$million	31.12.17 ¹ \$million
Audit fees for the Group statutory audit	9.2	9.4
Fees payable to KPMG for other services provided to the Group:		
Audit of Standard Chartered PLC subsidiaries	8.3	7.7
Total audit fees	17.5	17.1
Audit-related services	7.0	5.9
Other assurance services	0.3	0.2
Tax compliance and advisory services	0.1	0.3
Corporate finance services	0.2	0.5
Total fees payable	25.1	24.0

1 Prior year balances have been re-presented to align to current year categories

The following is a description of the type of services included within the categories listed above:

- Audit fees for the Group statutory audit are in respect of fees payable to KPMG LLP for the statutory audit of the consolidated financial statements of the Group and the separate financial statements of Standard Chartered PLC
- Audit-related fees consist of fees such as those for services required by law or regulation to be provided by the auditor, reviews of interim financial information, reporting on regulatory returns, reporting to a regulator on client assets and extended work performed over financial information and controls authorised by those charged with governance
- Other assurance services include agreed-upon-procedures in relation to statutory and regulatory filings
- Tax services include services which are not prohibited by the European Directive on Statutory Audits of Annual and Consolidated Accounts and the Regulation on Statutory Audits of Public Interest Entities
- Corporate finance services are fees payable to KPMG for issuing comfort letters

Expenses incurred during the provision of services and which have been reimbursed by the Group are not included within auditor's remuneration. Expenses incurred for 2018 were \$0.6 million (2017: \$0.9 million).

39. Standard Chartered PLC (Company)

Classification and measurement of financial instruments

	31.12.18			31.12.17		
Financial assets	Derivatives held for hedging \$million	Amortised cost \$million	Total \$million	Derivatives held for hedging \$million	Amortised cost \$million	Total \$million
Derivatives	9	—	9	70	—	70
Investment securities	—	11,537	11,537	—	12,159	12,159
Amounts owed by subsidiary undertakings	—	17,606	17,606	—	15,714	15,714
Total	9	29,143	29,152	70	27,873	27,943

There was no change to the classification, measurement or credit impairment of financial assets upon the transition to IFRS 9. The instruments classified as amortised cost will be recorded in stage 1.

Derivatives held for hedging are held at fair value and are classified as Level 2 while the counterparty is Standard Chartered Bank.

Debt securities comprise corporate securities issued by Standard Chartered Bank and have a fair value equal to carrying value of \$11,537 million (31 December 2017: \$12,159 million).

In 2018 and 2017, amounts owed by subsidiary undertakings have a fair value equal to carrying value.

	31.12.18			31.12.17		
	Derivatives held for hedging \$million	Amortised cost \$million	Total \$million	Derivatives held for hedging \$million	Amortised cost \$million	Total \$million
Financial liabilities						
Derivatives	1,128	–	1,128	492	–	492
Debt securities in issue	–	17,202	17,202	–	16,169	16,169
Subordinated liabilities and other borrowed funds	–	13,436	13,436	–	13,882	13,882
Total	1,128	30,638	31,766	492	30,051	30,543

Derivatives held for hedging are held at fair value and are classified as Level 2 while the counterparty is Standard Chartered Bank.

The fair value of debt securities in issue is \$17,202 million (31 December 2017: \$16,169 million) and have fair value equal to carrying value.

The fair value of subordinated liabilities and other borrowed funds is \$13,043 million (31 December 2017: \$14,314 million).

Derivative financial instruments

	31.12.18			31.12.17		
	Notional principal amounts \$million	Assets \$million	Liabilities \$million	Notional principal amounts \$million	Assets \$million	Liabilities \$million
Derivatives						
Foreign exchange derivative contracts:						
Currency swaps	6,864	–	818	8,038	59	300
Interest rate derivative contracts:						
Swaps	10,939	9	310	11,980	11	192
Total	17,803	9	1,128	20,018	70	492

Credit risk

Maximum exposure to credit risk

	31.12.18 \$million	31.12.17 \$million
Derivative financial instruments	9	70
Debt securities	11,537	12,159
Amounts owed by subsidiary undertakings	17,606	15,714
Total	29,152	27,943

In 2018 and 2017, amounts owed by subsidiary undertakings were neither past due nor impaired; the Company had no individually impaired loans.

In 2018 and 2017, the Company had no impaired debt securities. The debt securities held by the Group are issued by Standard Chartered Bank, a wholly owned subsidiary undertaking with credit ratings of A+/A/A1.

Liquidity risk

The following table analyses the residual contractual maturity of the assets and liabilities of the Company on a discounted basis:

31.12.18									
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Assets									
Derivative financial instruments	–	–	–	–	–	3	–	6	9
Investment securities	–	–	–	–	–	1,698	3,960	5,879	11,537
Amount owed by subsidiary undertakings	1,318	–	–	2,759	–	2,093	7,070	4,366	17,606
Investments in subsidiary undertakings	–	–	–	–	–	–	–	34,853	34,853
Other assets	–	–	–	–	–	–	–	–	–
Total assets	1,318	–	–	2,759	–	3,794	11,030	45,104	64,005
Liabilities									
Derivative financial instruments	83	–	–	9	–	260	324	452	1,128
Senior debt	1,031	–	–	2,731	–	2,079	5,402	5,959	17,202
Other liabilities	201	91	59	–	21	–	–	19	391
Subordinated liabilities and other borrowed funds	–	–	–	–	–	1,472	4,368	7,596	13,436
Total liabilities	1,315	91	59	2,740	21	3,811	10,094	14,026	32,157
Net liquidity gap	3	(91)	(59)	19	(21)	(17)	936	31,078	31,848

31.12.17									
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Assets									
Derivative financial instruments	–	–	–	–	–	2	5	63	70
Investment securities	–	–	–	–	–	–	3,658	8,501	12,159
Amount owed by subsidiary undertakings	271	23	1,577	–	1,613	3,901	5,275	3,054	15,714
Investments in subsidiary undertakings	–	–	–	–	–	–	–	34,853	34,853
Other assets	–	–	–	–	–	–	–	3	3
Total assets	271	23	1,577	–	1,613	3,903	8,938	46,474	62,799
Liabilities									
Derivative financial instruments	–	–	2	–	–	19	283	188	492
Senior debt	–	–	1,326	–	1,499	3,826	4,671	4,847	16,169
Other liabilities	194	72	76	–	24	–	36	3	405
Subordinated liabilities and other borrowed funds	–	–	–	–	–	–	3,094	10,788	13,882
Total liabilities	194	72	1,404	–	1,523	3,845	8,084	15,826	30,948
Net liquidity gap	77	(49)	173	–	90	58	854	30,648	31,851

Financial liabilities on an undiscounted basis

31.12.18									
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Derivative financial instruments	83	—	—	9	—	260	324	452	1,128
Debt securities in issue	1,031	7	172	2,765	241	2,408	6,175	6,633	19,432
Subordinated liabilities and other borrowed funds	—	—	221	—	362	2,055	5,975	12,789	21,402
Other liabilities	201	91	59	—	21	—	—	20	392
Total liabilities	1,315	98	452	2,774	624	4,723	12,474	19,894	42,354

31.12.17									
	One month or less \$million	Between one month and three months \$million	Between three months and six months \$million	Between six months and nine months \$million	Between nine months and one year \$million	Between one year and two years \$million	Between two years and five years \$million	More than five years and undated \$million	Total \$million
Derivative financial instruments	—	—	2	—	—	18	284	188	492
Debt securities in issue	6	10	51	66	1,592	4,151	5,192	5,854	16,922
Subordinated liabilities and other borrowed funds	12	30	33	210	106	617	4,774	15,982	21,764
Other liabilities	192	72	76	—	24	—	36	—	400
Total liabilities	210	112	162	276	1,722	4,786	10,286	22,024	39,578

40. Related undertakings of the Group

As at 31 December 2018, the Group's interests in related undertakings is disclosed below. Unless otherwise stated, the share capital disclosed comprises ordinary or common shares which are held by subsidiaries of the Group. Note 32 details undertakings that have a significant contribution to the Group's net profit or net assets.

Subsidiary Undertakings

Name and registered address	Country of Incorporation	Description of shares	Proportion of shares held (%)
<i>The following companies have the address of 1 Basinghall Avenue, London, EC2V 5DD, United Kingdom</i>			
BWA Dependents Limited	United Kingdom	£1.00 Ordinary shares	100
FinVentures UK Limited	United Kingdom	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing (UK) Limited	United Kingdom	£1.00 Ordinary shares	100
SC (Secretaries) Limited	United Kingdom	£1.00 Ordinary shares	100
SC Leaseco Limited	United Kingdom	\$1.00 Ordinary shares	100
SC Transport Leasing 1 Limited	United Kingdom	£1.00 Ordinary shares	100
SC Transport Leasing 2 Limited	United Kingdom	£1.00 Ordinary shares	100
SCMB Overseas Limited	United Kingdom	£0.10 Ordinary shares	100
Stanchart Nominees Limited ¹	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Africa Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered APR Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Bank	United Kingdom	\$0.01 Non-Cumulative Irredeemable Preference shares	100
		\$5.00 Non-Cumulative Redeemable Preference shares	100
		\$1.00 Ordinary shares	100
Standard Chartered Health Trustee (UK) Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Holdings Limited ¹	United Kingdom	\$2.00 Ordinary shares	100
Standard Chartered I H Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Leasing (UK) 2 Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Leasing (UK) 3 Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Leasing (UK) Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Masterbrand Licensing Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered NEA Limited	United Kingdom	\$1.00 Ordinary shares	100

Standard Chartered Nominees Limited ¹	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Nominees (Private Clients UK) Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Overseas Holdings Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Securities (Africa) Holdings Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Trustees (UK) Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered UK Holdings Limited	United Kingdom	£10.00 Ordinary shares	100
The SC Transport Leasing Partnership 1	United Kingdom	Limited Partnership interest	100
The SC Transport Leasing Partnership 2	United Kingdom	Limited Partnership interest	100
The SC Transport Leasing Partnership 3	United Kingdom	Limited Partnership interest	100
The SC Transport Leasing Partnership 4	United Kingdom	Limited Partnership interest	100
The BW Leasing Partnership 1 LP ²	United Kingdom	Limited Partnership interest	100
The BW Leasing Partnership 2 LP ²	United Kingdom	Limited Partnership interest	100
The BW Leasing Partnership 3 LP ²	United Kingdom	Limited Partnership interest	100
The BW Leasing Partnership 4 LP ²	United Kingdom	Limited Partnership interest	100
The BW Leasing Partnership 5 LP ²	United Kingdom	Limited Partnership interest	100
<i>The following companies have the address of 2 More London Riverside, London SE1 2JT, United Kingdom</i>			
Bricks (C&K) LP ²	United Kingdom	Limited Partnership interest	100
Bricks (C) LP ²	United Kingdom	Limited Partnership interest	100
Bricks (M) LP	United Kingdom	Limited Partnership interest	100
Bricks (P) LP ²	United Kingdom	Limited Partnership interest	100
Bricks (T) LP ²	United Kingdom	Limited Partnership interest	100
<i>The following company has the address of Rua Gamal Abdel Nasser, Edifício Tres Torres, Eixo Viário, Distrito Urbano da Ingombota, Município de Luanda, Província de Luanda, Angola</i>			
Standard Chartered Bank Angola S.A.	Angola	AOK6,475.62 Ordinary shares	60
<i>The following company has the address of Level 5, 345 George St, Sydney NSW 2000, Australia</i>			
Standard Chartered Grindlays Pty Limited	Australia	AUD Ordinary shares	100
<i>The following companies have the address of 5th Floor Standard House Bldg, The Mall, Queens Road, PO Box 496, Gaborone, Botswana</i>			
Standard Chartered Bank Insurance Agency (Proprietary) Limited	Botswana	BWP1.00 Ordinary shares	100
Standard Chartered Investment Services (Proprietary) Limited	Botswana	BWP1.00 Ordinary shares	100
Standard Chartered Bank Botswana Limited	Botswana	BWP1.00 Ordinary shares	75.8
Standard Chartered Botswana Education Trust ³	Botswana	Interest in trust	100
Standard Chartered Botswana Nominees (Proprietary) Limited	Botswana	BWP Ordinary shares	100
<i>The following company has the address of Avenida Brigadeiro Faria Lima, 3600 – 7th floor, Sao Paulo, Sao Paulo, 04538-132, Brazil</i>			
Standard Chartered Bank (Brasil) S.A. – Banco de Investimento	Brazil	BRL Ordinary shares	100
<i>The following company has the address of 51-55 Jalan Sultan, Complex Jalan Sultan, Bandar Seri Begawan, BS8811, Brunei Darussalam</i>			
Standard Chartered Finance (Brunei) Bhd	Brunei Darussalam	BND1.00 Ordinary shares	100
<i>The following company has the address of G01-02, Wisma Haji Mohd Taha Building, Jalan Gadong, BE4119, Brunei Darussalam</i>			
Standard Chartered Securities (B) Sdn Bhd	Brunei Darussalam	BND1.00 Ordinary shares	100
<i>The following company has the address of 1155, Boulevard de la Liberté, Douala, B.P. 1784, Cameroon</i>			
Standard Chartered Bank Cameroon S.A	Cameroon	XAF10,000.00 shares	100
<i>The following company has the address of 20 Adelaide Street, Suite 1105, Toronto ON M5C 2T6 Canada</i>			
Standard Chartered (Canada) Limited	Canada	CAD1.00 Ordinary shares	100
<i>The following company has the address of Maples Finance Limited, PO Box 1093 GT, Queensgate House, Georgetown, Grand Cayman, Cayman Islands</i>			
SCB Investment Holding Company Limited	Cayman Islands	\$1,000.00 A Ordinary shares	100
		\$1.00 Class X shares	100
<i>The following company has the address of Cayman Corporate Centre, 27 Hospital Road, George Town, Grand Cayman KY1-9008, Cayman Islands</i>			
Ocean Horizon Holdings South Ltd	Cayman Islands	\$1.00 Ordinary shares	100

The following companies have the address of Walkers Corporate Limited,
Cayman Corporate Centre, 27 Hospital Road George Town, Grand Cayman
KY1-9008, Cayman Islands

Sirat Holdings Limited	Cayman Islands	\$0.01 Ordinary shares	91
		\$0.01 Preference shares	66.7
Standard Chartered Corporate Private Equity (Cayman) Limited	Cayman Islands	\$0.001 Ordinary shares	100
Standard Chartered International Partners	Cayman Islands	\$0.001 Ordinary shares	100
Standard Chartered Principal Finance (Cayman) Limited	Cayman Islands	\$0.0001 Ordinary shares	100
Standard Chartered Private Equity (Cayman) Limited	Cayman Islands	\$0.001 Ordinary shares	100

The following company has the address of Mourant Ozannes Corporate
Services (Cayman) Limited, Harbour Centre, 42 North Church Street,
PO Box 1348, Grand Cayman KY1-1108, Cayman Islands

Sunflower Cayman SPC	Cayman Islands	\$1.00 Management shares	100
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The following companies have the address of Maples Corporate Services
Limited, PO Box 309, Ugland House, Grand Cayman KY1-1104,
Cayman Islands

Cerulean Investments LP	Cayman Islands	Limited Partnership interest	100
Standard Chartered Saadiq Mudarib Company Limited	Cayman Islands	\$1.00 Ordinary shares	100

The following companies have the address of Unit 2 – 101, Building 3,
Haifeng Logistics Park, No. 600 Luoyang Road, Tianjin, Dongjiang Free
Trade Port Zone, China

Pembroke Aircraft Leasing (Tianjin) Limited	China	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing Tianjin 1 Limited	China	CNY1.00 Ordinary shares	100
Pembroke Aircraft Leasing Tianjin 2 Limited	China	CNY1.00 Ordinary shares	100

The following company has the address of Standard Chartered Tower,
201 Century Avenue, Pudong, Shanghai 200120, China

Standard Chartered Bank (China) Limited	China	CNY Ordinary shares	100
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The following company has the address of Unit 5, 12th Floor, Standard
Chartered Tower, World Finance, No 1 East Third Ring Middle Road,
Chaoyang District, Beijing 100020, China

Standard Chartered Corporate Advisory Co. Ltd	China	\$1.00 Ordinary shares	100
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The following company has the address of No. 188 Yeshe Rd, 11F,
A-1161 RM, Pudong New District, Shanghai 31201308, China

Standard Chartered Trading (Shanghai) Limited	China	\$15,000,000.00 Ordinary shares	100
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The following company has the address of No. 35, Xinhuanbei Road, TEDA,
Tianjin, 300457, China

Standard Chartered Global Business Services Co. Limited	China	\$ Ordinary shares	100
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The following company has the address of Standard Chartered Bank Cote
d'Ivoire, 23 Boulevard de la République, Abidjan 17, 17 B.P. 1141, Cote
d'Ivoire

Standard Chartered Bank Cote d'Ivoire SA	Cote d'Ivoire	XOF100,000.00 Ordinary shares	100
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The following company has the address of Standard Chartered Bank France,
32 Rue de Monceau, 75008, Paris, France

Pembroke Lease France SAS	France	€1.00 Ordinary shares	100
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The following company has the address of 8 Ecowas Avenue, PMB 259
Banjul, The Gambia

Standard Chartered Bank Gambia Limited	Gambia	GMD1.00 Ordinary shares	74.9
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The following company has the address of Taunusanlage 16, 60325,
Frankfurt am Main, Germany

Standard Chartered Bank AG	Germany	€ Ordinary shares	100
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The following companies have the address of Standard Chartered Bank
Building, 87 Independence Avenue, P.O. Box 768, Accra, Ghana

Standard Chartered Bank Ghana Limited	Ghana	GHS Ordinary shares	69.4
		GHS0.52 Preference shares	87.0
Standard Chartered Ghana Nominees Limited	Ghana	GHS Ordinary shares	100

The following companies have the address of Bordeaux Court, Les Echelons,
South Esplanade, St. Peter Port, Guernsey

Birdsong Limited	Guernsey	£1.00 Ordinary shares	100
Nominees One Limited	Guernsey	£1.00 Ordinary shares	100
Nominees Two Limited	Guernsey	£1.00 Ordinary shares	100
Songbird Limited	Guernsey	£1.00 Ordinary shares	100
Standard Chartered Secretaries (Guernsey) Limited	Guernsey	£1.00 Ordinary shares	100
Standard Chartered Trust (Guernsey) Limited	Guernsey	£1.00 Ordinary shares	100

The following company has the address of 15/F, Standard Chartered Tower, 388 Kwun Tong Road, Kwun Tong, Kowloon, Hong Kong

Horsford Nominees Limited	Hong Kong	HKD Ordinary shares	100
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The following companies have the address of 1401 Hutchison House, 10 Harcourt Road, Hong Kong

Kozagi Limited	Hong Kong	HKD10.00 Ordinary shares	100
Majestic Legend Limited	Hong Kong	HKD1.00 Ordinary shares	100
Ori Private Limited	Hong Kong	\$1.00 Ordinary shares	100
		\$1.00 A Ordinary shares	90.8
Standard Chartered PF Real Estate (Hong Kong) Limited	Hong Kong	HKD10.00 Ordinary shares	100

The following companies have the address of 25/F, Standard Chartered Bank Building, 4-4A Des Voeux Road, Central, Hong Kong

Marina Acacia Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Amaryllis Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Amethyst Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Ametrine Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Angelite Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Apollo Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Beryl Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Carnelian Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Emerald Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Flax Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Gloxinia Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Hazel Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Honor Shipping Limited	Hong Kong	HKD Ordinary shares	100
		\$ Ordinary shares	100
Marina Ilex Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Iridot Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Kunzite Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Leasing Limited	Hong Kong	\$ Ordinary shares	100
Marina Mimosa Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Moonstone Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Peridot Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Sapphire Shipping Limited	Hong Kong	\$ Ordinary shares	100
Marina Splendor Shipping Limited	Hong Kong	HKD Ordinary shares	100
		\$ Ordinary shares	100
Marina Tourmaline Shipping Limited	Hong Kong	\$ Ordinary shares	100
SC Digital Solutions Limited	Hong Kong	HKD0.05 Ordinary shares	100
Standard Chartered Leasing Group Limited	Hong Kong	\$ Ordinary shares	100
Standard Chartered Trade Support (HK) Limited	Hong Kong	HKD Ordinary shares	100

The following company has the address of 13/F, Standard Chartered Tower, 388 Kwun Tong Road, Kwun Tong, Kowloon, Hong Kong

SC Learning Limited	Hong Kong	HKD Ordinary shares	100
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The following company has the address of 2/F, Standard Chartered Bank Building, 4-4A Des Voeux Road, Central, Hong Kong

Standard Chartered Private Equity Limited	Hong Kong	HKD1.00 Ordinary shares	100
		\$1.00 Ordinary shares	100

The following company has the address of 13/F, Standard Chartered Bank Building, 4-4A Des Voeux Road, Central, Hong Kong

Standard Chartered Trust (Hong Kong) Limited	Hong Kong	HKD10.00 Ordinary shares	100
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The following company has the address of 14/F, Standard Chartered Bank Building, 4-4A Des Voeux Road, Central, Hong Kong

Standard Chartered Private Equity Managers (Hong Kong) Limited	Hong Kong	HKD Ordinary shares	100
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The following company has the address of 15/F, Two International Finance Centre, No. 8 Finance Street, Central, Hong Kong

Standard Chartered Securities (Hong Kong) Limited	Hong Kong	HKD Ordinary shares	100
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The following company has the address of 21/F, Standard Chartered Tower, 388 Kwun Tong Road, Kwun Tong, Kowloon, Hong Kong

Standard Chartered Asia Limited	Hong Kong	HKD Deferred shares	100
		HKD Ordinary shares	100
		\$ Ordinary shares	100

The following companies have the address of 32/F, Standard Chartered Bank Building, 4-4A Des Voeux Road, Central, Hong Kong

Standard Chartered Sherwood (HK) Limited	Hong Kong	HKD Ordinary shares	100
Standard Chartered Bank (Hong Kong) Limited	Hong Kong	HKD A Ordinary shares	100
		HKD B Ordinary shares	100
		\$ Preference shares	100

The following company has the address of L5 The Forum, Exchange Square, 8 Connaught Place, Central, Hong Kong

Standard Chartered Global Trading Investments Limited	Hong Kong	HKD Ordinary shares	100
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The following company has the address of 1st Floor, Europe Building, No.1, Haddows Road, Nungambakkam, Chennai, 600 006, India

Standard Chartered Global Business Services Private Limited	India	INR10.00 Equity shares	100
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The following company has the address of 90 M.G.Road, II Floor, FORT, Mumbai, MAHARASHTRA, 400 001, India

Standard Chartered Finance Private Limited	India	INR10.00 Ordinary shares	98.7
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The following companies have the address of Crescenzo, 6th Floor, Plot No 38-39, G Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra, 400051, India

Standard Chartered (India) Modeling and Analytics Centre Private Limited	India	INR10.00 Ordinary shares	100
Standard Chartered Investments and Loans (India) Limited	India	INR10.00 Ordinary shares	100
St Helen's Nominees India Private Limited	India	INR10.00 Equity shares	100

The following company has the address of Crescenzo, 7th Floor, Plot No 38-39, G Block, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra, 400051, India

Standard Chartered Private Equity Advisory (India) Private Limited	India	INR1,000.00 Ordinary shares	100
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The following company has the address of 2nd Floor, 23-25 M.G. Road, Fort, Mumbai, 400 001, India

Standard Chartered Securities (India) Limited	India	INR10.00 Ordinary shares	100
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The following companies have the address of Menara Standard Chartered, 7th floor, Jl. Prof. DR. Satrio No. 164, Jakarta, 12930, Indonesia

PT. Price Solutions Indonesia	Indonesia	\$100.00 Ordinary shares	100
PT Solusi Cakra Indonesia	Indonesia	IDR23,809,600.00 Ordinary shares	99

The following companies have the address of 32 Molesworth Street, Dublin 2, D02 Y512, Ireland

Inishbrophy Leasing Limited	Ireland	€1.00 Ordinary shares	100
Inishcannon Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Inishcorky Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Inishcrean Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Inishdawson Leasing Limited	Ireland	€1.00 Ordinary shares	100
Inisherkin Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Inishgort Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Inishlynch Leasing Limited	Ireland	€1.00 Ordinary shares	100
Inishoo Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Inishquirk Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Inishtubrid Leasing Limited	Ireland	\$1.00 Ordinary shares	100
Nightjar Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 1 Limited	Ireland	€1.00 Ordinary shares	100
Pembroke Aircraft Leasing 2 Limited	Ireland	€1.00 Ordinary shares	100
Pembroke Aircraft Leasing 3 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 4 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 5 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 6 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 7 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 8 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 9 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 10 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 11 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing 12 Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Aircraft Leasing Holdings Limited	Ireland	\$1.00 Ordinary shares	100
Pembroke Capital Limited	Ireland	€1.25 Ordinary shares	100
		\$1.00 Ordinary shares	100
Pembroke Capital Shannon Limited	Ireland	€1.25 Ordinary shares	100
Skua Limited	Ireland	\$1.00 Ordinary shares	100

<i>The following company has the address of First Names House, Victoria Road, Douglas, IM2 4DF, Isle of Man</i>			
Pembroke Group Limited	Isle of Man	\$0.01 Ordinary shares	100
<i>The following companies have the address of 1st Floor, Goldie House, 1-4 Goldie Terrace, Upper Church Street, Douglas, IM1 1EB, Isle of Man</i>			
Standard Chartered Assurance Limited	Isle of Man	\$1.00 Ordinary shares	100
		\$1.00 Redeemable Preference shares	100
		\$1.00 Ordinary shares	100
Standard Chartered Insurance Limited	Isle of Man	\$1.00 Ordinary shares	100
<i>The following company has the address of 21/F, Sanno Park Tower, 2-11-1 Nagatacho, Chiyoda-ku, Tokyo, 100-6155, Japan</i>			
Standard Chartered Securities (Japan) Limited	Japan	JPY50,000 Ordinary shares	100
<i>The following company has the address of Lime Grove House, Green Street, St Helier, JE1 2ST, Jersey</i>			
Ocean Horizon Holdings East Limited	Jersey	\$1.00 Ordinary shares	100
<i>The following company has the address of 4/F St Pauls Gate, 22-24 New Street, St Helier, JE1 4TR, Jersey</i>			
Ocean Horizon Holdings West Limited	Jersey	\$1.00 Ordinary shares	100
<i>The following company has the address of 15 Castle Street, St Helier, JE4 8PT, Jersey</i>			
SCB Nominees (CI) Limited	Jersey	\$1.00 Ordinary shares	100
<i>The following company has the address of IFC 5, St Helier, JE1 1ST, Jersey</i>			
Standard Chartered Funding (Jersey) Limited ¹	Jersey	£1.00 Ordinary shares	100
<i>The following companies have the address of Standard Chartered@ Chiromo, Number 48, Westlands Road, P. O. Box 30003 – 00100, Nairobi, Kenya</i>			
Standard Chartered Investment Services Limited	Kenya	KES20.00 Ordinary shares	100
Standard Chartered Bank Kenya Limited	Kenya	KES5.00 Ordinary shares	74.3
		KES5.00 Preference shares	100
Standard Chartered Securities (Kenya) Limited	Kenya	KES10.00 Ordinary shares	100
Standard Chartered Financial Services Limited	Kenya	KES20.00 Ordinary shares	100
Standard Chartered Insurance Agency Limited	Kenya	KES100.00 Ordinary shares	100
Standard Chartered Kenya Nominees Limited	Kenya	KES20.00 Ordinary shares	100
<i>The following companies have the address of M6-2701, West 27Fl, Suha-dong, 26, Eulji-ro 5-gil, Jung-gu, Seoul, Korea, Republic of</i>			
Resolution Alliance Korea Ltd	Korea, Republic of	KRW5,000.00 Ordinary shares	100
<i>The following company has the address of 2/F, 47 Jongno, Jongno-gu, Seoul, 110-702, Korea, Republic of</i>			
Standard Chartered Bank Korea Limited	Korea, Republic of	KRW5,000.00 Ordinary shares	100
Standard Chartered Securities Korea Limited	Korea, Republic of	KRW5,000.00 Ordinary shares	100
<i>The following companies have the address of 17/F, 100, Gongpyeong-dong, Jongno-gu, Seoul, Korea, Republic of</i>			
SCPEK IV	Korea, Republic of	Limited Partnership interest	41.4
Standard Chartered Private Equity Korea II	Korea, Republic of	KRW1,000,000.00 Partnership interest	100
Standard Chartered Private Equity Managers (Korea) Limited	Korea, Republic of	KRW5,000.00 Ordinary shares	100
SW Holdings Limited	Korea, Republic of	KRW1,000.00 Ordinary shares	100
TBO Korea Holdings Limited	Korea, Republic of	KRW1,000.00 Ordinary shares	100
<i>The following company has the address of Atrium Building, Maarad Street, 3rd Floor, P.O.Box: 11-4081 Riad El Solh, Beirut, Beirut Central District, Lebanon</i>			
Standard Chartered Metropolitan Holdings SAL	Lebanon	\$10.00 Ordinary A shares	100
<i>The following companies have the address of Level 16, Menara Standard Chartered, 30, Jalan Sultan Ismail, 50250 Kuala Lumpur, Malaysia</i>			
Cartaban (Malaya) Nominees Sdn Berhad	Malaysia	RM10.00 Ordinary shares	100
Cartaban Nominees (Asing) Sdn Bhd	Malaysia	RM1.00 Ordinary shares	100
Cartaban Nominees (Tempatan) Sdn Bhd	Malaysia	RM1.00 Ordinary shares	100
Golden Maestro Sdn Bhd	Malaysia	RM1.00 Ordinary shares	100
Popular Ambience Sdn Bhd	Malaysia	RM1.00 Ordinary shares	100
Price Solutions Sdn Bhd	Malaysia	RM1.00 Ordinary shares	100
SCBMB Trustee Berhad	Malaysia	RM10.00 Ordinary shares	100
Standard Chartered Bank Malaysia Berhad	Malaysia	RM0.10 Irredeemable Cumulative Preference shares	100
		RM1.00 Ordinary shares	100
Standard Chartered Saadiq Berhad	Malaysia	RM1.00 Ordinary shares	100

The following companies have the address of Brumby Centre, Lot 42, Jalan Muhibbah, 87000 Labuan F.T., Malaysia

Marina Morganite Shipping Limited	Malaysia	\$ Ordinary shares	100
Marina Moss Shipping Limited	Malaysia	\$1.00 Ordinary shares	100
Marina Tanzanite Shipping Limited	Malaysia	\$ Ordinary shares	100
Pembroke Leasing (Labuan) 2 Berhad	Malaysia	\$1.00 Ordinary shares	100
Pembroke Leasing (Labuan) 3 Berhad	Malaysia	\$1.00 Ordinary shares	100
Pembroke Leasing (Labuan) Pte Limited	Malaysia	\$1.00 Ordinary shares	100

The following company has the address of N8, Jalan Kerinchi, 59200 Kuala Lumpur, Wilayah Persekutuan, Malaysia

Resolution Alliance Sdn Bhd ²	Malaysia	RM1.00 Ordinary shares	91
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The following company has the address of Level 7, Wisma Standard Chartered, Jalan Teknologi 8, Taman Teknologi Malaysia, 57000 Bukit Jalil, Kuala Lumpur, Wilayah Persekutuan, Malaysia

Standard Chartered Global Business Services Sdn Bhd	Malaysia	RM1.00 Ordinary shares	100
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The following companies have the address of Trust Company Complex, Ajeltake Road, Ajeltake Island, MH96960, Marshall Islands

Marina Alysse Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Amandier Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Ambroise Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Angelica Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Aquamarine Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Aventurine Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Buxus Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Celsie Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Citrine Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Dahlia Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Dittany Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Dorado Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Lilac Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Lolite Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Obsidian Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Pissenlet Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Poseidon Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Protea Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Quartz Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Remora Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Turquoise Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Zeus Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100
Marina Zircon Shipping Limited	Marshall Islands	\$1.00 Ordinary shares	100

The following companies have the address of SGG Corporate Services (Mauritius) Ltd, 33, Edith Cavell St, Port Louis, 11324, Mauritius

Actis Asia Real Estate (Mauritius) Limited	Mauritius	Class A \$1.00 Ordinary shares	100
		Class B \$1.00 Ordinary shares	100
Actis Place Holdings (Mauritius) Limited ²	Mauritius	Class A \$1.00 Ordinary shares	62
		Class B \$1.00 Ordinary shares	62
Actis Treit Holdings (Mauritius) Limited ²	Mauritius	Class A \$1.00 Ordinary shares	62
		Class B \$1.00 Ordinary shares	62

The following company has the address of 6/F, Standard Chartered Tower, 19, Bank Street, Cybercity, Ebene, 72201, Mauritius

Standard Chartered Bank (Mauritius) Limited	Mauritius	\$10.00 Ordinary shares	100
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The following companies have the address of c/o Abax Corporate Services Ltd, 6/F, Tower A, 1 CYBERCITY, Ebene, Mauritius

Standard Chartered Financial Holdings	Mauritius	\$1.00 Ordinary shares	100
Standard Chartered Private Equity (Mauritius) II Limited	Mauritius	\$1.00 Ordinary shares	100
Standard Chartered Private Equity (Mauritius) Limited	Mauritius	\$1.00 Ordinary shares	100
		\$ Redeemable Preference shares	100
Standard Chartered Private Equity (Mauritius) III Limited	Mauritius	\$1.00 Ordinary shares	100

The following company has the address of 5/F, Ebene Esplanade, 24 Bank Street, Cybercity, Ebene, Mauritius

Subcontinental Equities Limited	Mauritius	\$1.00 Ordinary shares	100
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<i>The following company has the address of Standard Chartered Bank Nepal Limited, Madan Bhandari Marg, Ward No.34, Kathmandu Metropolitan City, Kathmandu District, Bagmati Zone, Kathmandu, Nepal</i>			
Standard Chartered Bank Nepal Limited	Nepal	NPR100.00 Ordinary shares	70.2
<i>The following companies have the address of Hoogoorddreef 15, 1101 BA, Amsterdam, Netherlands</i>			
Pembroke B717 Holdings B.V.	Netherlands	€1.00 Ordinary shares	100
Pembroke Holland B.V.	Netherlands	€450.00 Ordinary shares	100
<i>The following companies have the address of 1 Basinghall Avenue, London, EC2V 5DD, United Kingdom</i>			
Smart Application Investment B.V.	Netherlands	€45.00 Ordinary shares	100
Standard Chartered Holdings (Africa) B.V.	Netherlands	€4.50 Ordinary shares	100
Standard Chartered Holdings (Asia Pacific) B.V.	Netherlands	€4.50 Ordinary shares	100
Standard Chartered Holdings (International) B.V.	Netherlands	€4.50 Ordinary shares	100
Standard Chartered MB Holdings B.V.	Netherlands	€4.50 Ordinary shares	100
<i>The following companies have the address of 142 Ahmadu Bello Way, Victoria Island, Lagos, Nigeria</i>			
Cherroots Nigeria Limited	Nigeria	NGN1.00 Ordinary shares	100
Standard Chartered Bank Nigeria Limited	Nigeria	NGN1.00 Irredeemable Non Cumulative Preference shares	100
		NGN1.00 Ordinary shares	100
		NGN1.00 Redeemable Preference shares	100
Standard Chartered Capital & Advisory Nigeria Limited	Nigeria	NGN1.00 Ordinary shares	100
Standard Chartered Nominees (Nigeria) Limited	Nigeria	NGN1.00 Ordinary shares	100
<i>The following company has the address of 3/F Main SCB Building, I.I Chundrigar Road, Karachi, Sindh, 74000, Pakistan</i>			
Price Solution Pakistan (Private) Limited ¹	Pakistan	PKR10.00 Ordinary shares	100
<i>The following company has the address of P.O. Box No. 55561.I. Chundrigar Road, Karachi, 74000, Pakistan</i>			
Standard Chartered Bank (Pakistan) Limited	Pakistan	PKR10.00 Ordinary shares	100
<i>The following company has the address of ul. Towarowa 25A, 00-869 Warszawa, Poland</i>			
Standard Chartered Global Business Services spółka z ograniczona odpowiedzialnoscia	Poland	PLN50.00 Ordinary shares	100
<i>The following company has the address of Offshore Chambers, PO Box 217, Apia, Western Samoa</i>			
Standard Chartered Nominees (Western Samoa) Limited	Samoa	\$1.00 Ordinary shares	100
<i>The following company has the address of Al Faisaliah Office Tower, 7/F, King Fahad Highway, Olaya District, Riyadh P.O box 295522, Riyadh, 11351, Saudi Arabia</i>			
Standard Chartered Capital (Saudi Arabia)	Saudi Arabia	SAR10.00 Ordinary shares	100
<i>The following company has the address of 9 & 11, Lightfoot Boston Street, Freetown, Sierra Leone</i>			
Standard Chartered Bank Sierra Leone Limited	Sierra Leone	SLL1.00 Ordinary shares	80.7
<i>The following companies have the address of 8 Marina Boulevard, Level 23, Marina Bay Financial Centre, Tower 1, 018981, Singapore</i>			
Actis Mahi Holdings (Singapore) Private Limited	Singapore	SGD 1.00 Ordinary shares	100
Actis Place Holdings No.1 (Singapore) Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Actis Place Holdings No.2 (Singapore) Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Actis RE Investment 1 Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Actis RE Investment 2 Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Actis RE Investment 3 Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Actis RE Investment 4 Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Actis Treit Holdings No.1 (Singapore) Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Actis Treit Holdings No.2 (Singapore) Private Limited ²	Singapore	SGD 1.00 Ordinary shares	100
Augusta Viet Pte. Ltd.	Singapore	\$1.00 Ordinary shares	100
Greenman Pte. Ltd.	Singapore	SGD1.00 Class A Preferred shares	100
		SGD1.00 Class B Preferred shares	100
		SGD1.00 Ordinary shares	100
Standard Chartered PF Managers Pte. Limited	Singapore	\$1.00 Ordinary shares	100

Standard Chartered Private Equity (Singapore) Pte. Ltd	Singapore	\$ Ordinary shares	100
Standard Chartered Private Equity Managers (Singapore) Pte. Ltd	Singapore	\$ Ordinary shares	100
Standard Chartered Real Estate Investment Holdings (Singapore) Private Limited	Singapore	SGD1.00 Ordinary shares	100
<i>The following companies have the address of 8 Marina Boulevard, Level 26, Marina Bay Financial Centre, Tower 1, 018981, Singapore</i>			
Marina Aquata Shipping Pte. Ltd.	Singapore	\$ Ordinary shares	100
Marina Aruana Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
		\$ Ordinary shares	100
Marina Aster Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
Marina Cobia Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
		\$ Ordinary shares	100
Marina Daffodil Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
Marina Fatmarini Shipping Pte. Ltd.	Singapore	\$ Ordinary shares	100
Marina Frabandari Shipping Pte. Ltd.	Singapore	\$ Ordinary shares	100
Marina Freesia Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
Marina Gerbera Shipping Pte. Ltd.	Singapore	\$ Ordinary shares	100
Marina Mars Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
Marina Mercury Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
Marina Opah Shipping Pte. Ltd.	Singapore	SGD Ordinary shares	100
		\$ Ordinary shares	100
Marina Partawati Shipping Pte. Ltd.	Singapore	\$ Ordinary shares	100
Marina Poise Shipping Pte. Ltd.	Singapore	\$ Ordinary shares	100
<i>The following companies have the address of 231A Pandan Loop, 128419, Singapore</i>			
Phoon Huat Pte. Ltd.	Singapore	SGD1.00 Ordinary shares	70
Redman Pte. Ltd.	Singapore	SGD1.00 Ordinary shares	70
<i>The following company has the address of 7 Changi Business Park Crescent, #03-00 Standard Chartered @ Changi, 486028, Singapore</i>			
Raffles Nominees (Pte.) Limited	Singapore	SGD Ordinary shares	100
<i>The following companies have the address of 8 Marina Boulevard, Level 27, Marina Bay Financial Centre, Tower 1, 018981, Singapore</i>			
SCTS Capital Pte. Ltd	Singapore	SGD Ordinary shares	100
SCTS Management Pte. Ltd.	Singapore	SGD Ordinary shares	100
Standard Chartered (2000) Limited	Singapore	SGD1.00 Ordinary shares	100
Standard Chartered Bank (Singapore) Limited	Singapore	SGD Ordinary shares	100
		SGD Preference shares	100
		\$ Ordinary shares	100
Standard Chartered Trust (Singapore) Limited	Singapore	SGD Ordinary shares	100
Standard Chartered Holdings (Singapore) Private Limited	Singapore	SGD Ordinary shares	100
		\$ Ordinary shares	100
<i>The following company has the address of Abogado Pte Ltd, No. 8 Marina Boulevard, #05-02 MBFC Tower 1, 018981, Singapore</i>			
Standard Chartered IL&FS Management (Singapore) Pte. Limited	Singapore	\$1.00 Ordinary shares	50
<i>The following company has the address of 9 Battery Road, #15-01 Straits Trading Building, 049910, Singapore</i>			
Standard Chartered Nominees (Singapore) Pte Ltd	Singapore	SGD1.00 Ordinary shares	100
<i>The following companies have the address of 5/F, 4 Sandown Valley Crescent, Sandton, Gauteng, 2196, South Africa</i>			
CMB Nominees Proprietary Limited	South Africa	ZAR1.00 Ordinary shares	100
Standard Chartered Nominees South Africa Proprietary Limited (RF)	South Africa	ZAR Ordinary shares	100
<i>The following company has the address of 1, 2, 4, 7, 9, 10F, No. 168/170 &, 8F, 12F, No.168, Tun Hwa N. Rd., Songshan Dist., Taipei, 105, Taiwan</i>			
Standard Chartered Bank (Taiwan) Limited	Taiwan	TWD10.00 Ordinary shares	100
<i>The following companies have the address of 1 Floor, International House, Shaaban Robert Street / Garden Avenue, PO Box 9011, Dar Es Salaam, Tanzania, United Republic of</i>			
Standard Chartered Bank Tanzania Limited	Tanzania, United Republic of	TZS1,000.00 Ordinary shares	100
		TZS1,000.00 Preference shares	100
Standard Chartered Tanzania Nominees Limited	Tanzania, United Republic of	TZS1,000.00 Ordinary shares	100

<i>The following company has the address of 100 North Sathorn Road, Silom, Bangrak Bangkok, 10500, Thailand</i>			
Standard Chartered Bank (Thai) Public Company Limited	Thailand	THB10.00 Ordinary shares	100
<i>The following company has the address of Buyukdere Cad. Yapi Kredi Plaza C Blok, Kat 15, Levent, Istanbul, 34330, Turkey</i>			
Standard Chartered Yatirim Bankasi Turk Anonim Sirketi	Turkey	TRL0.10 Ordinary shares	100
<i>The following company has the address of Standard Chartered Bank Bldg, 5 Speke Road, PO Box 7111, Kampala, Uganda</i>			
Standard Chartered Bank Uganda Limited	Uganda	UGS1,000.00 Ordinary shares	100
<i>The following company has the address of 505 Howard St. #201, San Francisco, CA 94105 United States</i>			
SC Studios, LLC	United States	Membership interest	100
<i>The following company has the address of Standard Chartered Bank, 37F, 1095 Avenue of the Americas, New York 10036, United States</i>			
Standard Chartered Bank International (Americas) Limited	United States	\$1.00 Ordinary shares	100
<i>The following companies have the address of Corporation Trust Centre, 1209 Orange Street, Wilmington DE 19801, United States</i>			
Standard Chartered Holdings Inc.	United States	\$100.00 Common shares	100
StanChart Securities International LLC	United States	Membership interest	100
Standard Chartered Capital Management (Jersey), LLC	United States	Membership interest	100
Standard Chartered Securities (North America) LLC	United States	Membership interest	100
Standard Chartered International (USA) LLC	United States	Membership interest	100
<i>The following company has the address of 50 Fremont Street, San Francisco CA 94105, United States</i>			
Standard Chartered Overseas Investment, Inc.	United States	\$10.00 Ordinary shares	100
<i>The following company has the address of 251 Little Falls Drive, Wilmington, Delaware 19808, USA</i>			
Standard Chartered Trade Services Corporation	United States	\$0.01 Common shares	100
<i>The following company has the address of Room 1810-1815, Level 18, Building 72, Keangnam Hanoi Landmark Tower, Pham Hung Road, Cau Giay New Urban Area, Me Tri Ward, Nam Tu Liem District, Hanoi10000, Vietnam</i>			
Standard Chartered Bank (Vietnam) Limited	Vietnam	VND Charter Capital shares	100
<i>The following companies have the address of Vistra Corporate Services Centre, Wickhams Cay II, Road Town, Tortola, VG1110, Virgin Islands, British</i>			
Sky Favour Investments Limited	Virgin Islands, British	\$1.00 Ordinary shares	100
Sky Harmony Holdings Limited	Virgin Islands, British	\$1.00 Ordinary shares	100
<i>The following companies have the address of Standard Chartered House, Cairo Road, Lusaka, PO BOX 32238, Zambia</i>			
Standard Chartered Bank Zambia Plc	Zambia	ZMW0.25 Ordinary shares	90
Standard Chartered Zambia Securities Services Nominees Limited	Zambia	ZMK1.00 Ordinary shares	100
<i>The following companies have the address of Africa Unity Square Building, 68 Nelson Mandela Avenue, Harare, Zimbabwe</i>			
Africa Enterprise Network Trust ³	Zimbabwe	Interest in Trust	100
Standard Chartered Asset Management Limited	Zimbabwe	\$0.001 Ordinary shares	100
Standard Chartered Bank Zimbabwe Limited	Zimbabwe	\$1.00 Ordinary shares	100
Standard Chartered Nominees Zimbabwe (Private) Limited	Zimbabwe	\$2.00 Ordinary shares	100

1 Directly held by parent company of the Group

2 The Group has determined that these undertakings are excluded from being consolidated into the Group's accounts, and do not meet the definition of a Subsidiary under IFRS. See Notes 32 and 33 for the consolidation policy and disclosure of the undertaking.

3 No share capital by virtue of being a trust

Joint ventures

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
<i>The following company has the address of WTC II Building, Jalan Jenderal Sudirman Kav29-31, Jakarta, 12920 Indonesia</i>			
PT Bank Permata Tbk	Indonesia	IDR125.00 B shares	44.6
<i>The following company has the address of 100/36 Sathorn Nakorn Tower, Fl 21 North Sathorn Road, Silom Sub-District, Bangrak District, Bangkok, 10500, Thailand</i>			
Resolution Alliance Limited	Thailand	THB10.00 Ordinary shares	49

Associates

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
<i>The following company has the address of Bohai Bank Building, No.218 Hai He Dong Lu, Hedong District, Tianjin, China, 300012, China</i>			
China Bohai Bank Co. Ltd	China	CNY Ordinary shares	19.99
<i>The following company has the address of C/o CIM Corporate Services Ltd, Les Cascades, Edith Cavell Street, Port Louis, Mauritius</i>			
FAI Limited	Mauritius	\$1.00 Ordinary shares	25
<i>The following company has the address of Victoria House, State House Avenue, Victoria, MAHE, Seychelles</i>			
Seychelles International Mercantile Banking Corporation Limited	Seychelles	SCR1,000.00 Ordinary shares	22
<i>The following company has the address of 1 Raffles Quay, #23-01, One Raffles Quay, 048583, Singapore</i>			
Clifford Capital Pte. Ltd	Singapore	\$1.00 Ordinary shares	9.9

Significant investment holdings and other related undertakings

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
The following company has the address of 65A Basinghall Street, London, EC2V 5DZ, United Kingdom			
Cyber Defence Alliance Limited	United Kingdom	Membership interest	25
The following company has the address of Walker House, 87 Mary Street, George Town, KY1-9005, Cayman Islands			
Asia Trading Holdings Limited	Cayman Islands	\$0.01 Ordinary shares	50
The following company has the address of Intertrust Corporate Services (Cayman) Limited, 190 Elgin Avenue, George Town, Grand Cayman, KY1-9005, Cayman Islands			
ATSC Cayman Holdco Limited	Cayman Islands	\$0.01 A Ordinary shares	5.3
		\$0.01 B Ordinary shares	100
The following companies have the address of Harbour Centre #42 North Church Street, PO Box 1348, Grand Cayman, KY1-1108 Cayman Islands, Cayman Islands			
Standard Chartered IL&FS Asia Infrastructure (Cayman) Limited	Cayman Islands	\$0.01 Ordinary shares	50
Standard Chartered IL&FS Asia Infrastructure Growth Fund Company Limited	Cayman Islands	\$1.00 Ordinary shares	50
Standard Chartered IL&FS Asia Infrastructure Growth Fund, L.P.	Cayman Islands	Partnership interest	38.6
The following companies have the address of 190 Elgin Avenue, George Town, Grand Cayman, KY1-9005, Cayman Islands			
Greathorse Chemical Limited	Cayman Islands	\$1.00 Ordinary shares	32.95
Hygienic Group	Cayman Islands	\$0.01 Redeemable Exchangeable Preferred shares	29.32
The following company has the address of 3, Floor 1, No.1, Shiner Wuxingcaiyuan, West Er Huan Rd, Xi Shan District, Kunming, Yunnan Province, PRC, China			
Yunnan Golden Shiner Property Development Co., Ltd.	China	CNY1.00 Ordinary shares	42.5

The following company has the address of Nerine House, St George's Place, St Peter Port, GY1 3ZG, Guernsey

Stonehage Fleming Family and Partners Ltd	Guernsey	£0.01 Class B shares	9.2
		£0.01 Class DC shares	20.2

The following companies have the address of Unit 605-08, 6/F Wing On Centre, 111 Connaught Rd, Central Sheung Wan, Hong Kong

Actis Carrock Holdings (HK) Limited	Hong Kong	\$ Class A shares	39.69
		\$ Class B shares	39.69
Actis Jack Holdings (HK) Limited	Hong Kong	\$ Class A shares	39.69
		\$ Class B shares	39.69
Actis Rivendell Holdings (HK) Limited	Hong Kong	\$ Class A shares	39.69
		\$ Class B shares	39.69
Actis Temple Stay Holdings (HK) Limited	Hong Kong	\$ Class A shares	39.69
		\$ Class B shares	39.69
Actis Young City Holdings (HK) Limited	Hong Kong	\$ Class A shares	39.69
		\$ Class B shares	39.69

The following company has the address of Off CTS No. 216, Village Bandivali, Patel Estate, S. V. road, Jogeshwari (W) Mumbai City, 400102, India

Hitodi Infrastructure Limited	India	Cumulative Redeemable Preference shares	100
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The following company has the address of 70, Nagindas Master Road, Fort, Mumbai, 400023, India

Joyville Shapoorji Housing Private Limited	India	INR10.00 Common Equity shares	25.8
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The following company has the address of 5/F, Mahindra Towers, Worli, Mumbai, 400018, India

Mahindra Homes Private Limited	India	INR10.00 Compulsorily Convertible Preference shares	100
		INR10.00 A Ordinary shares	25
		INR10.00 B Ordinary shares	100

The following company has the address of 1221 A, Devika Tower, 12th Floor, 6 Nehru Place, New Delhi 110019, New Delhi, 110019, India.

Mikado Realtors Private Limited	India	INR10.00 Ordinary shares	26
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The following company has the address of Elphinstone Building, 2nd Floor, 10 Veer Nariman Road, Fort, Mumbai -400001, Maharashtra, India

TRIL IT4 Private Limited	India	INR10.00 Ordinary shares	26
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The following company has the address of 4/F, 274, Chitalia House, Dr. Cawasji Hormusji Road, Dhobi Talao, Mumbai City, Maharashtra, India 400 002, Mumbai, 400 002, India

Industrial Minerals and Chemical Co. Pvt. Ltd	India	INR100.00 Ordinary shares	26
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The following company has the address of No. 1, Kanagam Village, 10/F IITM Research Park, Taramani, Chennai – 600113, Tamil Nadu, India

Northern Arc Capital Limited	India	INR20.00 Compulsorily Convertible Preference shares	33.5
		INR10.00 Equity shares	4.6

The following company has the address of E-78, South Extension Part-I, New Delhi, 110049, India

Tek Travels Private Limited	India	INR10.00 Ordinary shares	49.99
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The following company has the address of Graha Paramita, 3/F, Jalan Denpasar, Raya Block D-2, Kav. 8, Kuningan, Jakarta, 12940, Indonesia

PT Travira Air	Indonesia	IDR1,000,000.00 Ordinary shares	30
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The following company has the address of TRIO Building, 8/F, Jl, Kebon Sirih Raya Kav, 63, Jakarta, 10340, Indonesia

PT Trikomsel Oke Tbk	Indonesia	IDR50.00 Series B shares	29.2
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The following companies have the address of 4/F St Pauls Gate, 22-24 New Street, St Helier, JE1 4TR, Jersey

Standard Jazeera Limited	Jersey	\$100.00 Ordinary shares	20
Standard Topaz Limited	Jersey	\$1,000.00 Ordinary shares	20

The following company has the address of 146-8 Chusa-ro Sinam-myeon,
Yesan-gun Chungnam, Korea, Republic of

Daiyang Metal Company Ltd	Korea, Republic of	KRW 500 Ordinary shares	23.1
		KRW 500 Preferred shares	100
		KRW 500 Convertible Preference shares	100

The following companies have the address of 185 Seongnaecheon-ro
Songpa-gu Seoul Korea, Republic of

Haram Trade Co.Ltd.	Korea, Republic of	KRW 1,000,000,000 Ordinary shares	45
		KRW 1,000,000,000 redeemable convertible preferred shares	100
Maesong Trading Co.Ltd.	Korea, Republic of	KRW 1,000,000,000 Ordinary shares	45
		KRW 1,000,000,000 redeemable convertible preferred shares	100
Sameun Trade Co. Ltd.	Korea, Republic of	KRW 500,000,000 Ordinary shares	34.62
		KRW 500,000,000 redeemable convertible preferred shares	100
Sunwoo MT Co., Ltd.	Korea, Republic of	KRW 10,000,000,000 Ordinary shares	45
		KRW 10,000,000,000 redeemable convertible preferred shares	100

The following company has the address of 2615 Nambusoohwan-ro,
Gangnam-gu, Seoul, Korea, Republic of

Taebong Prime Co. Ltd	Korea, Republic of	KRW 10,000,000,000 Ordinary shares	45
		KRW 10,000,000,000 redeemable convertible preferred shares	100

The following company has the address of 17/F (Gongpyung-dong), 110,
Jongno-gu, Seoul, Korea, Republic of

Standard Chartered Private Equity Korea III	Korea, Republic of	KRW1,000,000.00 Ordinary shares	31
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The following company has the address of Lot 6.05, Level 6, KPMG Tower,
8 First Avenue, Bandar Utama, 47800 Petaling Jaya, Selangor, Malaysia

House Network SDN BHD	Malaysia	RM1.00 Ordinary shares	25
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The following company has the address of 180B Bencoolen Street,
#11-00 The Bencoolen, Singapore, 189648, Singapore

Crystal Jade Group Holdings Pte Ltd	Singapore	\$ Ordinary shares	42.6
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The following company has the address of Blk 10, Kaki Bukit Avenue 1, #07-
05 Kaki Bukit Industrial Estate, 417492, Singapore

MMI Technoventures Pte Ltd	Singapore	SGD Ordinary shares	50
		SGD 0.01 Redeemable Preference shares	50

The following company has the address of 1 Venture Avenue, #07-07 Big
Box, 608521, Singapore

Omni Centre Pte. Ltd.	Singapore	SGD Redeemable Convertible Preference shares	100
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The following company has the address of 81 Ubi Avenue 4, #03-11 UB One,
408830, Singapore

Polaris Limited	Singapore	SGD Ordinary shares	25.8
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The following company has the address of 80 Raffles Place, #32-01,
UOB Plaza 1, 048624, Singapore

THSC Investments Pte. Ltd.	Singapore	SGD0.50 Ordinary Shares	29.2
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The following company has the address of EADB Building, Plot 4 Nile
Avenue, PO Box 7128, Kampala, Uganda

East African Development Bank	Uganda	\$13,500.00 Class B shares	24.5
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The following company has the address of 251 Little Falls Drive, Wilmington,
New Castle DE 19808, United States

Paxata, Inc.	United States	\$0.0001 Series C2 Preferred Stock	40.7
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The following company has the address of Floor 7, Samco Building,
No. 326 Vo Van Kiet, Co Giang Ward, District 1, Ho Chi Minh City, Vietnam

New Lifestyle Service Corporation	Vietnam	VND Dividend Preference shares	100
		VND Redeemable Preference shares	100

The following company has the address of Floor M, Petroland Building,
12 Tan Trao, Tan Phu Ward, District 7, Ho Chi Minh City, Vietnam

Online Mobile Services Joint Stock Company	Vietnam	VND10,000 Class A1 Redeemable Preference shares	100
		VND10,000 Class A1 Dividend Preference shares	100
		VND10,000 Class C Dividend Preference shares	28.5

The following company has the address of PO Box 957, Offshore
Incorporations Centre,, Road Town, Tortola, BVI, Virgin Islands, British

Ecoplast Technologies Inc	Virgin Islands, British	\$0.0001 Class C Preferred shares	100
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In liquidation

Subsidiary undertakings

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
The following companies have the address of Deloitte LLP, Hill House, 1 Little New Street, London, EC4A 3TR, United Kingdom			
SC Overseas Investments Limited	United Kingdom	AUD1.00 Ordinary shares	100
		\$1.00 Ordinary shares	100
Standard Chartered Capital Markets Limited	United Kingdom	£1.00 Ordinary shares	100
		\$1.00 Ordinary shares	100
Standard Chartered Debt Trading Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered (GCT) Limited	United Kingdom	£1.00 Ordinary shares	100
Compass Estates Limited	United Kingdom	£1.00 Ordinary shares	100
Chartered Financial Holdings Limited	United Kingdom	£5.00 Ordinary shares	100
		£1.00 Preference shares	100
The following company has the address of Cra 7 Nro 71-52 TA if 702, Bogata, Colombia			
Sociedad Fiduciaria Extebandes S.A.	Colombia	COP1.00 Ordinary shares	100
The following companies have the address of Schottegatweg Oost, 44, Curacao, Netherlands Antilles			
American Express International Finance Corp.N.V.	Curaçao	\$1,000.00 Ordinary shares	100
Ricanex Participations N.V.	Curaçao	\$1,000.00 Ordinary shares	100
The following company has the address of 8/Floor, Gloucester Tower, The Landmark, 15 Queen's Road Central, Hong Kong			
Leopard Hong Kong Limited	Hong Kong	\$ Ordinary shares	100
The following companies have the address of 32 Molesworth Street, Dublin 2, D02 Y512, Ireland			
Pembroke 7006 Leasing Limited	Ireland	€1.25 Ordinary shares	100
Pembroke Alpha Limited	Ireland	€1.00 Ordinary shares	100
The following company has the address of Standard Chartered@Chiromo, Number 48, Westlands Road, P. O. Box 30003 – 00100, Nairobi, Kenya			
Standard Chartered Management Services Limited	Kenya	KES20.00 Ordinary shares	100
The following company has the address of 30 Rue Schrobelgen, 2526, Luxembourg			
Standard Chartered Financial Services (Luxembourg) S.A.	Luxembourg	€25.00 Ordinary shares	100
The following companies have the address of Level 16, Menara Standard Chartered, 30, Jalan Sultan Ismail, 50250 Kuala Lumpur, Malaysia			
Amphissa Corporation Sdn Bhd	Malaysia	RM1.00 Ordinary shares	100
The following company has the address of Jiron Huascar 2055, Jesus Maria, Lima 15072, Peru			
Banco Standard Chartered en Liquidacion	Peru	\$75.133 Ordinary shares	100
The following company has the address of Quai du General Guisan 38, 8022, Zurich, Switzerland, Switzerland			
Standard Chartered Bank (Switzerland) S.A.	Switzerland	CHF1,000.00 Ordinary shares	100
		CHF100.00 Participation Capital shares	100
The following company has the address of 6/F, Hewlett Packard Building, 337 Fu Hsing North Road, Taipei, Taiwan			
Kwang Hua Mocatta Company Ltd. (Taiwan)	Taiwan	TWD1,000.00 Ordinary shares	97.9

The following company has the address of 100/3, Sathorn Nakorn Tower, 3rd Floor, North Sathorn Road, Silom, Bangrak, Bangkok, 10500, Thailand

Standard Chartered (Thailand) Company Limited	Thailand	THB10.00 Ordinary shares	100
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The following company has the address of Luis Alberto de Herrera 1248, Torre II, Piso 11, Esc. 1111, Uruguay

Standard Chartered Uruguay Representacion S.A.	Uruguay	UYU1.00 Ordinary shares	100
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Joint ventures

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
The following companies have the address of 32 Molesworth St, Dublin 2, D02 Y512, Ireland			
Canas Leasing Limited	Ireland	\$1 Ordinary shares	50
Elvira Leasing Limited	Ireland	\$1 Ordinary shares	50

Associates

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
The following company has the address of Quadrant House, 4 Thomas More Square, London, E1W 1YW, United Kingdom			
MCashback Limited	United Kingdom	£0.01 Ordinary shares	31.7

Liquidated/dissolved/sold

Subsidiary undertakings

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
St. Helens Nominees Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Corporate Finance (Canada) Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Corporate Finance (Eurasia) Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered (CT) Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Equitor Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Financial Investments Limited	United Kingdom	£1.00 Ordinary A Shares	100
Standard Chartered Portfolio Trading (UK) Limited	United Kingdom	£1.00 Ordinary shares	100
Standard Chartered Receivables (UK) Limited	United Kingdom	\$1.00 Ordinary shares	100
Standard Chartered Participacoes E Assessoria Economica Ltda	Brazil	BRL0.51 Common shares	100
SCL Consulting (Shanghai) Co. Ltd	China	\$ Ordinary shares	100
Double Wings Limited	Hong Kong	HKD1.00 Ordinary shares	100
GE Capital (Hong Kong) Limited	Hong Kong	HKD10.00 Ordinary shares	100
Rivendell Private Limited	Hong Kong	\$1.00 A Ordinary shares	84.8
Union Town Limited	Hong Kong	HKD1.00 Ordinary shares	100
Standard Chartered Bank Mozambique, S.A.	Mozambique	\$1.00 Ordinary shares	100
Standard Chartered Investments (Singapore) Private Limited	Singapore	\$ Ordinary shares	100
Prime Financial Holdings Limited	Singapore	SGD Ordinary shares	100
		\$ Ordinary shares	100
Standard Chartered Securities (Singapore) Pte. Limited	Singapore	SGD Ordinary shares	100
Thai Exclusive Leasing Company Limited	Thailand	THB10.00 Ordinary shares	100
California Rose Limited	Virgin Islands, British	\$1.00 Ordinary shares	90.5
Earnest Range Limited	Virgin Islands, British	\$1.00 Ordinary shares	90.5

Significant investment holdings and other related undertakings

Name	Country of incorporation	Description of shares	Proportion of shares held (%)
Chayora Holdings Limited	Cayman Islands	\$0.01 Series B Preferred Shares	100
Ningbo Xingxin Real Estate Development Co.,Ltd*	China	CNY1.00 Registered Capital	60
Fast Great Investment Limited	Hong Kong	HKD1.00 Ordinary shares	28
Standard Latitude Consultancy (HK) Limited	Hong Kong	\$5,000 Ordinary shares	20
Fountain Valley PFV Limited	Korea, Republic of	KRW5,000.00 Ordinary shares	47.3
Lotus PFV Co. Ltd	Korea, Republic of	KRW5,000.00 Ordinary shares	50
Smoothie King Holdings, Inc.	Korea, Republic of	KRW5,000.00 Ordinary shares	20.3
Maxpower Group Pte Ltd	Singapore	Redeemable Preference shares	100
		SGD Warrants	100

41. Transition to IFRS 9 Financial Instruments

Balance Sheet

	IAS 39 31 December 2017 \$million	Classification & measurement ² \$million	Expected credit losses \$million	Other impacts \$million	IFRS 9 1 January 2018 \$million
Cash and balances at central banks	58,864	—	—	—	58,864
Financial assets held at fair value through profit or loss	27,564	47,076	—	—	74,640
Derivative financial instruments	47,031	—	—	—	47,031
Loans and advances to banks ¹	78,188	(15,886)	(7)	—	62,295
Of which: Reverse repurchase agreements and other similar secured lending	20,694	(15,593)	—	—	5,101
Loans and advances to customers ¹	282,288	(29,966)	(815)	—	251,507
Of which: Reverse repurchase agreements and other similar secured lending	33,581	(29,015)	—	—	4,566
Investment securities	117,025	(1,193)	(19)	—	115,813
Other assets	33,490	—	—	—	33,490
Current tax assets	491	—	—	1	492
Prepayments and accrued income	2,307	—	—	—	2,307
Interests in associates and joint ventures	2,307	—	—	(52)	2,255
Goodwill and intangible assets	5,013	—	—	—	5,013
Property, plant and equipment	7,211	—	—	—	7,211
Deferred tax assets	1,177	—	—	125	1,302
Assets classified as held for sale	545	—	—	—	545
Total assets	663,501	31	(841)	74	662,765
Deposits by banks	30,945	—	—	—	30,945
Customer accounts	370,509	—	—	—	370,509
Repurchase agreements and other similar secured borrowing	39,783	(38,144)	—	—	1,639
Financial liabilities held through profit or loss	16,633	38,140	—	—	54,773
Derivative financial instruments	48,101	—	—	—	48,101
Debt securities in issue	46,379	—	—	—	46,379
Other liabilities	35,257	—	—	—	35,257
Current tax liabilities	376	—	—	(10)	366
Accruals and deferred income	5,493	—	—	—	5,493
Subordinated liabilities and other borrowed funds	17,176	—	—	—	17,176
Deferred tax liabilities	404	—	—	(37)	367
Provisions for liabilities and charge ¹	183	—	176	—	359
Retirement benefit obligations	455	—	—	—	455
Total liabilities	611,694	(4)	176	(47)	611,819
Share capital and share premium account	7,097	—	—	—	7,097
Other reserves	12,767	(165)	65	(7)	12,660
Retained earnings¹	26,641	200	(1,074)	128	25,895
Total parent company shareholders' equity	46,505	35	(1,009)	121	45,652
Other equity instruments	4,961	—	—	—	4,961
Total equity excluding non-controlling interests	51,466	35	(1,009)	121	50,613
Non-controlling interests	341	—	(8)	—	333
Total equity	51,807	35	(1,017)	121	50,946
Total equity and liabilities	663,501	31	(841)	74	662,765

1 The Group's initial estimate of credit impairment provisions on adoption of IFRS 9 was \$6,720 million. Following refinement of the Group's expected loss models, the estimate of the opening credit impairment provisions has been revised down by \$222 million to \$6,498 million, and the net expected credit loss of \$(1,296) million adjusted against retained earnings has similarly decreased by \$222 million to \$(1,074) million

2 FVTPL financial assets have increased due to reclassifications of \$44,608 million of reverse repurchase agreements (IAS 39: loans and receivables), \$1,244 million of loans and advances to banks and customers (IAS 39: loans and receivables), \$511 million of investment debt securities (IAS 39: available-for sale) and \$684 million of equity shares (IAS 39: available-for-sale), with the remaining \$29m being IFRS 9 re-measurement adjustments. Repurchase agreements of \$38,144 million have been reclassified from amortised cost under IAS 39 to FVTPL

Statement of changes in equity

	Share capital and share premium account \$million	Capital and merger reserves \$million	Own credit adjustment reserve \$million	Available-for-sale reserve \$million	Fair value through OCI reserve \$million	Cash flow hedge reserve \$million	Translation reserve \$million	Retained earnings \$million	Parent company shareholders' equity \$million	Other equity instruments \$million	Non-controlling interests \$million	Total \$million
As at 31 December 2017	7,097	17,129	54	83	–	(45)	(4,454)	26,641	46,505	4,961	341	51,807
Net impact of:	–	–	–	(83)	(82)	–	–	200	35	–	–	35
IFRS 9 reclassifications ¹	–	–	–	(83)	(86)	–	–	169	–	–	–	–
IFRS 9 re-measurements ²	–	–	–	–	4	–	–	31	35	–	–	35
Expected credit loss, net ³	–	–	–	–	65	–	–	(1,074)	(1,009)	–	(8)	(1,017)
Tax impact ⁴	–	–	–	–	(6)	–	–	179	173	–	–	173
Impact of IFRS 9 on share of joint ventures and associates, net of tax	–	–	–	–	(1)	–	–	(51)	(52)	–	–	(52)
Estimated IFRS 9 transition adjustments	–	–	–	(83)	(24)	–	–	(746)	(853)	–	(8)	(861)
As at 1 January 2018	7,097	17,129	54	–	(24)	(45)	(4,454)	25,895	45,652	4,961	333	50,946

1 Available-for-sale category has been removed under IFRS 9. Unrealised gains and losses have been transferred to fair value through other comprehensive income (FVOCI) reserves, or retained earnings where the instruments are held as FVTPL. The FVOCI reserve includes a \$187 million loss in respect of equity securities designated as FVOCI, partly offset by \$18 million gain on debt securities designated as FVOCI

2 The remeasurement impact of financial assets that are now measured at fair value under IFRS 9

3 Impact from adopting expected credit losses. Gross impact is estimated at \$1,082 million (comprising \$1,074 million in retained earnings and \$8 million in non-controlling interests). As FVOCI debt instruments are held at fair value on the balance sheet, the expected credit loss charged to retained earnings is recognised as a credit to the FVOCI reserve. The net FVOCI reserve relating to FVOCI debt instruments will be recycled to the income statement on disposal of the instruments

4 Tax of \$173 million has been credited to reserves as a result of transition to IFRS 9. Of this, deferred tax of \$142 million has been credited to retained earnings, and is provided on additional deductible temporary differences that have arisen from loss provisions due to initial adoption of the expected credit loss approach

Impact of moving from an incurred loss approach to an expected credit loss approach

	1 January 2018							
	Loss allowances per IAS 39			Expected credit loss per IFRS 9				Increase/(decrease) \$million
	Portfolio impairment provisions \$million	Individual impairment provisions \$million	Total \$million	Stage 1 \$million	Stage 2 \$million	Stage 3 \$million	Total \$million	
Corporate & Institutional Banking	156	3,466	3,622	105	394	3,433	3,932	310
Retail Banking	208	275	483	382	178	389	949	466
Commercial Banking	99	1,431	1,530	39	93	1,369	1,501	(29)
Private Banking	2	67	69	8	1	91	100	31
Central & other items	–	–	–	4	–	–	4	4
Total loans and advances to customers ¹	465	5,239	5,704	538	666	5,282	6,486	782
Loans and advances to banks	1	4	5	6	2	4	12	7
Financial guarantees	–	77	77	6	16	77	99	22
Debt securities and other eligible bills – amortised cost	–	114	114	3	16	213	232	118
Debt securities and other eligible bills – FVOCI	–	–	–	23	42	–	65	65
Total	466	5,434	5,900	576	742	5,576	6,894	994

1 Includes both drawn and undrawn commitments

Movement in loss provisions

	Debt securities \$ million	FVOCI debt securities \$ million	Loans to banks \$ million	Loans to customers \$ million	Provisions for liabilities and charges		Total \$ million
					Undrawn commitments \$ million	Guarantees \$ million	
Total IAS 39 loss provisions	114	–	5	5,702 ¹	2 ¹	77	5,900
Reclassifications:							
Loss provisions reclassified to FVTPL	(109)	–	–	(122)	–	–	(231)
Modification losses netted against gross exposure	–	–	–	(65)	–	–	(65)
Adjusted IAS 39 loss provisions	5	–	5	5,515	2	77	5,604
Additional expected credit loss provisions	227	65	7	815	154	22	1,290
Total IFRS 9 impairment provisions	232	65	12	6,330 ²	156 ²	99	6,894
Estimated net expected credit loss movement	118	65	7	628	154	22	994

1 Total IAS 39 loss allowances (\$5,704 million) applied to loans and advances to customers as previously reported

2 Total IFRS 9 expected credit losses (\$6,486 million) applied to loans and advances to customers

Impact on non-performing loans to customers and banks¹

	Corporate & Institutional Banking \$million	Retail Banking \$million	Commercial Banking \$million	Private Banking \$million	Total \$million
Gross					
At 31 December 2017	5,957	489	2,026	207	8,679
Modified loans	(39)	—	(26)	—	(65)
Performing forbore (impaired)	—	329	—	—	329
Reclassified	(62)	—	(40)	—	(102)
At 1 January 2018 (stage 3)	5,856	818	1,960	207	8,841
Credit impairment provisions					
At 31 December 2017 (IAS 39 IIP)	3,468	215 ²	1,431	67	5,181
Modified loans	(39)	—	(26)	—	(65)
Performing forbore (impaired)	—	60	—	—	60
Reclassified to FVTPL	(81)	—	(40)	—	(121)
Additional expected credit loss	1	114	6	—	121
GSAM multiple scenario provisions	88	—	(2)	24	110
At 1 January 2018 (stage 3)	3,437	389 ²	1,369	91	5,286
IAS 39 PIP at 31 December 2017	157	208	99	2	466
Collateral at 31 December 2017	1,111	218	277	203	1,809
Non-performing cover ratios:					
At 31 December 2017 (IAS 39)	61%	87%	75%	33%	65%
At 31 December 2017 (IAS 39, excluding PIP)	58%	44%	71%	32%	60%
At 1 January 2018 (IFRS 9)	59%	48%	70%	44%	60%
At 31 December 2017 (IAS 39, including collateral)	77%	89%	84%	100%	81%
At 1 January 2018 (IFRS 9, including collateral)	78%	74%	84%	100%	80%
Of the above, included in the liquidation portfolio:					
Gross	1,945	—	125	156	2,226
Credit impairment provisions (IAS 39)	1,388	—	123	62	1,573
Additional provisions (IFRS 9)	29	—	—	24	53
At 1 January 2018 (stage 3)	1,417	—	123	86	1,626
Non-performing cover ratios:					
At 31 December 2017 (IAS 39)	71%	—	98%	40%	71%
At 1 January 2018 (IFRS 9)	73%	—	98%	55%	73%
At 31 December 2017 (IAS 39, including collateral)	84%	—	98%	100%	86%
At 1 January 2018 (IFRS 9, including collateral)	85%	—	98%	100%	88%

1 Includes FVTPL impaired loans

2 Under IAS 39, Retail Banking non-performing loans excluded those impaired loans classified as performing

42. Dealings in Standard Chartered PLC listed securities

This is also disclosed as part of Note 28 Share capital, other equity and reserves

Except as disclosed, neither the Company nor any of its subsidiaries has bought, sold or redeemed any securities of the company listed on The Stock Exchange of Hong Kong Limited during the period. Details of the shares purchased and held by the trusts are set out below.

	1995 Trust		2004 Trust		Total	
Number of shares	31.12.18	31.12.17	31.12.18	31.12.17	31.12.18	31.12.17
Shares purchased during the year	1,017,941	-	-	-	1,017,941	-
Market price of shares purchased (\$million)	8-	-	-	-	8	-
Shares held at the end of the year	2,354,820	3,769,011	16,755	18,004	2,371,575	3,787,015
Maximum number of shares held during the year					3,787,015	6,182,467

43. Corporate governance

The directors confirm that Standard Chartered PLC (the Company) has complied with all of the provisions set out in the UK Corporate Governance Code 2014 during the year ended 31 December 2018. The directors also confirm that, throughout the year, the Company has complied with the code provisions set out in the Hong Kong Corporate Governance Code contained in Appendix 14 of the Hong Kong Listing Rules. The Group confirms that it has adopted a code of conduct regarding directors' securities transactions on terms no less exacting than required by Appendix 10 of the Hong Kong Listing Rules and that the directors of the Company have complied with the required standards of the adopted code of conduct. The directors also confirm that the announcement of these results has been reviewed by the Company's Audit Committee.

Shareholder information

Forward-looking statements

This document may contain 'forward-looking statements' that are based on current expectations or beliefs, as well as assumptions about future events. These forward-looking statements can be identified by the fact that they do not relate only to historical or current facts. Forward-looking statements often use words such as 'may', 'could', 'will', 'expect', 'intend', 'estimate', 'anticipate', 'believe', 'plan', 'seek', 'continue' or other words of similar meaning. By their very nature, such statements are subject to known and unknown risks and uncertainties and can be affected by other factors that could cause actual results, and the Group's plans and objectives, to differ materially from those expressed or implied in the forward-looking statements.

Recipients should not place reliance on, and are cautioned about relying on, any forward-looking statements. There are several factors which could cause actual results to differ materially from those expressed or implied in forward-looking statements. The factors that could cause actual results to differ materially from those described in the forward-looking statements include (but are not limited to) changes in global, political, economic, business, competitive, market and regulatory forces or conditions, future exchange and interest rates, changes in tax rates, future business combinations or dispositions and other factors specific to the Group. Any forward-looking statement contained in this document is based on past or current trends and/or activities of the Group and should not be taken as a representation that such trends or activities will continue in the future.

No statement in this document is intended to be a profit forecast or to imply that the earnings of the Group for the current year or future years will necessarily match or exceed the historical or published earnings of the Group. Each forward-looking statement speaks only as of the date of the particular statement. Except as required by any applicable laws or regulations, the Group expressly disclaims any obligation to revise or update any forward looking statement contained within this document, regardless of whether those statements are affected as a result of new information, future events or otherwise.

Nothing in this document shall constitute, in any jurisdiction, an offer or solicitation to sell or purchase any securities or other financial instruments, nor shall it constitute a recommendation or advice in respect of any securities or other financial instruments or any other matter.

This information will be available on the Group's website at sc.com

Details of voting at the Company's AGM and of proxy votes cast can be found on the Company's website at sc.com/investors

If you would like to receive more information, please visit our website at sc.com/shareholders or contact the shareholder helpline on 0370 702 0138

Further information can be obtained from the Company's registrars or from ShareGift on 020 7930 3737 or from sharegift.org

Please register online at investorcentre.co.uk or contact our registrar for a mandate form

You can check your shareholding at computershare.com/hk/investors

By Order of the Board
Elizabeth Lloyd, CBE
Group Company Secretary

Hong Kong, 26 February 2019

As at the date of this announcement, the Board of Directors of Standard Chartered PLC comprises:

Chairman:

José María Viñals Iñiguez

Executive Directors:

William Thomas Winters and Andrew Nigel Halford

Independent Non-Executive Directors:

Dr Louis Chi-Yan Cheung; David Philbrick Conner; Dr Byron Elmer Grote; Christine Mary Hodgson (Senior Independent Director); Gay Huey Evans, OBE; Naguib Kheraj (Deputy Chairman); Dr Ngozi Okonjo-Iweala; Carlson Tong and Jasmine Mary Whitbread