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 2016 – PART 2

Standard Chartered PLC – Additional Financial information

Highlights

Standard Chartered PLC (the Group) today releases its results for the year ended 31 December 2016. The following pages provide additional information related to the announcement

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Standard Chartered PLC – Risk review
Principal uncertainties

Principal uncertainties

The Risk review is divided into the following sections:

Principal uncertainties sets out the key external factors that could impact the Group in the coming year

Risk management approach details how we control and govern risk

Risk profile on provides an analysis of our risk exposures across all major risk types

The key uncertainties and material risks we face in the current year are set out below. This should not be regarded as a complete and comprehensive statement of all potential risks and uncertainties that we may experience.

Deteriorating macroeconomic conditions

Deteriorating macroeconomic conditions such as the continuing slow growth in the eurozone, moderation of growth in China and asset price correction, influence personal expenditure and consumption patterns; demand for business products and services; the debt service burden of consumers and businesses; the general availability of credit for retail and corporate borrowers; and the availability of capital and liquidity for our business.

Global economic growth remains subdued, although the outlook for economic growth differs across each of our markets. Weak investment spending and low productivity growth remain key concerns for the developed world. The uncertainty related to recent geo-political developments could exacerbate these weaknesses. Asia remains the main driver of global growth supported by internal growth drivers, led by China. A mini-credit boom in early 2016 helped steady China's growth outlook, however, this will continue to fuel concerns about the size of its debt and the pace of transition to more consumption-led growth. While commodity prices have recovered from the lows of early 2016, further weakness in commodity prices could have a continued negative effect on the economic performance of commodity dependent nations in Sub-Saharan Africa, the Middle East and North Africa, through reduced foreign exchange earnings and government revenues.

The global economy has entered a period of monetary policy divergence, with the US Federal Reserve raising policy rates while other major central banks have adopted unorthodox monetary policy measures, including the setting of negative real benchmark interest rates and quantitative easing. This divergence is likely to result in changing asset preferences of investors and volatility in markets. Significant increases in interest rates from the historically low levels currently prevailing in many markets, in particular the US, could have an impact on the wider economy through credit quality and asset values.

Financial markets are highly linked to macroeconomic developments. A sudden financial markets dislocation could affect our performance, directly through its impact on the valuation of assets in our available-for-sale and trading portfolios or indirectly through the availability of capital or liquidity. Financial markets instability may also increase the likelihood of default by our counterparties and may increase the likelihood of client disputes.

To mitigate the abovementioned risks, we have for a number of years had in place a Business Risk Horizon framework that provides a forward-looking 12 to 18 month view of the economic, business and credit conditions across the Group's key markets, enabling us to take proactive action.

We monitor economic trends in our key markets very closely and ensure that our portfolio remains well diversified across products, regions and client segments so as to provide resilience against economic shocks. We monitor our portfolio indicators regularly to ensure that we are operating within our risk appetite and we take necessary risk mitigating actions on our exposures when such a need arises.

Stress testing is also an integral part of the Group's approach to risk management. We conduct stress tests at a Group, country, portfolio and business level to assess the effect of extreme but plausible developments in the global economy and financial markets on our performance and ability to operate within our risk appetite. This includes assessing the management actions we can take to ensure our resilience to stress. We have a comprehensive stress testing programme that is conducted throughout the year and includes the annual Bank of England stress test. The results of the stress test are considered in our assessment of risk appetite and limit setting.

We stress test our market risk exposures to highlight the potential impact of extreme market events and to confirm that they are within authorised stress loss triggers. Our stress scenarios are regularly updated to reflect changes in risk profile and economic events. We also perform scenario analysis on our portfolios to monitor the impact from emerging trends. Where necessary, overall reductions in market risk exposures are enforced.

We continuously review the suitability of our risk policies and controls and maintain robust processes to assess the suitability and appropriateness of the products and services we provide to our clients.

Geo-political uncertainties

Geo-political uncertainty and its impact of such on world trade affects trade flows, our customers' ability to pay, and our ability to manage capital or operations across borders as our performance is in part reliant on the openness of cross-border trade and capital flows. Political developments and policy decisions will continue to influence global macroeconomic conditions.

In Europe, the outcome of the UK referendum to leave the European Union (Brexit) as well as upcoming elections in key European Union member states in 2017 could have implications on economic conditions globally as a result of changes in policy direction, which may in turn influence the economic outlook for the eurozone and its key trading partners. The election cycle in Europe could bring market volatility, while the uncertainties linked to the Brexit negotiation process could delay some investment decisions until there is more clarity.

The result of the US Presidential elections in November 2016 led to some initial market volatility with the longer-term impact unclear given uncertainty about the broader direction and impact of US foreign and domestic policy. In particular, policies questioning free trade or the traditional system of security alliances could trigger market volatility and have a direct impact on some economic activities, including global trade. The protectionist policies, if followed by the US, could disrupt established supply chains and invoke retaliatory actions from other countries. A sudden change in fiscal policy could lead to a large market repricing of financial assets, with repercussions on all dollar-linked transactions.

Financial markets are also closely linked to geo-political events and a sudden dislocation of financial markets could affect our performance. The impact from such an occurrence and the measures we take to manage the resulting market risks has been discussed in the previous section on deteriorating macroeconomic conditions.

We regularly assess the geo-political risks and forward-looking impact on economic, business and credit conditions across the Group's key markets through the Business Risk Horizon framework, enabling us to take proactive actions where appropriate. There is regular senior level oversight, through the Group Risk Committee, of work undertaken to assess and manage geo-political risk.

We also conduct stress tests, where appropriate, with a focus on the potential impact of geo-political and physical events on relevant regions, client segments and risk types. The Risk Committees may commission portfolio reviews and deep dives to highlight the impact of geo-political events and proactively manage the portfolio.

Impact from the UK referendum to leave the European Union (Brexit)

On 23 June 2016, the UK held a referendum and voted to leave the European Union. The precise timing and terms of the exit are unclear as is the nature of the relationship between the UK, the European Union and other nations post exit. This has resulted in significant financial market and macroeconomic uncertainty.

The first order impact of Brexit is not material given the Group's exposure is predominantly to economies in Asia, Africa and the Middle East.

In addition to relevant mitigants mentioned elsewhere in this section, we continue to ensure that there is regular senior oversight of work undertaken to assess and manage Brexit risk and the practical implications, including our contingency plans.

Our continued approach is to maximise planning and preparedness while we observe further developments, including the triggering of Article 50, of the Treaty of Lisbon to formally provide notice of the UK's intention to leave the European Union, and we are in the advanced stages of our planning for continued market access for our clients.

The full impact of Brexit will only be known over the next couple of years as the negotiations progress with the European Union and other major trading partners. We continue to proactively assess and, where appropriate, manage the impact to the Group and our exposures to clients.

Evolving Financial crime, fraud and cybercrime

The banking industry continues to be a target for financial crime, fraud and cybercrime. Operational losses may result from, for example:

- Failure to comply with legal or regulatory requirements, or to meet regulatory expectations in relation to anti-money laundering, countering terrorist financing and sanctions compliance
- Internal and external fraud
- Cybercrime or criminal exploitation via information systems or online channels

The Group, through its size and strategic intent, continues to be exposed to money laundering and sanctions risks. These risks are inherent in the Group's operations and may arise from, among other things, the Group offering different banking products to diverse customer types delivered through multiple channels in, or related to, many regions; the Group's defences being overcome by criminals; and/or regulators assessing deficiencies in the Group's design and/or governance over controls operating across the Group's client or counterparty due diligence and surveillance.

Economic crime arising from internal or external fraud continues to be a global problem for the financial services industry, and managing fraud risk remains complex. The Group is also exposed to economic crime arising from fraud risk for similar reasons as those listed above for money laundering and sanctions.

Cybercrime is rising and becoming more globally coordinated. The Group may incur losses due to cybercrime including risks relating to fraud, vandalism and damage to critical infrastructure. The Group's business depends on our ability to process a large number of transactions efficiently and accurately, and is highly reliant on digital technologies, computer and email services, software and networks. This dependency on secure processing, storage and transmission of confidential and other information in our computer systems and networks increases our exposure risk to cybercrime.

The Group seeks to be vigilant in managing risks relating to financial crime, fraud and cybercrime. The Group has implemented policies and procedures to minimise these risks. Controls are embedded in the Group's processes to prevent such risks or to detect them as quickly as possible. The Group performs regular reviews of our control environment, and performs benchmarking of its standards to continuously improve its controls against these risks. The Group considers these risks as scenarios in stress testing. In June 2016, the Group was formally recognised by the US Financial Crimes Enforcement Network (FinCEN) for two investigations conducted by the Group's Financial Crime Compliance team that led to successful law enforcement action.

The Group continues to pursue its Financial Crime Risk Mitigation Programme to enhance its approach to money laundering prevention, combating terrorist financing, and compliance with sanctions as described below in the regulatory investigations and legal proceedings principal uncertainty. To improve the oversight of fraud management, a Global Fraud Risk Management Group has been formed and is overseeing the enhancement of standards to meet the Group Fraud Risk Management Policy and related procedure. The Group has implemented a range of cybercrime defences to protect from hacking, misuse, malware, errors, social engineering and physical threats. The Group also performs external benchmarking against government and international cyber security standards and frameworks, and conducts tests of our defences against cyber and other attacks in line with regulatory frameworks. Any of the foregoing risks, or a failure by the Group to manage such risks may have a material adverse effect on the Group's financial condition, results of operations and prospects.

Operational performance eroding external confidence in the Group

Group operational under-performance can result from differences in the Group's earning as compared to market expectations or competitor performance. This could impact the Group's share price and, in extreme cases, a material under-performance may even erode confidence in the Group.

Principal uncertainties

The Group has a clear strategy that is consistent with the risk appetite and financial objectives for the Group. The risk appetite is set at granular levels and is approved by the Board, against which regular updates are provided. The financial objectives are reviewed periodically and the strategy is regularly reviewed and challenged by the Board for potential risks and its execution.

The organisational structure of country, regional and segment CEOs allows us to respond quickly and effectively to any areas of under-performance. The Group regularly monitors the execution of its strategic plan through the Group's performance management process.

We update our equity and debt providers and rating agencies regularly to ensure they understand our progress against the strategy.

Exchange rate movements

Changes in exchange rates affect, among other things, the value of our assets and liabilities denominated in foreign currencies, as well as the earnings reported by our non-US dollar denominated branches and subsidiaries. Sharp currency movements can also affect trade flows, the ability of countries and clients to service debt and the wealth of clients, any of which could have an impact on our performance.

We monitor exchange rate movements closely and adjust our exposures accordingly. Under certain circumstances, we may take the decision to hedge our foreign exchange exposures in order to protect our capital ratios from the effects of changes in exchange rates. The effect of exchange rate movements on the capital adequacy ratio is partially mitigated to the extent there are proportionate movements in risk-weighted assets.

Evolving impact of regulatory compliance

Our business as an international bank will continue to comply with an evolving and complex regulatory and legislative framework in each of the jurisdictions in which we operate. The precise nature and impact of future changes in laws and regulations is not always predictable and may, at times, not be aligned with our strategic interests. These changes sometimes have broader implications on the volatility and liquidity in some of the markets in which we operate, which may in turn have an impact on the way we conduct business and manage our capital and liquidity. As a bank with a substantial footprint across emerging markets, but being headquartered in the UK, we continue to face an evolving and complex regulatory framework in each of the jurisdictions where we operate. Despite regulatory frameworks being enhanced for much of the decade to increase confidence in the banking sector, we await final rules in many key areas of regulation that could further impact on our business model and how we manage our capital and liquidity. We are closely monitoring the discussions of Basel Committee of Banking Services regarding the standards for the calibration and implementation of capital floors. At the time of writing we await final proposals from the Basel Committee on the revisions to credit risk and operational risk, as well as the European application of the revised approach to calculating market risk, binding leverage ratio and net stable funding ratio.

In addition to having to comply with regulations in each of our emerging markets we operate in, the fact that many regulations stemming from the US or EU regulators are extraterritorial in their application adds additional challenges, complexities and uncertainties for cross-border business in these markets. The Markets in Financial Instruments Directive (MIFID2) will be implemented from the start of 2018, yet the precise geographical scope of its application to products and securities in markets outside the European Union remains uncertain. A number of regulations require changing contractual terms for all clients to ensure compliance with over-the-counter (OTC) derivative reforms or bail-in requirements stemming from the European Union's Banking Resolution and Recovery Directive (BRRD).

The Group requires adherence to and implementation of regulations while meeting and anticipating the expectations of regulators and regulatory reform. The Group has implemented Group-wide policies and procedures to manage the risks associated with managing regulatory change.

Regulatory investigations, reviews and legal proceedings

While the Group seeks to comply with the letter and spirit of all applicable laws and regulations at all times, it 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 can be material to the Group. 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.

Regulatory and enforcement authorities have broad discretion to pursue actions and impose a wide range of penalties for non-compliance with laws and regulations. Penalties imposed by authorities have included substantial monetary penalties, additional compliance and remediation requirements and additional business restrictions. In recent years, such authorities have exercised their discretion to impose increasingly severe penalties on financial institutions that have been determined to have violated laws and regulations, and there can be no assurance that future penalties will not be of a different type or increased severity. The Group is cooperating with a number of reviews, requests for information and investigations and actively managing its legal proceedings including in respect of legacy issues, but both the nature and timing of the outcome of these matters is uncertain and difficult to predict. As such, it is not possible to predict the extent of any liabilities or other adverse consequences that may arise for the Group.

The Group has made significant investments to enhance its systems and controls environment and has increased the capacity and capability of its compliance resources. A Financial Crime Risk Committee sits at Board level to oversee financial crime compliance and the Group has invested in various remediation programmes and appointed independent reviewers to critically examine its systems and controls. The Group has an ongoing Financial Crime Risk Mitigation Programme (FCRMP), which is a comprehensive, multi-year programme designed to review and enhance many aspects of the Group's existing approach to money laundering prevention and to combating terrorism finance and the approach to sanctions compliance and the prevention of bribery and corruption. In addition, as a result of the Group's 2012 and 2014 settlements with certain US authorities (the Settlements), a remediation programme referred to as the US Supervisory Remediation Program (SRP) was established comprising workstreams designed to ensure compliance with the Settlements. Many of the deliverables under the SRP are reliant on, or led by, individuals or functions outside the US, and in some cases represent the US implementation of Group-wide remediation or upgrade activity managed under the FCRMP. Consequently, there is a close working relationship between the SRP and FCRMP for the purpose of project coordination and delivery. As part of the FCRMP, the Group or its advisors may identify new issues, potential breaches or matters requiring further review or further process improvements that could impact the scope or duration of the FCRMP.

The remediation programmes and other compliance-related investments are a necessary cost of doing business for the Group and affect numerous markets, businesses and functions. The rollout of these programmes and enhancements may be complex and the timing and associated costs of these measures are uncertain.

The Group recognises that its compliance with historical, current and future sanctions, as well as AML and BSA requirements, and customer due diligence practices, not just in the US but throughout the Group's footprint, are and will remain a focus of the relevant authorities.

In meeting regulatory expectations and demonstrating active risk management, the Group is also reviewing its portfolio and taking steps to restrict or restructure or otherwise mitigate higher-risk business activities, which could include divesting or closing businesses that exist beyond risk appetite. We continue to educate and train our people on conduct, conflicts of interest, information security and financial crime compliance in order to reduce our exposure to legal and regulatory proceedings.

For further details on legal and regulatory matters, including details on the Settlements, refer to note 25 to the financial statements.

As a result of our normal business operations, Standard Chartered is exposed to a broader range of risks than those Principal uncertainties mentioned above and our approach to managing risk is detailed on the following pages.

Standard Chartered PLC – Risk review
Risk management approach

Risk Management Framework

Effective risk management is essential to 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.

Through our Risk Management Framework we manage enterprise-wide risks, with the objective of maximising risk-adjusted returns while remaining within our risk appetite.

As part of this framework, the Board has approved a set of principles that describe the risk management culture we wish to sustain:

Balancing risk and return

- We manage our risks to build a sustainable franchise, in the interests of all our stakeholders
- We only take risks within our risk appetite and risk tolerances, and where consistent with our approved strategy
- We manage our risk profile so as to maintain a low probability of an unexpected loss event that would materially undermine the confidence of our investors

Conduct of business

- We demonstrate that we are Here for good through our conduct, and are mindful of the reputational consequences of inappropriate conduct
- We seek to achieve good outcomes for clients, investors and the markets in which we operate, while abiding by the spirit and letter of laws and regulations
- We treat our colleagues fairly and with respect

Responsibility and accountability

- We take individual responsibility to ensure risk-taking is disciplined and focused, particularly within our area of authority
- We make sure risk-taking is transparent, controlled and reported in line with the Risk Management Framework, within risk appetite and risk tolerance boundaries and only where there is appropriate infrastructure and resource

Anticipation

- We seek to anticipate material future risks, learn lessons from events that have produced adverse outcomes and ensure awareness of known risks

Competitive advantage

- We seek to achieve competitive advantage through efficient and effective risk management and control

Risk governance

Ultimate responsibility for setting our risk appetite statement and for the effective management of risk rests with the Board.

Acting within an authority delegated by the Board, the Board Risk Committee, whose membership is exclusively comprised of independent non-executive directors of the Group, has responsibility for oversight and review of prudential risks, including but not limited to credit, country cross-border, market, pension, capital, liquidity and funding and operational risks. It reviews the Group's overall risk appetite statement and makes recommendations thereon to the Board. Its responsibilities also include reviewing the appropriateness and effectiveness of the Group's risk management systems and controlling the adequacy of information it is provided with, considering the implications of material regulatory change proposals, and ensuring effective due diligence on material acquisitions and disposals. The Board Risk Committee also reviews reports on key cyber risks, threats, events, project updates and the Board's top risk profile updates as identified by the Information and Cyber Security Management Group.

The Committee has the authority to request and receive relevant information consistent with the requirements of the Basel Committee on Banking Supervision regulation 239 (BCBS239) that will allow the Committee to fulfill its governance mandate relating to the risks to which the Group is exposed, and alert senior management when risk reports do not meet its requirements.

The Board Risk Committee receives regular reports on risk management, including our portfolio trends, policies and standards, stress testing, 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.

The Brand, Values and Conduct Committee oversees the brand, values and good reputation of the Group, ensuring that reputational risk is consistent with the Risk Appetite Statement approved by the Board and the creation of long-term shareholder value.

The Board Financial Crime Risk Committee focuses on financial crime compliance risk matters across the Group and oversees the Group's effective compliance with financial crime regulations.

The Audit Committee reviews the Group's internal financial controls to identify, assess, manage and monitor financial risks.

Executive responsibility for risk management is delegated to the Standard Chartered Bank Court (the 'Court'), which comprises the Group executive directors and other directors of Standard Chartered Bank. The Court delegates authority for the management of risk to the Group Risk Committee and the Group Asset and Liability Committee.

The Group Risk Committee is responsible for the management of all risks other than those delegated by the Court to the Group Asset and Liability Committee. The Group Risk Committee is responsible for the establishment of, and compliance with, policies relating to credit risk, country cross-border risk, market risk, operational risk, pension risk and reputational risk. The Group Risk Committee also defines our overall Risk Management Framework.

The Group Asset and Liability 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, capital adequacy and structural foreign exchange and interest rate exposure and tax exposure.

HOW THE STANDARD CHARTERED COURT COMMITTEE STRUCTURE HAS CHANGED

As at 1 January 2016

STANDARD CHARTERED BANK COURT

Group Risk Committee	**Group Asset and Liability Committee**
Group Operational Risk Committee	Liquidity Management Committee
Group Financial Crime Risk Committee	Capital Management Committee
Group Information Management Governance Committee	Global Balance Sheet Committee
Stress Testing Committee	Tax Management Committee
Business Responsibility and Reputational Risk Committee	
Credit & Market Risk Committee	

As at 31 December 2016

STANDARD CHARTERED BANK COURT

Group Risk Committee	**Group Asset and Liability Committee**	**Combined United States Operations Risk Committee**
Group Operational Risk Committee	Operational Balance Sheet Committee	
Group Financial Crime Risk Committee		
Group Information Management		
Governance Committee		
Stress Testing Committee		
Business Responsibility and Reputational Risk Committee		
Corporate & Institutional Banking Risk Committee		
Private Banking Risk Committee		
Greater China and North Asia Risk Committee		
ASEAN and South Asia Risk Committee		
Africa and Middle East Risk Committee		

Further simplification of the committee structure was carried out in 2016. Five risk committees were formed to ensure coverage of all risks arising from activities within the businesses and regions. These committees, appointed by the Group Risk Committee comprised: Africa & Middle East Risk Committee, ASEAN & South Asia Risk Committee, Greater China & North Asia Risk Committee, Corporate & Institutional Banking Risk Committee, and Private Banking Risk Committee. These committees are chaired by the respective Chief Risk Officer.

Under the revised risk committee structure, Corporate & Institutional Banking Risk Committee covers risks arising from activities in Corporate & Institutional Banking globally and in the Europe & Americas region as well as bank wide Market and Traded Credit Risk. The Private Banking Risk Committee covers risks arising in Private Banking globally including Wealth Management. The three regional risk committees will cover risks arising from their respective region including Commercial and Retail Banking.

The roles of the Group Risk Committee and the Group Asset and Liability Committee are essentially unchanged following the reorganisation of our business, although the committee structures below them have changed in some areas.

Members of the Group Risk Committee are drawn mainly from the Management Team and the Group Asset and Liability Committee are drawn principally from the Court. The Group Risk Committee is chaired by the Group Chief Risk Officer. The Group Asset and Liability Committee is chaired by the Group Chief Financial Officer. Risk limits and risk exposure approval authority frameworks are set by the Group Risk Committee in respect of credit risk, country cross-border risk, market risk and operational risk. The Group Asset and Liability Committee sets the approval authority frameworks in respect of capital and liquidity and funding risks. Risk approval authorities may be exercised by risk committees or authorised individuals.

The committee governance structure ensures that risk-taking authority and risk management policies are cascaded down from the Board to the appropriate functional, client segment and country-level senior management and committees. Information regarding material risk issues and compliance with policies and standards is communicated to the appropriate country, client segment, functional and Group-level senior management and committees.

In 2016, we aligned the sources of authorities to the Senior Managers Regime. Given the focus on individual accountability, this area continues to be reviewed and further refined.

The Group Risk Committee and Group Asset and Liability Committee request and receive information to fulfil their governance mandates relating to the risks to which the Group is exposed, and alert senior management when risk reports do not meet their requirements. Similar to 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, risk concentrations, forward-looking assessments, updates on specific risk situations or actions agreed by these committees to reduce or manage risk.

On 29 June 2016, the Standard Chartered Bank Combined United States Operations Risk Committee was established 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 Court and is chaired by the Group Chief Risk Officer with membership drawn from the Board of directors of Standard Chartered Bank and one Independent Director of Standard Chartered Bank. Its responsibilities are drawn from the EPS Rules and pertain to liquidity, risk governance and oversight. The Committee receives reports that include information on risk measures, compliance with local liquidity risk limits, risk concentrations, changes to Risk Management Framework and updates on specific risk situations or actions agreed by the Committee to reduce or manage risk.

Roles and responsibilities for risk management are defined under a Three Lines of Defence model. Each line of defence describes a specific set of responsibilities for risk management and control.

- First line of defence: all employees are required to ensure the effective management of risks within the scope of their direct organisational responsibilities. Business unit, function and geographic heads are accountable for risk management in their respective businesses and functions, and for countries where they have governance responsibilities
- Second line of defence: this comprises the risk control owners, supported by their respective control functions. Risk control owners are responsible for ensuring that the residual risks within the scope of their responsibilities remain within risk appetite. The scope of a risk control owner's responsibilities is defined by a given risk type and the risk management processes that relate to that risk type. These responsibilities cut across the Group and are not constrained by functional, business and geographic boundaries. The major risk types are described individually in the following sections
- Third line of defence: the independent assurance provided by the Group Internal Audit function. Its role is defined and overseen by the Audit Committee of the Board

Group Internal Audit provides independent assurance of the effectiveness of management's control of its own business activities (the first line) and of the processes maintained by the risk control functions (the second line). As a result, Group Internal Audit provides assurance that the overall system of control effectiveness is working as required within the Risk Management Framework.

The Risk function

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

The role of the Risk function is:

- To maintain the Risk Management Framework, ensuring it remains appropriate to the Group's activities, is effectively communicated and implemented across the Group, and to administer related governance and reporting processes
- To uphold the overall integrity of the Group's risk/return decisions, and in particular to ensure that risks are properly assessed, that risk/return decisions are made transparently on the basis of this proper assessment, and controlled in accordance with the Group's standards and risk appetite
- To exercise direct risk control ownership for credit, market, country cross-border and operational risk types

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

Risk management approach

This is particularly important given that revenues are recognised from the point of sale, while losses arising from risk positions typically manifest themselves over time.

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

Risk appetite

In 2016 our risk appetite and risk tolerance definitions were updated. We recognise three sets of 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** defines externally imposed constraints within which the Group must operate. It is the maximum level of risk the Group can assume, given its current capabilities and resources, before breaching constraints determined by regulatory capital and liquidity requirements, 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 that the Group is willing to assume in pursuit of its strategy. Risk appetite cannot exceed risk capacity
- **Risk tolerances** is the outer constraint defined by the Group for each risk type via metrics and thresholds. Risk tolerance is set within the risk appetite and is a buffer, determined by management, within the Board approved risk appetite

The Group's risk profile is our overall exposure to risk at a given point in time, covering all applicable risk types. Risk control tools such as exposure limits, underwriting standards, scorecard cut-offs and policies and other operational control parameters are used to keep the Group's risk profile within risk appetite (and therefore also risk capacity). Status against risk appetite is reported to the Board Risk Committee. This includes the reporting of breaches.

The Board has approved a Risk Appetite Statement, which is underpinned by a set of financial and operational control parameters, known as risk tolerances. These risk tolerances directly constrain the aggregate risk exposures that can be taken across the Group. The number of risk tolerances has been increased in 2016 to include greater breath and greater granularity for credit, capital, market and operational risks. A strategic risk appetite statement has been introduced for the first time. The Risk Appetite Statement has been supplemented by an overarching statement outlining the Group's Risk Appetite Principles.

The Group's Risk Appetite Principles and Risk Appetite Statement, along with the key associated risk appetite metrics approved by the Board are as follows:

- Risk Appetite Principles: The Group Risk Appetite is 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 investors and ensure a fair outcome for our clients, 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, that would materially undermine the confidence of our investors and all internal and external stakeholders.
- General: the Group will not compromise adherence to its risk appetite in order to pursue revenue growth or higher returns
- Credit and country cross-border risk: the Group manages its credit and country cross-border exposures following the principle of diversification across products, regions, client segments and industry sectors. Specific metrics are set for individual and aggregate single-name credit concentrations, industry credit concentrations, portfolio tenor, specific portfolio exposure, portfolio collateralisation, retail unsecured credit risk concentrations, high risk retail unsecured credit risk concentrations, mortgage high loan-to-value concentrations and country cross-border credit risk concentrations
- Market risk: the Group should control its trading portfolio and activities to ensure that market risk losses (financial or reputational) do not cause material damage to the Group's franchise. Specific metrics are set to ensure resilience to market stress to minimise volatility to profit and loss in Financial Markets and Common Equity Tier 1 capital
- Liquidity and Funding risk: the Group should be able to meet its payment and collateral obligations under extreme but plausible liquidity stress scenarios without recourse to extraordinary central bank support. Specific metrics are set for liquidity stress survival horizons, short-term wholesale borrowing, minimum advances to deposits and liquidity coverage ratios
- Capital: The Group should maintain a strong capital position including the maintenance of management buffers sufficient to support its strategic aims. Specific metrics are set for minimum Common Equity Tier 1 capital, Tier 1 capital, Total capital and leverage ratios under business-as-usual and stress conditions
- Operational risk: 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. This statement is underpinned by metrics for each operational top risk.
- Reputational risk: the Group will protect its reputation to ensure that there is no material damage to the Group's franchise
- Pension risk: the Group will manage its pension plans such that:
  - There is no material unexpected deterioration in their funding requirements or other financial metrics
  - Members' benefits will continue in their current form although management actions such as a removal of discretionary benefits are allowable in the case of a market stress event
- Strategic risk: the Group will review its strategy on an annual basis to take account of external and internal developments and monitor execution of strategic plans to ensure their effective implementation

The Group Risk Committee, the Group Financial Crime 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) advises the Board on the Risk Appetite Statement and monitors Group compliance with it.

Stress testing

Stress testing and scenario analysis are used to assess the ability of Standard Chartered to continue operating effectively under extreme but plausible macrofinancial conditions.

Our approach to stress testing is designed to:

- Contribute to the setting and monitoring of Board-level risk appetite
- Contribute to the setting and monitoring of executive-level risk appetite and risk management more generally
- Identify key risks to our capital and liquidity positions, strategy, franchise and reputation
- Support the development of management actions and contingency plans, including business continuity, to ensure the Group can recover from extreme but plausible conditions
- Meet regulatory requirements

Stress tests are performed at Group, country, business and portfolio level. Bespoke scenarios are applied to our market and liquidity positions as described in the section on Market risk and Liquidity and funding risk. In addition to these, our stress tests also focus on the potential impact of macroeconomic, geo-political and physical events on relevant region client segments and risk types including among others credit risk which is discussed in more detail below.

Credit risk

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

Credit risk is managed through a framework that sets out policies and procedures covering the measurement and management of credit risk. There is a clear segregation of duties between transaction originators in the businesses and approvers in the Risk function other than in very few authorised cases for Retail Banking - this is discussed in the Credit approval and credit risk assessment section. All credit exposure limits are approved within a defined credit approval authority framework. The Group manages its credit exposures following the principle of diversification across products, regions, industries, collateral types and client segments.

Credit Risk Governance

The Group Risk Committee delegates the authority for the management of credit risk (among other risk types) to several committees – the Corporate & Institutional Banking Risk Committee, Private Banking Risk Committee as well as 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 businesses areas and regions. Meetings are held regularly and the committees monitor all material credit risk exposures, key internal developments and external trends, and ensure that appropriate action is taken.

Credit policies

Credit policies and standards are considered and approved by recognised second line risk committees or individuals with delegated authority. The Group Risk Committee oversees the delegation of credit approval and loan impairment provisioning authorities. The principles for the delegation, review and maintenance of credit approval authorities are defined in the Risk Authorities policy. 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.

Policies and procedures specific to each client or product segment are established by authorised individuals identified in the Risk Authorities policy. These are consistent with our Group-wide credit policies, but are more detailed and adapted to reflect the different risk characteristics across client and product segments. Policies are regularly reviewed and monitored to ensure they remain effective and consistent with the risk environment and risk appetite.

Credit rating and measurement

Risk measurement plays a central role, along with judgment and experience, in informing risk-taking and portfolio management decisions.

Since 1 January 2008, Standard Chartered has used the advanced internal ratings-based (IRB) approach under the Basel II regulatory framework to calculate credit risk capital requirements.

A standard alphanumeric credit risk grade (CG) system for Corporate & Institutional Banking and Commercial Banking is used. The numeric grades run from 1 to 14 and some of the grades are further sub-classified. Lower credit grades are indicative of a lower likelihood of default. CG 1 to 12 are assigned to performing customers or accounts, while CG 13 and 14 are assigned to non-performing or defaulted customers. An analysis by Credit Quality of those loans that are neither past due nor impaired is set out later in this document.

Retail Banking IRB portfolios use application and behaviour 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 CGs.

Advanced IRB 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 IRB risk measurement models were approved by the Credit and Market Risk Committee, on the recommendation of the Credit Model Assessment Committee. The Credit Model Assessment Committee approves all other IRB risk measurement models, with key decisions noted to the Credit and Market Risk Committee. The Credit Model Assessment Committee drew authority from the Credit and Market Risk Committee in ensuring risk identification and measurement capabilities are objective and consistent, so that risk control and risk origination decisions are properly informed. The Credit and Market Risk Commitee ceased to exist in September 2016 and the Stress Testing Committee assumed these authorities. Prior to review by the Credit Model Assessment Committee, all IRB models are validated in detail by a model validation team, which is separate from the teams that develop and maintain the models. Models undergo periodic review. Reviews are also triggered if the performance of a model deteriorates materially against predetermined thresholds during the ongoing model performance monitoring process.

Risk management approach

Credit approval and credit risk assessment

Major credit exposures to individual counterparties, groups of connected counterparties and portfolios of retail exposures are reviewed and approved by the Credit Approval Committee. The Credit Approval Committee is appointed by the Group Risk Committee.

All other credit approval authorities are delegated by the Group Risk Committee to individuals based both on their judgement and experience and a risk-adjusted scale that takes account of the estimated maximum potential loss from a given customer or portfolio. Credit origination and approval roles are segregated in all but a very few authorised cases for Retail Banking. In those very few exceptions where they are not, originators can only approve limited exposures within defined risk parameters which are subject to oversight from the credit risk function.

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 usually based on the client's credit quality and the repayment capacity from operating cash flows 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 subjected to stricter minimum requirements and require escalation to a senior credit officer or authorised body.

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 by a counterparty or a group of connected counterparties.

At the portfolio level, credit concentration thresholds are set and monitored to control concentrations, where appropriate, by country, industry, product, tenor, collateral type, collateralisation level and credit risk profile.

For concentrations that are material at a Group level, thresholds are set and monitored by the respective Risk Committees and reported to the Group Risk and Board Risk Committees.

Risk appetite levels are set by a counterparty depending on credit grade, by industry, and for the Top 20 Corporate exposures.

Credit risk mitigation

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

The Group credit policies set out the key considerations for eligibility, enforceability and effectiveness of credit risk mitigation arrangements.

Collateral types that are eligible as risk mitigants include: cash; residential, commercial and industrial property; fixed assets such as motor vehicles, aircraft, plant and machinery; marketable securities; commodities; bank guarantees; and standby letters of credit. The Group also enters into collateralised reverse repurchase agreements.

The Group has credit policies and procedures in place setting out the criteria for collateral to be recognised as a credit risk mitigant, including requirements concerning legal certainty, priority, concentration, correlation, liquidity and valuation parameters such as frequency of review and independence.

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. The valuation frequency is at minimum annual and more frequent valuations are driven by the level of price volatility of each type of collateral and the nature of the underlying product or risk exposure. For financial collateral to be eligible for recognition the collateral must be sufficiently liquid and its value over time sufficiently stable to provide appropriate certainty as to the credit protection achieved. Risk mitigation benefits may be reduced or removed where the collateral value is not supported by a recent independent valuation.

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.

Collateral values are, where appropriate, adjusted 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.

Where guarantees, credit insurance 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.

Traded products

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 and relies on various single and multi-risk factor stress test scenarios to measure, identify and risk manage counterparty credit risk across derivatives and securities financing transactions.

Risk management approach

The Group uses bilateral and multilateral netting to reduce pre settlement and settlement counterparty credit risk. Pre-settlement risk exposures are normally netted using bilateral netting documentation in legally approved jurisdictions. Settlement exposures are generally netted using Delivery versus Payments or Payment versus Payments systems. Master netting agreements are generally enforced only in the event of default. In line with International Accounting Standards (IAS) 32, derivative exposures are presented on a net basis in the financial statements only if there is a legal right to offset and there is intent to settle on a net basis or realise the assets and liabilities simultaneously.

In addition, the Group enters into credit support annexes (CSAs) with counterparties where collateral is deemed a necessary or desirable mitigant to the exposure.

Wrong way risk occurs when an exposure increase is coupled with a decrease in the credit quality of the obligor. Specifically, as the mark-to-market on a derivative contract increases in favour of the Group, the driver of this mark-to-market change also reduces the ability of the counterparty to meet its payment, margin call or collateral posting requirements. The Group employs various policies and procedures to ensure that wrong way risk exposures are recognised upfront and monitored.

Securities

The portfolio limits and parameters for the underwriting and purchase of all predefined securities assets to be held for sale are approved by the Underwriting Committee. The Underwriting Committee is established under the authority of the Corporate & Institutional Banking Risk Committee. The business operates within set limits, which include country, single issuer, holding period and credit grade limits.

Day-to-day credit risk management activities for traded securities are carried out by a specialist team within the Risk function 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 risk are controlled by the Risk function.

The Underwriting Committee approves individual proposals to underwrite new security issues for our clients. 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 the Risk function.

Credit 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 environmental, 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, portfolio and underwriting standards, risk policy and procedures.

Clients or portfolios are placed on early alert 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 plans 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), our specialist recovery unit. Typically, all Corporate & Institutional Banking, Commercial Banking and Private Banking past due accounts are managed by GSAM.

For Retail Banking exposures, portfolio delinquency trends are monitored continuously at a detailed level. Individual customer behaviour is also tracked and considered for lending decisions. Accounts that are past due or charged-off are subject to a collections or recovery process respectively, and managed independently by the Risk function. In some countries, aspects of collections and recovery activities are outsourced.

Loan impairment

A loan is impaired when we assess that we will not recover a portion of the contractual cash flows. Specific definitions of when a loan is deemed as impaired are discussed in the following sections for Retail Banking, as well as Corporate & Institutional Banking, Commercial Banking and Private Banking.

The Group's loan loss provisions are established to recognise incurred impairment losses either on specific loan assets or within a portfolio of loans and advances. Individually impaired loans are those loans against which individual impairment provisions (IIP) have been raised.

Estimating the amount and timing of future recoveries involves significant judgement, and considers the level of arrears as well as the assessment of matters such as future economic conditions and the value of collateral, for which there may not be a readily accessible market.

Loan losses that have been incurred but have not been separately identified at the balance sheet date are determined by taking into account past loss experience as a result of uncertainties arising from the economic environment, and defaults based on portfolio trends. Actual losses identified could differ significantly from the impairment provisions reported, for example, as a result of uncertainties arising from the economic environment.

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. Economic and credit conditions are interdependent within each geography and as a result there is no single factor to which the Group's loan impairment allowances as a whole are sensitive. It is possible that actual events over the next year will differ from the assumptions built into our model, resulting in material adjustments to the carrying amount of loans and advances.

Retail Banking

For Retail Banking portfolios, an account is considered impaired when it meets certain defined threshold conditions in terms of overdue payments (contractual impairment) or meets other objective conditions such as bankruptcy, debt restructuring, fraud or death. A loan is considered delinquent (or past due), when the customer has failed to make a principal or interest payment in accordance with the loan contract. These threshold conditions are defined in policy and 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.

Portfolio impairment provisions (PIP) cover the inherent losses in the portfolio that exist at the balance sheet date but have not been individually identified. Considerations applied in determining the appropriate level of portfolio provisions include historic loss experience, loss emergence periods, risk indicators such as delinquency rates, and the potential impact of existing external conditions. Some of these factors require judgemental overlays. PIPs take into account the fact that, while delinquency is an indication of impairment, not all delinquent loans (particularly those in the early stages of delinquency) will in fact be impaired. This will only become apparent with the passage of time and as we investigate the causes of delinquency on a case-by-case basis.

It is on this basis that Retail Banking accounts are considered impaired when a credit obligation is 150 days past due. There are, however, exceptions to this rule for portfolios where empirical evidence suggests that they should be set more conservatively.

The core components of the IIP calculation are the value of gross charge off and recoveries. Gross charge off and/or provisions are recognised when it is established that the account is unlikely to pay, either through past due or any other specific condition. Recovery of unsecured debt post-impairment is recognised based on actual cash collected, either directly from clients or through the sale of defaulted loans to third-party institutions. Provision release of secured loans post-impairment 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), or the loan is paid to current and remains in current for more than 180 days (release of full provision).

Corporate & Institutional, Commercial and Private Banking

Loans are classified as impaired where analysis and review indicate that full payment of either interest or principal is questionable, or as soon as payment of interest or principal is 90 days overdue. Impaired accounts are managed by our specialist recovery unit, GSAM, which is independent from our main businesses. Where any amount is considered irrecoverable, an IIP is raised. This provision is the difference between the loan-carrying amount and the present value of estimated future cash flows.

The individual circumstances of each client are taken into account when GSAM estimates future cash flows. 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, we attempt to balance economic conditions, local knowledge and experience, and the results of independent asset reviews.

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.

As with Retail Banking, a PIP is held to cover the inherent risk of losses which, although not identified, are known through experience to be present in any loan portfolio. This is set with reference to historical loss rates and subjective factors such as the economic environment and the trends in key portfolio indicators. The PIP methodology provides for accounts for which an IIP has not been raised.

Country cross-border risk (unaudited)

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

The Group Risk Committee is responsible for approving country cross-border risk limits and delegates the setting and management of limits to the Group Country Risk function. The business and country chief executive officers manage exposures within these limits. Countries designated as higher risk are subject to increased central monitoring..

Assets that generate country cross-border exposure are those where the main source of repayment or security is derived from a country other than the country in which the asset is booked. These cover a wide range of products, including loans and advances, deposits with other banks, trade and other bills, acceptances, amounts receivable under finance leases, derivatives, certificates of deposit and other negotiable paper, investment securities and formal commitments. Cross-border assets also include exposures to local residents denominated in currencies other than the local currency and local-currency assets funded by intra-group funding. Cross-border exposure also includes the value of commodity, aircraft and shipping assets owned by the Group that are held in a given country.

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 these 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. From 1 January 2016, a CVA desk has been actively hedging the credit and market exposures arising from CVA and FVA. From 1 August 2016, Credit and Funding Valuation Adjustment (XVA) risk was recognised in the total trading and non-trading VaR, and the impact of which was not material

Non-trading book: – The Asset and Liability Management (ALM) desk is required to hold a liquid assets buffer of which $84.9 billion 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. 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
- Currency exchange rate risk: arising from changes in exchange rates and implied volatilities on foreign exchange options
- Commodity price risk: arising from changes in commodity prices and implied volatilities on commodity options; covering energy, precious metals, base metals and agriculture
- Credit spread risk: arising from changes in the credit spread of its derivatives' counterparties through credit valuation adjustment CVA accounting.

Market risk governance

The Board approves the Group's risk appetite for market risk. Subject to the risk appetite set for market risk, the Group Risk Committee sets Group-level market risk limits and stress loss triggers.

The Corporate and Institutional Banking Risk Committee (CIBRC), under authority delegated by the Group Risk Committee, is esponsible for setting material value at risk (VaR) and stress loss triggers for market risk within the levels set by the Group Risk Committee. The CIBRC also delegates to the Global Head, Market & Traded Credit Risk responsibility for the policies and standards for the control of market risk and overseeing their ongoing effectiveness. These policies cover both trading and non-trading books of the Group.

The Market and Traded Credit Risk function approves all the other market risk limits within delegated authorities and monitors exposures against these limits. Additional limits are placed on specific instruments and position concentrations where appropriate. Sensitivity measures are used in addition to VaR as risk management tools. For example, interest rate sensitivity is measured in terms of exposure to a one basis point increase in yields, whereas foreign exchange, commodity and equity sensitivities are measured in terms of the underlying values or amounts involved. Option risks are controlled through revaluation limits on underlying price and volatility shifts, limits on volatility risk and other variables that determine the option's value.

VaR

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 outcome.

VaR is calculated for expected movements over a minimum of one business day and to a confidence level of 97.5 per cent. This confidence level suggests that potential daily losses, in excess of the VaR measure, are likely to be experienced six times per year.

The Group applies two VaR methodologies:

- Historical simulation: 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 VaR
- 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.

VaR is calculated as 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.

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 (RNIV) framework, which estimates these risks and applies capital add-ons.

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

Stress testing

Losses beyond the 97.5 per cent confidence interval are not captured by a VaR calculation, which therefore gives no indication of the size of losses in tail event situations.

Market and Traded Credit Risk complements the VaR measurement by weekly stress testing of market risk exposures to highlight the potential risk that may arise from extreme market events that are rare but plausible.

Stress testing is an integral part of the market 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 Market and Traded Credit Risk function reviews stress exposures 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.

Ad hoc scenarios are also prepared, reflecting specific market conditions and for particular concentrations of risk that arise within the business.

Non-trading book and Group Treasury market risk treatment

Interest rate risk from non-trading book portfolios is transferred to local Asset and Liability Management (ALM) desks. ALM deals in the market in approved financial instruments in order to manage the net interest rate risk, subject to approved VaR and risk limits. Local Asset and Liability Committees are responsible for any residual interest rate risks that cannot be managed by ALM.

VaR and stress tests are therefore applied to these ALM exposures, including available-for-sale debt securities, in the same way as for the trading book. Securities classed as Loans and Receivables or Held-to-maturity are not reflected in VaR or stress tests since they are accounted for on an amortised cost basis, so market price movements have a limited effect on either profit and loss or reserves.

Equity risk relating to non-listed private equity and strategic investments is not included within VaR. It is separately managed through delegated limits for both investment and divestment, and is also subject to regular review by an investment committee.

These are included as Level 3 assets, as disclosed in note 12 to the financial statements.

Group Treasury raises debt and equity capital and the proceeds are invested within the Group as capital or placed with ALM. Interest rate risk arises due to the investment of equity and reserves into rate-sensitive assets, as well as some tenor mismatches between debt issuance and placements. These risks were managed within an Earnings at Risk limit set by Operational Balance Sheet Committee but, in future, will be incorporated into the overall Earnings Risk framework of the Group.

Group Treasury also manages the structural foreign exchange risk that arises from non-US dollar currency net investments in branches and subsidiaries. The impact of foreign exchange movements is taken to reserves which form part of the capital base. The effect of exchange rate movements on the capital ratio is partially mitigated by the fact that both the value of these investments and the risk-weighted assets in those currencies follow broadly the same exchange rate movements. Under delegated authorities, the Group Treasurer may decide to hedge the net investments if it is expected that the capital ratio will be materially affected by exchange rate movements. Changes in the valuation of these positions are taken to reserves. Structural foreign exchange risk is not included within Group VaR.

Liquidity and funding risk

Liquidity Risk is the potential for loss because the Group, although solvent, does not have available sufficient financial resources to enable it to meet its obligations as they fall due, or can access these financial resources only at excessive cost.

Funding risk is the potential for actual or opportunity loss because the Group does not have stable or diversified sources of funding in the medium and long-term to enable it to meet its financial obligations, in pursuit of its desired business strategy or growth objectives.

We seek to manage our liquidity and funding prudently in all locations and for all currencies. Exceptional market events could impact us adversely, thereby potentially affecting our ability to fulfill our obligations as they fall due.

We have a robust risk type framework for managing the Group's liquidity and funding risk. Through this framework we control and optimise the risk-return profile of the Group. This is principally achieved by:

- Setting risk appetites aligned with strategic objectives
- Identifying, measuring and monitoring liquidity risks:
  - Assessment of regulatory requirements and internal balance sheet characteristics driving liquidity risk
  - The ILAAP (Internal Liquidity Adequacy Assessment Process), which assesses the liquidity adequacy of the Group under business as usual and stressed conditions
  - The Group's liquidity stress testing framework covering both internal and regulatory scenarios
- Constraining risk profile within the Board approved risk appetite:
  - Development of policies to address the liquidity and funding risks identified
  - Implementation of associated risk measures that act as mitigants of these risks
  - Ongoing monitoring of risk measures against limits

To mitigate liquidity and funding risk we maintain a well diversified, customer-driven funding base and access to wholesale funds under normal market conditions. In addition, we maintain a diversified portfolio of marketable securities that can be monetised or pledged as collateral in the event of a liquidity stress. The Group Recovery Plan, reviewed and approved annually, is maintained by Group Treasury and includes a broad set of Recovery Indicators, an escalation framework and a set of management actions that could be effectively implemented by senior management in the event of a liquidity stress. A similar plan is maintained within each major country.

Liquidity and funding risk governance

The Board approves the Group's Risk Appetite for liquidity and funding risk along with supporting metrics. The Group Chief Financial Officer has overall responsibility for determining the Group's approach to liquidity and funding risk management and delegates authority to the Group Treasurer.

Country oversight under the liquidity and funding framework resides with country Asset and Liability Committees, supported by local Asset and Liability Management desks. Countries must ensure they operate within predefined liquidity limits and remain in compliance with Group liquidity policies and practices, as well as local regulatory requirements.

Stress testing

The Group intends to maintain a prudent and sustainable funding and liquidity position, in all presence countries and currencies, such that it can withstand a severe yet plausible liquidity stress. This is reflected in the Risk Appetite Statement and metrics.

Regular stress testing is conducted to demonstrate that the Group's liquidity exposure remains within the approved Risk Appetite Statement as well as within regulatory limits.

The internal liquidity stress testing framework includes multiple stress scenarios with varied survival periods and stressed conditions to appropriately reflect the liquidity risks undertaken by the Group. The framework includes an idiosyncratic stress, a market-wide stress and a combined stress. The combined stress assumes both idiosyncratic and market-wide events that affect the Group simultaneously and hence is typically the most severe scenario.

The results for the combined stress takes into account convertibility and portability constraints across all major presence countries and is used to calibrate the amount of liquidity resources the Group should hold. It is monitored daily and managed by Group Treasury.

Operational risk (unaudited)

We define operational risk as the potential for loss from inadequate or failed internal processes, people and systems or from the impact of external events, including legal risks.

The management of operational risk is a challenge due to its broad scope as operational risk arises from all activities carried out within the Group. To address this challenge we map risks across the Group at a processes level with control installed to mitigate these risks. We benchmark practices against peers and regulatory requirements.

Operational risk governance

The Group Risk Committee provides oversight of operational risk management across the Group. It is supported by the Group Operational Risk Committee, and the Group Financial Crime Risk Committee , which oversee operational risk arising from the global businesses and functions. These committees receive regular reports on the Group's operational risk profile. The Group Risk Committee is also supported by the Group Information Management Governance Committee which oversees the management of the data quality framework and strategy.

The Stress Testing Committee (STC) has oversight over the appropriateness of the stress scenarios and the assumptions contained within them.

Internal organisation – Three lines of defence

To implement its operational risk management approach, the Group applies the Three Lines of defence model.

In the context of Operational Risk:

The first line of defence is responsible for identifying and managing the inherent risks in processes they own.

The second line of defence is responsible for setting and maintaining control standards for the operational risk management. The second line of defence comprises both risk control owners of each operational risk sub-type and Group policy owners.

The third line of defence is the independent assurance provided by the Group Internal Audit function.

Risk classification

Operational risk sub-types are the different ways that the Group may be operationally exposed to loss. The Group uses operational risk sub-types principally as an aid to ensure comprehensive and consistent identification of operational risks, wherever they may arise. Operational risk sub-types are listed in the table below.

OPERATIONAL RISK SUB-TYPES

External rules and regulations	Potential for actual or opportunity loss due to failure to comply with laws or regulations, or as a result of changes in laws or regulations or in their interpretation or application
Liability	Potential for loss or sanction due to a legal claim against any part of the Group or individuals within the Group
Legal enforceability	Potential for loss due to failure to legally protect the Group's interests or from difficulty in enforcing the Group's rights
Damage or loss of physical asset	Potential for loss or damage or denial of use of property or other physical assets
Safety and security	Potential for loss or damage relating to health and safety or physical security
Internal fraud or dishonesty	Potential for loss due to action by staff that is intended to defraud, or to circumvent the law or Group policy
External fraud	Potential for loss due to criminal acts by external parties such as fraud or theft of financial assets
Information security	Potential for loss due to unauthorised access, use, disclosure, disruption, modification or destruction of information
Processing failure	Potential for loss due to failure of an established process or a process design weakness
Model	Potential for loss due to a significant discrepancy between the output of credit and market risk measurement models and actual experience Potential for regulatory breach due to a significant discrepancy between the output of financial crime client risk scoring and financial crime transaction monitoring models and actual experience

Operational risk management approach

The Group defines and maintains a process universe for all client segments, products and functions.

The process universe is the complete list of end-to-end processes that collectively describe the activities of the Group and is the reference for the application of the operational risk management approach. This approach has been installed for prioritised risks across all countries.The operational risk management approach requires:

- All processes to be identified and standardised except for regulatory or legitimate system exceptions
- Inherent risks to be identified and assessed by the first line and approved by the second line
- Industrial strength controls to be designed with standards for quantity, materiality and timeliness of detection and rectification of defects
- Residual risk to be assessed by first line and approved by second line
- Monitoring of risks and controls
- Prompt execution of risk treatment actions

Stress testing

As part of the operational risk management approach, the Group conducts stress testing by scenario analysis.

In 2016, we participated in the Bank of England stress test and the annual Internal Capital Adequacy Assessment Process. The exercises included judgemental overlays for the potential risk of low-frequency, high-severity events occurring during stress conditions.

In addition to the above, we review concentration of risks across the Group's processes and prioritises low-frequency high-severity scenarios to assess the potential impact that may exceed the Group's risk appetite. During 2016, the scenario analysis programme conducted 13 scenarios. These scenarios included anti-money laundering, sanctions, information and cyber security and change management.

Conduct of business, or conduct, is a term that is used in a broad number of ways across the financial services industry. At its broadest, good conduct is the appropriate execution of business, by the Group or any individual acting on its behalf, in accordance with our strategic intent, risk management principles and risk appetite. More narrowly, it refers to specific regulations designed to achieve fair outcomes for customers and the effective operation of markets.

Good conduct is evidenced through disciplined adherence to our overall systems and controls outlined in the Risk Management Framework and the standards of individual behaviour set out in the Code of Conduct (the 'Code').

Specifically for operational risk:

- External rules and regulations classifications defined in the Operational Risk Framework include specific categories of regulation designed to achieve fair outcomes for clients (client conduct) and the effective operation of markets (market conduct). This ensures that each category of regulation is properly classified and aligned to the Group's systems and control structures. Risk control owners and Group policy owners are responsible for defining the Group's minimum standards and controls in respect of each category.
- Conduct is considered in the Group's top operational risks. The Group aims to prevent the risks of failure to deliver the conduct of business standards expected by the Group's clients, investors and markets in which we operate. Many of the top risks can be driven by poor conduct so the Group is focused on its control standards around these risks.

Risk management approach

Reputational risk (unaudited)

Reputational risk is the potential for damage to the Group's franchise, resulting in loss of earnings or adverse impact on market capitalisation as a result of stakeholders taking a negative view of the Group or its actions. Failures in behaviours or systems may affect stakeholders' perceptions of the Group's commitment to its Here for good brand promise. Reputational risk could arise from the failure of the Group to effectively mitigate the risks in its businesses, including one or more of country, credit, liquidity, market, regulatory, legal, strategic or other operational risk. Damage to the Group's reputation could cause existing clients to reduce or cease to do business with the Group and prospective clients to be reluctant to do business with the Group. All employees are responsible for day-to-day identification and management of reputational risk. These responsibilities form part of the Code and are further embedded through values-based performance assessments. Risk control owners must identify material reputational risks arising from any business activity or transaction that they control and ensure that these are escalated and controlled in accordance with the Group's Reputational Risk Policy and applicable procedures.

Our reputational risk framework covers two areas. Reputational risk management refers to proactively avoiding or mitigating the potential damage that might result from a future reputational risk event (ex ante). Reputational issues management and crisis communication refers to measures to limit damage from a reputational risk event that has already occurred (ex post).

Reputational risk may also arise from a failure to comply with environmental and social standards in our relationship with clients and in our financing decisions. Environmental risk is the potential for material harm or degradation to the natural environment, while social risk is the potential to cause material harm to individuals or communities. Environmental and social risks associated with clients are a key area of risk for the Group and we have continued to develop and enhance our approach to managing such risks since 1997.

Reflecting the differing regulatory and legislative frameworks applicable to clients in the Group's markets, we have global sector-specific environmental and social (E&S) standards as set out in our 17 sectoral and three thematic position statements. We apply these in the provision of financial services to clients who operate in sectors presenting specific risks, and for key issues. These are underpinned by the Equator Principles and the IFC Performance Standards.

The Board recognises its responsibility to manage these risks and that failure to manage them adequately would have an adverse impact on our business, and is responsible for ensuring that high standards of responsible business are maintained and that an effective control framework is in place.

The Board receives regular information to identify and assess significant risks and opportunities arising from environmental and social matters. These issues are overseen by the Brand, Values and Conduct Committee. The Committee reviews sustainability priorities, and oversees the development of, and delivery against, public commitments regarding the activities and/or businesses that the Group will or will not accept in alignment with our Here for good brand promise.

We take our position statement commitments seriously. To ensure we deliver our commitments, we embed these requirements through our core banking processes. We have mechanisms in our origination and credit processes to identify and assess environmental and social risks in accordance with our standards. We have a dedicated Environmental and Social Risk Management (ESRM) team that reviews clients and proposed transactions that present specific risks.

The Group recognises that stakeholder expectations of our environmental and social risk management will change over time. As such we seek to explain our approach and standards via our position statements, and to ensure they remain appropriate through active monitoring. In 2016 we have updated our Climate Change and Energy Position Statements to reflect changing expectations on our role in energy financing and in managing climate risk. We also created a Human Rights Position Statement, consolidating our previous policies and disclosures.

In 2016, our ESRM team reviewed over 320 client relationships and transactions across a range of Position Statement sectors. We believe in working collaboratively to achieve sustainability goals. This includes working with clients, other financial institutions and industry bodies to promote, develop and encourage leading E&S standards. For all risks identified, we seek to develop effective mitigating measures. Where this is not possible, transactions have been and will continue to be turned down. In 2016, we trained more than 110 staff on our requirements and processes.

The Group reports on its environmental and social performance through the Group's Annual Report and Accounts and through the sustainability section of the Group's website.

The Group Risk Committee provides Group-wide oversight on reputational risk, sets policy and monitors material risks. The Brand, Values and Conduct and Board Risk Committees provide additional oversight of reputational risk on behalf of the Board. At the business level, the Business Responsibility and Reputational Risk Committee has responsibility for managing reputational risk.

In 2017 a review of risk control ownership and governance of reputational risk will take place

Pension risk (unaudited)

Pension risk is the potential for loss due to having to meet an actuarially assessed shortfall in the Group's pension schemes. Standard Chartered offers defined contribution pension plans for new hires in most locations, and only maintains defined benefit plans where required by law, contract or for closed groups of long-serving employees. The Group monitors and manages both the pension financial risks stemming from its legacy defined benefit schemes and the operational and reputational risks of all its pension arrangements. In doing this the Group has primary regard to its capital position, and the relative costs and benefits of reducing or removing its risk exposure.

The Group's primary pension risk measures are updates, at least quarterly, of the accounting balance sheet position, the 1-in-200 year stress test required annually by the PRA, and the funding position of the UK Fund (over 60 per cent of the Group's pension liabilities). The Group mitigates pension risk via a Group Pension Risk Policy which requires all new plans to be defined contribution where possible, and mandates standards around investments, benefit changes, funding, documentation, actuarial valuations, accounts and auditing.

Adherence to these standards is assured by an annual governance review.

The Pension Risk Control Owner is responsible for the governance of pension risk and reports to the Group Risk Committee every six months on pension risk matters.

Strategic risk (unaudited)

Strategic Risk is defined as a possible source of loss (or lost opportunity) that might arise from the pursuit of an unsuccessful business plan. Strategic risk is as much about missing out on potential upside opportunities as managing downside risks. Strategic Risks also materialise through other risk types.

As the ultimate governance body for the Group, the Board challenges the Group's strategy and highlights potential underlying risks. The Group Chief Financial Officer is responsible for formulation of the Group Strategy consistent with the risk appetite and financial objectives agreed by the Board from time to time. He is also responsible for ensuring any strategic analysis presented to the Group Chief Executive, the Board of Standard Chartered PLC or other governing bodies is sound and comprehensive. Responsibility for strategy development formally rests with the business heads, but the Group Head of Strategy is the risk control owner for all strategic risks.

Risk profile

Our risk profile in 2016

We have a well-established risk governance structure and we closely manage our risks to maintain the Group's risk profile in compliance with the Risk Appetite Statement. Market conditions continued to be challenging in 2016 and the economic outlook remains uncertain. We manage these uncertainties through a framework that provides a forward-looking 12 to 18 month view of the economic, business and credit conditions across the Group's key markets enabling us to proactively manage our portfolio.

We continue to take action to reposition the Group's corporate portfolio, exiting weaker credit or lower return clients and adding new clients selective. The Group's portfolio is now more diversified across dimensions such as industry sectors, geographies and single names.

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

1

Robust risk governance structure and experienced senior team

- We have a robust Risk Management Framework that assigns accountability and responsibility for the management and control of risk
- We have a clear Risk Appetite Statement which is aligned to the Group's strategy; it is approved by the Board and informs the more granular risk parameters within which our businesses operate with a particular focus on reducing concentrations
- We have a very experienced senior risk team and our risk committees are staffed by the Group's most senior leaders
- We continuously monitor our risk profile to ensure it remains within our risk appetite, regularly conduct stress tests and adjust our exposures, underwriting standards and limits

2

Increasingly diversified short tenor portfolio with reducing concentrations

- Our balance sheet remains resilient and increasingly well-diversified across a wide range of regions, client segments, industries and products which serve to mitigate risk
- Within the Corporate & Institutional Banking and Commercial Banking portfolio:
  - Loans and advances to the financing, insurance and non-banking industry are 27 per cent of the total customer portfolio, mostly to investment grade institutions. All other industry concentrations are below 14 per cent of the total customer portfolio
  - The loan portfolio remains predominantly short-dated, with 70 per cent of loans and advances to customers maturing in under one year
  - Our top 20 corporate exposures have reduced to 55 percent of Tier 1 capital, from 61 percent as at December 2015
  - Over 47 per cent of customer loans and advances is investment grade and this mix is improving
  - We hold a diverse mix of collateral, valued conservatively. Over half of our sub-investment grade corporate portfolio is collateralised. 55 per cent of long-term sub investment grade is collateralised
- More than 41 per cent of customer loans and advances are in retail products. The overall loan-to-value ratio on our mortgage portfolio is less than 50 per cent
- We have low exposure to asset classes outside our core markets

3

Strong capital and liquidity position

- We remain well capitalised and our balance sheet remains highly liquid
- We have a strong advances-to-deposits ratio, and remain a net provider of liquidity to interbank markets
- Our customer deposit base is diversified by type and maturity
- We have a substantial portfolio of liquid assets that can be realised if a liquidity stress occurs

Risk profile

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.

Credit risk

The following pages provide details of credit exposure, split as follows:

- Overall exposure to credit risk, for on-balance sheet and off-balance sheet financial instruments, before and after taking into account credit risk mitigation
- Credit quality, which provides an analysis of the loan portfolio by client segment categorised by Strong, Satisfactory and Higher risk,forborne loans and credit quality by region
- Credit quality by region
- Problem credit management and provisioning, which provides an analysis of non-performing loans and impaired loans
- Credit risk mitigation, which provides an analysis of collateral held by client segment and collateral type, and details of loan-to-value ratios and other forms of credit risk mitigation
- Other portfolio analysis, which provides Maturity analysis by client segment, and industry and retail products analysis by region
- Selected portfolios, which provide further detail on commodities and commodities related exposures, debt securities and treasury bills and asset-backed securities

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

A summary of our current policies and practices regarding credit risk management is provided in the Risk management approach.

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 2016, before and after taking into account any collateral held or other credit risk mitigation. For on-balance sheet instruments, the maximum exposure to credit risk is the carrying amount reported on the balance sheet. For off-balance sheet instruments, the maximum exposure to credit risk generally represents the contractual notional amounts.

The Group's maximum exposure to credit risk is spread across its markets and is affected by the general economic conditions in the regions in which it operates. The Group sets limits on the exposure to any counterparty, and credit risk is spread over a variety of different personal, commercial and institutional customers.

The Group's gross maximum exposure to credit risk has decreased by $15 million when compared to 2015, mainly driven by the reduction in off-balance sheet exposure, offset by the increase in on-balance sheet exposure. Cash and balances at central banks have increased by $5.4 billion reflecting higher surplus liquidity in Europe and the Americas. Loans and advances to customers and banks have increased by $2.4 billion, with loans to customers down $5.5 billion mainly due to risk-mitigating actions to reduce exposures in some markets and sectors and exposure to banks, up $7.9 billion from short-term reverse repurchase transaction backed up by high quality bonds. Off-balance sheet exposures, mainly arising from trade finance, decreased by $6.2 billion, reflecting the slowdown in key markets in our footprint.

Investment securities decreased by $5.9 billion as we reduced holdings of UK Government Bonds and other debt securities. The Group's credit risk exposure before risk mitigation arising from derivatives increased by $2.4 billion.

Maximum exposure to credit risk

	2016				2015			
		Credit risk management				Credit risk management		
	Maximum exposure	Collateral	Master netting agreement	Net exposure	Maximum exposure	Collateral	Master netting agreements	Net exposure
	$million	$million	$million	$million	$million	$million	$million	$million
On-balance sheet								
Cash and balances at central banks	70,706	-	-	70,706	65,312	-	-	65,312
Loans and advances to customers held at:[1]								
Fair value through profit or loss	3,177				4,047			
Amortised cost	252,719				257,356			
	255,896				261,403			
Loans and advances to banks held at:[1]								
Fair value through profit or loss	2,060				2,275			
Amortised cost	72,609				64,494			
	74,669				66,769			
Total loans and advances to banks and customers	330,565	151,310	-	179,255	328,172	145,311[7]	-	182,861
Investment securities[2]								
As per balance sheet	108,972	-	-	108,972	114,767	-	-	114,767
Held at fair value through profit or loss	14,840	-	-	14,840	17,079	-	-	17,079
Less: Equity securities	(2,564)	-	-	(2,564)	(4,655)	-	-	(4,655)
	121,248	-	-	121,248	127,191	-	-	127,191
Derivative financial instruments[3]	65,509	9,624	40,391	15,494	63,143	10,074	38,934	14,135
Accrued income[4]	1,639			1,639	1,924			1,924
Assets held for sale	1,102			1,102	340			340
Other assets [5]	33,942			33,942	32,408			32,408
Total balance sheet	624,711	160,934	40,391	423,386	618,490	155,385	38,934	424,171
Off-balance sheet								
Contingent liabilities	37,390	-	-	37,390	39,055	-	-	39,055
Undrawn irrevocable standby facilities, credit lines and other commitments to lend[6]	55,655	-	-	55,655	59,431	-	-	59,431
Documentary credits and short-term trade-related transactions	4,120	-	-	4,120	4,852	-	-	4,852
Forward asset purchases and forward deposits	6	-	-	6	69[8]	-	-	69
Total off- balance sheet	97,171	-	-	97,171	103,407	-	-	103,407
Total	721,882	160,934	40,391	520,557	721,897	155,385	38,934	527,578

1. An analysis of credit quality and further details of collateral held by client segment and held for past due and individually impaired loans is set out later in the Risk and Capital section
2. Equity shares are excluded as they are not subject to credit risk
3. The Group enters into master netting agreements, which in the event of default results 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
4. Accrued income is now included in the table to more accurately reflect the maximum exposure to credit risk
5. The composition of other assets has been amended to more accurately reflect the maximum exposure to credit risk. Other assets now also include HK certificate of indebtedness, cash collateral, acceptances in addition to unsettled trades and other financial assets
6. Excludes unconditionally cancellable facilities
7. Collateral balance has been restated.
8. Forward asset purchases and forward deposits have been restated.

Credit quality analysis

An overall breakdown of the loan portfolio by client segment is set out on later in this section, differentiating between the performing and non-performing book.

Within the performing book, there is an analysis:

- By credit quality, which plays a central role in the quality assessment and monitoring of risk
- Of loans and advances past due but not impaired: a loan is considered past due if payment of principal or interest has not been made on its contractual due date
- Of loans and advances where an impairment provision has been raised: these represent certain forborne accounts that have complied with their revised contractual terms for more than 180 days and on which no further loss of principal is expected

Further analysis of credit quality by geography, together with the related impairment charges and provisions, is set out later in this section

Credit grade migration

Performing loans constitute 98 per cent of customer loans, a increase of 1 per cent from 2015.

All loans are assigned a Credit Grade (CG), which is reviewed periodically and amended in light of changes in the borrower's circumstances or behaviour. CG 1 to 12 are assigned to performing clients or accounts, while CG 13 and 14 are assigned to non-performing or defaulted clients.

A breakdown of the performing loans by credit quality is provided later in this section. The Group uses an internal risk mapping to determine the credit quality for loans, as shown in the table below.

Mapping of credit quality[1]

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

1. The credit quality categories for performing loans were changed to align them to how the business is managed in Retail Banking and Private Banking. The categories for Corporate & Institutional Banking and Commercial Banking were aligned to external ratings categories

Overall, the credit quality of the Corporate & Institutional Banking and Commercial Banking loan book has improved when compared to 2015. The strong credit grading category has increased by $6.8 billion due to higher levels of reverse repurchase activity with financing, insurance and non-banking clients. The satisfactory credit quality grading category has decreased by $4.1 billion due to actions taken to reduce single name concentration and commodities exposure. Excluding the above two items, the credit quality composition across most sectors and countries is consistent with the prior year, although there has been some deterioration in the commodities-related sector due to sustained commodity price volatility. This deterioration resulted in a small increase in the higher risk credit quality category of $0.3 billion.

The credit quality composition for loans to banks is also consistent with prior periods, with the majority of the growth in this period being in the strong category.

Retail Banking credit quality remained stable over the past year.

Performing loans and advances that are past due but not impaired decreased slightly in 2016, with improvement in 61-90 days past dues. The past due balances arise substantially in the 'up to 30 days past due' category. In the Corporate & Institutional Banking and Commercial Banking segments, across all past due categories, approximately 73 per cent of the amounts past due were regularised by 31 January 2017.

Non-performing loans (NPLs)

A NPL is any loan that is more than 90 days past due or is otherwise individually impaired. This excludes loans renegotiated at or after 90 days past due, but on which there has been no default in interest or principal payments for more than 180 days since renegotiation, and against which no loss of principal is expected.

NPLs are analysed, net of individual impairment provisions, between what is past due but not impaired and what is impaired.

NPLs (net of individual impairment provisions) are $2.7bn lower than 2015. This is driven primarily by the liquidation portfolio in the Corporate & Institutional Banking segment.

Gross NPLs increased in the ongoing business mainly due to a small number of exposures in the commodities-related sector and diamond and jewellery sector in the Corporate & Institutional Banking book. Gross NPLs in the ongoing business for the second half of 2016 was lower compared to the first half of 2016.

Individual impairment provisions

In Corporate & Institutional Banking, individual impairment provisions on the balance sheet for NPLs has decreased by $269 million (6 per cent) compared to 31 December 2015. This was mainly driven by lower provisions in the liquidation portfolio. Individual impairment provisions in the ongoing business increased by $825 million. Commercial Banking individual impairment provisions on the balance sheet for NPLs remained flat compared to 31 December 2015.

Retail Banking individual impairment provision balance improved by $70 million to 2015, primarily driven by improvements in Korea Personal Debt Rehabilitation Scheme (PDRS) related losses and sales of portfolios in Thailand and the sale of portfolios in Thailand and the Philippines. We remain disciplined in our approach to risk management and proactive in our collection efforts to minimise account delinquencies.

Portfolio impairment provisions

Portfolio impairment provisions are held to cover the inherent risk of losses, which, although not identified, are known through experience to be present in any loan portfolio. Portfolio impairment provision balances have increased 4.6 per cent from 2015. There was an increase of $106 million in the Corporate & Institutional Banking segment due to an adjustment for uncertainties arising from the same sectors as those driving loan impairment. The increase in Corporate & Institutional Banking portfolio impairment provision was partially offset by a decrease of $58 million in the Retail Banking segment and $19 million in the Commercial Banking segment due to improvement in credit quality.

By client segment

	2016						
		Loans to customers					
	Loans to banks	Corporate & Institutional Banking	Retail Banking	Commercial Banking	Private Banking	Central & other items	Total
	$million	$million	$million	$million	$million	$million	$million
Performing loans							
- Strong	66,954	63,547	91,186	4,851	7,816	4,023	171,423
- Satisfactory	7,682	55,207	1,560	18,296	3,767	233	79,063
- Higher risk	34	1,223	410	264	38	-	1,935
	74,670	119,977	93,156	23,411	11,621	4,256	252,421
Impaired forborne loans, net of provisions	-	-	251	-	-	-	251
Non-performing loans	-	2,515	339	768	289	-	3,911
Total loans	74,670	122,492	93,746	24,179	11,910	4,256	256,583
Portfolio impairment provision	(1)	(261)	(258)	(166)	(2)	-	(687)
Total net loans and advances	74,669	122,231	93,488	24,013	11,908	4,256	255,896

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

	Loans to banks	Corporate & Institutional Banking	Retail Banking	Commercial Banking	Private Banking	Central & other items	Total
Included in performing loans							
Neither past due nor impaired							
- Strong	66,600	63,416	91,186	4,812	7,816	4,023	171,253
- Satisfactory	7,580	53,791	-	17,728	3,690	233	75,442
- Higher risk	34	1,121	-	188	18	-	1,327
	74,214	118,328	91,186	22,728	11,524	4,256	248,022
Past due but not impaired							
- Up to 30 days past due	456	1,402	1,560	539	91	-	3,592
- 31 - 60 days past due	-	100	282	111	-	-	493
- 61 - 90 days past due	-	147	128	33	6	-	314
	456	1,649	1,970	683	97	-	4,399
Total performing loans	74,670	119,977	93,156	23,411	11,621	4,256	252,421
of which, forborne loans amounting to	*1*	*964*	*224*	*111*	*-*	*-*	*1,299*
Included in non-performing loans							
Past due but not impaired							
- 91 - 120 days past due	-	-	72	5	-	-	77
-121 - 150 days past due	-	-	60	12	-	-	72
	-	-	132	17	-	-	149
Individually impaired loans, net of provisions	-	2,515	207	751	289	-	3,762
Total non-performing loans	-	2,515	339	768	289	-	3,911
of the above, forborne loans	*-*	*889*	*135*	*200*	*-*	*-*	*1,224*

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

	Loans to banks	Corporate & Institutional Banking	Retail Banking	Commercial Banking	Private Banking	Central & other items	Total
Neither past due nor impaired							
- Strong	1,659	1,769	-	-	-	-	1,769
- Satisfactory	401	1,346	-	47	-	-	1,393
- Higher risk	-	-	-	-	-	-	-
	2,060	3,115	-	47	-	-	3,162
Past due but not impaired							
- Up to 30 days past due	-	-	-	-	-	-	-
- 31 - 60 days past due	-	-	-	-	-	-	-
- 61 - 90 days past due	-	-	-	-	-	-	-
	-	-	-	-	-	-	-
Individually impaired loans	-	15	-	-	-	-	15
Total loans held at fair value through profit and loss	2,060	3,130	-	47	-	-	3,177

Standard Chartered PLC – Risk review
Risk profile

	2015						
		Loans to customers[1]					
	Loans to banks	Corporate and Institutional Banking	Retail Banking	Commercial Banking	Private Banking	Central & other items	Total
	$million	$million	$million	$million	$million	$million	$million
Performing loans							
Neither past due nor impaired							
- Strong	60,502	57,297	92,117	4,335	10,010	5,547	169,306
- Satisfactory	6,183	58,694	1,701	18,910	4,965	-	84,270
- Higher risk	44	830	487	337	-	-	1,654
	66,729	116,821	94,305	23,582	14,975	5,547	255,230
Impaired forborne loans, net of provisions	-	-	240	-	-	-	240
Non-performing Loans	41	4,857	468	943	322	-	6,590
Total loans	66,770	121,678	95,013	24,525	15,297	5,547	262,060
Portfolio impairment provision	(1)	(155)	(316)	(185)	(1)	-	(657)
Total net loans	66,769	121,523	94,697	24,340	15,296	5,547	261,403

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

Included in performing loans							
Neither past due nor impaired							
- Strong	60,197	55,562	92,117	3,773	9,958	5,547	166,957
- Satisfactory	6,183	58,929	-	19,024	4,965	-	82,918
- Higher risk	44	595	-	223	-	-	818
	66,424	115,08	92,117	23,020	14,923	5,547	250,693
Past due but not impaired							
- Up to 30 days past due	177	1,237	1,701	453	52	-	3,443
- 31 - 60 days past due	2	89	335	60	-	-	484
- 61 - 90 days past due	126	409	152	49	-	-	610
	305	1,735	2,188	562	52	-	4,537
Total performing loans	66,729	116,82	94,305	23,582	14,975	5,547	255,230
of which, forborne loans amounting to	*1*	*1,038*	*194*	*110*	-	-	*1,342*
Included in non-performing loans							
Past due but not impaired							
- 91 - 120 days past due	-	-	149	9	-	-	158
-121 - 150 days past due	-	-	65	4	-	-	69
	-	-	214	13	-	-	227
Individually impaired loans, net of provisions	41	4,857	254	930	322	-	6,363
Total non-performing loans	41	4,857	468	943	322	-	6,590
Of which, forborne loans amounting to	*1*	*2,868*	*214*	*211*	-	-	*3,293*

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

Neither past due nor impaired							
- Strong	2,275	3,707	-	5	-	-	3,712
- Satisfactory	-	103	-	-	-	-	103
- Higher risk	-	-	-	-	-	-	-
	2,275	3,810	-	5	-	-	3,815
Past due but not impaired							
- Up to 30 days past due	-	-	-	-	-	-	-
- 31 - 60 days past due	-	-	-	-	-	-	-
- 61 - 90 days past due	-	98	-	-	-	-	98
	-	98	-	-	-	-	98
Individually impaired loans	-	134	-	-	-	-	134
Total loans held at fair value through profit and loss	2,275	4,042	-	5	-	-	4,047

1. The 2015 comparatives have been represented to reflect the reorganisation of the Group's client segments.

Risk profile

Forborne loans

The table below shows an analysis of forborne loans by region. The 43 per cent reduction in total forborne loans in 2016 was due to the settlement of a large exposure in the liquidation portfolio.

	2016				
	Greater China & North Asia $million	ASEAN &South Asia $million	Africa & MENAP $million	Europe & Americas $million	Total $million
Not impaired	**159**	**242**	**790**	**109**	**1,300**
Impaired	**327**	**726**	**284**	**138**	**1,475**
Total forborne loans	**486**	**968**	**1,074**	**247**	**2,775**

	2015[1]				
	Greater China & North Asia $million	ASEAN &South Asia $million	Africa & MENAP $million	Europe & Americas $million	Total $million
Not impaired	304	350	632	57	1,343
Impaired	334	1,325	384	1,491	3,534
Total forborne loans	638	1,675	1,016	1,548	4,877

1. The 2015 comparatives have been represented to reflect the management view. Previously numbers were presented on a financial view. Refer to note 2 for details.

Risk profile

Credit quality by region

Loans and advances to customers

The following tables set out an analysis of the loans to customers and banks between those loans that are neither past due nor impaired, those that are past due but not impaired, those that are impaired, the impairment provision and net impairment charge by geographic region.

	2016								
	Balance sheet[1]						Profit and loss[1]		
	Neither past due nor individually impaired $million	Past due but not individually impaired $million	Individually impaired $million	Individual impairment provision $million	Portfolio impairment provision $million	Total $million	Net individual impairment provision $million	Portfolio impairment provision/ (release) $million	Net loan impairment charge $million
Greater China & North Asia	109,250	901	1,115	(535)	(198)	110,533	484	(53)	431
ASEAN & South Asia	69,652	1,648	4,665	(2,568)	(236)	73,161	984	6	990
Africa & Middle East	25,846	1,720	2,682	(1,981)	(127)	28,140	594	7	601
Europe & Americas	43,274	279	1,218	(583)	(126)	44,062	491	92	583
	248,022	4,548	9,680	(5,667)	(687)	255,896	2,553	52	2,605

	2015								
	Balance sheet[1, 2]						Profit and loss[1]		
	Neither past due nor individually impaired $million	Past due but not individually impaired $million	Individually impaired $million	Individual impairment provision $million	Portfolio impairment provision $million	Total $million	Net individual impairment provision $million	Portfolio impairment provision/ (release) $million	Net loan impairment charge[2] $million
Greater China & North Asia	104,800	912	1,489	(787)	(253)	106,161	847	89	936
ASEAN & South Asia	81,365	2,195	5,537	(2,509)	(245)	86,343	2,143	57	2,200
Africa & Middle East	28,486	1,462	3,021	(1,771)	(128)	31,070	908	(11)	897
Europe & Americas	36,042	195	2,579	(956)	(31)	37,829	832	(138)	694
	250,693	4,764	12,626	(6,023)	(657)	261,403	4,730	(3)	4,727

1. Excludes impairment charges relating to debt securities classified as loans and receivables
2. The 2015 comparatives have been represented to reflect the management view. Previously numbers were presented on a financial view.
3. The movement in portfolio impairment provision includes net impairment charges or releases against profit, transfers to assets held for sale and exchange translation differences

Loans and advances to banks

	2016								
	Balance sheet[1]						Profit and loss		
	Neither past due nor individually impaired	Past due but not individually impaired	Individually impaired	Individual impairment provision	Portfolio impairment provision	Total	Net individual impairment provision	Portfolio impairment provision/ (release)	Net loan impairment charge
	$million	$million	$million	$million	$million	$million	$million	$million	$million
Greater China & North Asia	**31,930**	**309**	**-**	**-**	**-**	**32,239**	**-**	**-**	**-**
ASEAN & South Asia	**14,722**	**17**	**163**	**(163)**	**(1)**	**14,738**	**-**	**-**	**-**
Africa & Middle East	**7,492**	**61**	**-**	**-**	**-**	**7,553**	**-**	**-**	**-**
Europe & Americas	**20,070**	**69**	**-**	**-**	**-**	**20,139**	**-**	**-**	**-**
	74,214	**456**	**163**	**(163)**	**(1)**	**74,669**	**-**	**-**	**-**

	2015								
	Balance sheet[1, 2]						Profit and loss		
	Neither past due nor individually impaired	Past due but not individually impaired	Individually impaired	Individual impairment provision	Portfolio impairment provision	Total	Net individual impairment provision	Portfolio impairment provision/ (release)	Net loan impairment charge
	$million	$million	$million	$million	$million	$million	$million	$million	$million
Greater China & North Asia	29,151	1	-	-	-	29,152	-	-	-
ASEAN & South Asia	9,438	21	160	(160)	(1)	9,458	82	(1)	81
Africa & Middle East	6,827	98	1	-	-	6,926	-	-	-
Europe & Americas	21,008	185	43	(3)	-	21,233	8	-	8
	66,424	305	204	(163)	(1)	66,769	90	(1)	89

1. Excludes impairment charges relating to debt securities classified as loans and receivables
2. The 2015 comparatives have been represented to reflect the Management view. Previously numbers were presented on a financial view

Problem credit management and provisioning

Impairments

At Group level, total loan impairment including the liquidation portfolio was $2,791 million representing 107 basis points (bps) of average customer loans and advances, down from $4,976 million in 2015. Loan impairment for the ongoing business remained largely flat at $2,382 million compared to $2,381 million in 2015.

By client segment, Retail Banking loan impairment has continued to improve and fell 28 per cent to $489 million (2015: $677 million) representing 51 bps of loss. Improvement in loan impairment in 2016 is an outcome of improving portfolio performance in markets such as Korea, Hong Kong, Thailand, Singapore and a modest improvement in other markets.

Commercial Banking ongoing business loan impairment, though remaining elevated, fell by 50 per cent to $491 million in 2016 (2015: $980 million). This was across all regions as a result of improved credit and account management, but we remain vigilant for emerging risks.

The ongoing business loan impairment charge in Corporate & Institutional Banking increased to $1,401 million when compared to $723 million in 2015. Loan impairment of $795 million in the second half of 2016 is higher than previous half years (H1 2016: $606 million; H2 2015: $525 million) due to impairment related to the diamond and jewellery sector. Geographically, Europe and Americas contributed to 36 per cent of the 2016 loan impairment.

The ongoing business cover ratio for Corporate & Institutional Banking has increased to 62 per cent (2015: 47 per cent) and for Commercial Banking increased to 75 per cent (2015: 70 per cent). The ongoing business cover ratio for the Group has increased to 69 per cent (2015: 62 per cent)

By industry sector, loan impairment related to commodities sector in the Corporate & Institutional Banking ongoing business was $435 million, an increase of 8 per cent from 2015 (2015: $401 million) albeit lower in the second half of 2016 than in the first half. This constitutes 31 per cent of the ongoing Corporate & Institutional Banking ongoing business impairment charge and mainly relates to exposures in India.

The commodities sector loan impairment in the ongoing Commercial Banking on going business was $101 million, down 41 per cent from 2015 (2015: $171 million) and constituted 21 per cent of the Commercial Banking impairment charge.

In India, loan impairment for the Corporate & Institutional Banking ongoing business increased to $284 million in 2016 (2015: $188 million). The increase was primarily driven by a small number of exposures in the commodities sector. Loan impairment in the India Commercial Banking ongoing business decreased by 57 per cent to $103 million (2015: $239 million).

In 2015 the liquidation portfolio had been marked down to an estimate of its realisable value resulting in an impairment of $2.6bn. Additional impairment of $409 million was recognised in 2016 on the resolution of cases and on a clearer view of realisable value.

Other impairment (including restructuring charges and goodwill impairment) was $612 million (2015: $855million). Excluding goodwill impairment, other impairment was $446 million, an increase of $79 million mainly due to the decline in value of Principal Finance.

In 2016 the Group disclosed its decision to reduce balance sheet exposure to Principal Finance by streamlining the business over time and managing its third party portfolio to maximise value for shareholders and third-party investors. As a non-strategic business, the Group will exit Principal Finance and future gains and losses will be treated as restructuring and excluded from the underlying results of the Group.

The following table provides details of the impairment charge for the year.

	2016 $million	2015 $million
Ongoing business portfolio loan impairment		
Corporate & Institutional Banking	**1,401**	723
Retail Banking	**489**	677
Commercial Banking	**491**	980
Private Banking	**1**	1
Impairment on loans and advances and other credit risk provisions	**2,382**	2,381
Liquidation portfolio loan impairment		
Corporate & Institutional Banking	**335**	2,321
Commercial Banking	**10**	181
Private Banking	**64**	93
Impairment on loans and advances and other credit risk provisions	**409**	2,595
Total loan impairment	**2,791**	4,976
Other impairment	**612**	855
Total impairment	**3,403**	5,831

[1] Includes charges relating to restructuring actions for other impairments

Non-performing loans by client segment

Gross NPLs decreased by $3.1 billion, or 24 per cent, compared to 2015. These decreases were primarily driven by a reduction in the liquidation portfolio through the disposal of loans and write-offs. Gross NPLs in the ongoing business were up by $633 million on account of a small number of exposures in the commodities-related sectors (oil and gas offshore support) and in the diamond and jewellery sector.

Compared to 2015, amounts written off relating to Corporate & Institutional Banking increased due to a small number of large write-offs from the liquidation portfolio.

Commercial Banking amounts written off increased compared to 2015, primarily in Greater China as a result of the partial write-off of a large exposure in the liquidation portfolio and a number of small write-offs from the ongoing business.

The table below presents a movement of the gross NPLs to banks and customers, together with the provisions held and the respective cover ratios for all segments.

Cover ratio

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

The cover ratio before collateral for Retail Banking improved to 85 per cent (2015: 80 per cent) due to the sales of portfolios in Thailand and the Philippines.

The cover ratio before collateral for Corporate & Institutional Banking increased to 65 per cent compared to 48 per cent in 2015. The Commercial Banking cover ratio before collateral also increased to 75 per cent from 70 per cent in 2015.

The balance of NPLs not covered by individual impairment provisions represents the adjusted value of collateral held and the Group’s estimate of the net outcome of any workout or recovery strategy.

Collateral provides risk mitigation to some degree in all client segments and supports the credit quality and cover ratio assessments post impairment provisions.

	2016				
	Corporate & Institutional Banking $million	Retail Banking $million	Commercial Banking $million	Private Banking $million	Total $million
Gross non-performing loans at 1 January	9,128	747	2,559	325	12,759
Exchange translation differences	(68)	(12)	(59)	(2)	(141)
Classified as non-performing during the year	1,800	864	642	103	3,409
Recoveries on loans and advances previously written off	13	63	51	-	127
Additions	1,813	927	693	103	3,536
Transferred to assets held for sale	-	(47)	-	-	(47)
Transferred to performing during the year	(39)	(147)	(5)	-	(191)
Net repayments	(2,416)	(180)	(300)	-	(2,896)
Amounts written off	(1,390)	(722)	(480)	(63)	(2,655)
Disposals of loans	(552)	(18)	(39)	(69)	(678)
Reductions	(4,397)	(1,114)	(824)	(132)	(6,467)
Gross non-performing loans at 31 December	6,476	548	2,369	294	9,687
Individual impairment provisions[1]	(3,961)	(209)	(1,601)	(5)	(5,776)
Net non-performing loans	2,515	339	768	289	3,911
Portfolio impairment provision	(262)	(258)	(166)	(2)	(688)
Total	2,253	81	602	287	3,223
Cover ratio	65%	85%	75%	2%	67%
Collateral ($million)	702	255	358	290	1,605
Cover ratio (after collateral)	72%	85%	83%	100%	76%
Of the above, included in liquidation portfolio					
Gross non-performing loans at 31 December	3,333	-	213	261	3,807
Individual impairment provisions	(2,267)	-	(154)	-	(2,421)
Net non-performing loans	1,066	-	59	261	1,386
Cover ratio	68%	-	72%	-	64%
Collateral ($ million)	356	-	-	261	617
Cover ratio (after collateral)	79%	-	72%	100%	80%

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

Problem credit management and provisioning

	2015[2]				
	Corporate & Institutional Banking $million	Retail Banking $million	Commercial Banking $million	Private Banking $million	Total $million
Gross non-performing loans at 1 January	4,380	797	2,225	90	7,492
Exchange translation differences	(200)	(55)	(92)	(2)	(349)
Classified as non-performing during the year	5,778	561	951	394	7,684
Recoveries on loans and advances previously written off	-	5	-	-	5
Additions	5,778	566	951	394	7,689
Transferred to assets held for sale	-	-	-	-	-
Transferred to performing during the year	(11)	(59)	(28)	(6)	(104)
Net repayments	(357)	(144)	(230)	-	(731)
Amounts written off	(461)	(305)	(244)	(93)	(1,103)
Disposals of loans	(1)	(53)	(23)	(58)	(135)
Reductions	(830)	(561)	(525)	(157)	(2,073)
Gross non-performing loans at 31 December	9,128	747	2,559	325	12,759
Individual impairment provisions[1]	(4,230)	(279)	(1,616)	(3)	(6,128)
Net non-performing loans	4,898	468	943	322	6,631
Portfolio impairment provision	(155)	(316)	(185)	(2)	(658)
Total	4,743	152	758	320	5,973
Cover ratio	48%	80%	70%	1%	53%
Collateral ($ million)	1,396	258	449	322	2,425
Cover ratio (after collateral)	62%	72%	81%	100%	67%

Of the above, included in liquidation portfolio

Gross non-performing loans at 31 December	6,960	-	250	302	7,512
Individual impairment provisions	(3,361)	-	(183)	-	(3,544)
Net non-performing loans	**3,599**	**-**	**67**	**302**	**3,968**
Cover ratio	**48%**	**-**	**73%**	**-**	**47%**
Collateral ($ million)	**992**	**-**	**-**	**302**	**1,294**
Cover ratio (after collateral, excluding PIP)	**63%**	**-**	**73%**	**100%**	**64%**

1. The difference to total individual impairment provision reflects provisions against performing forborne loans that are not included within non-performing loans as they have been performing for 180 days
2. The 2015 comparatives have been represented to reflect the reorganisation of the Group's client segments

Standard Chartered PLC – Risk review
Risk profile

Non-performing loans by region

The following tables set out the total non-performing loans to banks and customers on the basis of the regions:

	2016				
	Greater China & North Asia $million	ASEAN & South Asia $million	Africa & Middle East $million	Europe & Americas $million	Total $million
Loans and advances					
Gross non-performing	**1,170**	**4,711**	**2,739**	**1,067**	**9,687**
Individual impairment provision[1]	**(600)**	**(2,659)**	**(1,847)**	**(670)**	**(5,776)**
Non-performing loans net of individual impairment provision	**570**	**2,052**	**892**	**397**	**3,911**
Portfolio impairment provision	**(198)**	**(236)**	**(128)**	**(126)**	**(688)**
Net non-performing loans and advances	**372**	**1,816**	**764**	**271**	**3,223**
Cover ratio	**68%**	**61%**	**72%**	**75%**	**67%**

	2015[2]				
	Greater China& North Asia $million	ASEAN & South Asia $million	Africa & MENAP $million	Europe & Americas $million	Total $million
Loans and advances					
Gross non-performing	1,392	5,686	3,058	2,623	12,759
Individual impairment provision[1]	(748)	(2,650)	(1,771)	(959)	(6,128)
Non-performing loans net of individual impairment provision	644	3,036	1,287	1,664	6,631
Portfolio impairment provision	(253)	(246)	(128)	(31)	(658)
Net non-performing loans and advances	391	2,790	1,159	1,633	5,973
Cover ratio	72%	51%	62%	38%	53%

1. The difference to total individual impairment provision reflects provisions against forborne loans that are not included within non-performing loans as they have been performing for 180 days
2. The 2015 comparatives have been represented to reflect the management view. Previously numbers were presented on a financial view

Standard Chartered PLC – Risk review
Risk profile

Individual and portfolio impairment provisions

The present value of estimated future cash flows, discounted at the asset's original effective interest rate is used to determine the amount of any impairment. In the case of the liquidation portfolio, the effect and timing of the disposal strategy is included in the estimate of future cash flows.

The significant increase in discount unwind in 2016 is mainly due to a large exposure in the liquidation portfolio. The movement in individual impairment provisions is provided below.

	2016			2015		
	Individual impairment provisions $million	Portfolio impairment provisions $million	Total $million	Individual impairment provisions $million	Portfolio impairment provisions $million	Total $million
Provisions held at 1 January	6,186	658	6,844	3,375	698	4,073
Exchange translation differences	(68)	(9)	(77)	(214)	(36)	(250)
Amounts written off	(2,745)	-	(2,745)	(1,889)	-	(1,889)
Releases of acquisition fair values	-	-	-	(1)	-	(1)
Recoveries of amounts previously written off	177	-	177	181	-	181
Discount unwind	(287)	-	(287)	(107)	-	(107)
Transferred to assets held for sale	(16)	(13)	(29)	-	-	-
Disposal of business units	-	-	-	(14)	-	(14)
New provisions - restructuring	409	-	409	968	-	968
New provisions - excluding restructuring	2,582	205	2,787	4,174	229	4,403
New provisions	2,991	205	3,196	5,142	229	5,371
Recoveries/provisions no longer required	(438)	(153)	(591)	(322)	(233)	(555)
Net impairment charge/(releases) against	2,553	52	2,605	4,820	(4)	4,816
Other movements[1]	30	-	30	35	-	35
Provisions held at 31 December	5,830	688	6,518	6,186	658	6,844

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

Standard Chartered PLC – Risk review
Risk profile
Individually impaired loans by client segment

Corporate & Institutional Banking gross individually impaired loans decreased by $2.7 billion, or 29 per cent, since 2015 primarily in Europe and South Asia as a result of the settlement of a large exposure in the liquidation portfolio.

Gross impaired loans in the Retail Banking book decreased to $0.7 billion mainly due to improvement in Korea and the sale of Thailand and Philippine portfolios.

The following table shows the movement of individually impaired loans and provisions for each client segment:

	2016				
	Corporate & Institutional Banking $million	Retail Banking $million	Commercial Banking $million	Private Banking $million	Total $million
Gross impaired loans at 1 January	9,128	831	2,546	325	12,830
Exchange translation differences	(75)	(11)	(59)	(1)	(146)
Classified as individually impaired during the year	1,801	769	573	103	3,246
Transferred to not impaired during the year	(39)	(87)	(2)	-	(128)
Other movements[1]	(4,339)	(782)	(705)	(133)	(5,959)
Gross impaired loans at 31 December	6,476	720	2,353	294	9,843
Provisions held at 1 January	4,230	337	1,616	3	6,186
Exchange translation differences	(77)	(3)	12	-	(68)
Amounts written off	(1,439)	(722)	(520)	(64)	(2,745)
Recoveries of amounts previously written off	8	164	5	-	177
Discount unwind	(230)	(26)	(31)	-	(287)
Transferred to assets held for sale	-	(16)	-	-	(16)
New provisions	1,574	763	587	67	2,991
Recoveries/provisions no longer required	(134)	(235)	(68)	(1)	(438)
Net individual impairment charge against profit	1,440	528	519	66	2,553
Other movements[2]	29	-	1	-	30
Individual impairment provisions held at 31 December	3,961	262	1,602	5	5,830
Net individually impaired loans	2,515	458	751	289	4,013

[1] Other movement in Gross impaired loans includes repayments, amounts written off and disposals of loans

[2] Other movements include provision previously reported under other credit impairment

	2015[3]				
	Corporate & Institutional Banking	Retail Banking	Commercial Banking	Private Banking	Total
	$million	$million	$million	$million	$million
Gross impaired loans at 1 January	4,964	846	2,198	91	8,099
Exchange translation differences	(199)	(40)	(86)	(2)	(327)
Classified as individually impaired during the year	5,548	382	940	394	7,264
Transferred to not impaired during the year	(370)	(43)	(27)	(6)	(446)
Other movements[1]	(815)	(314)	(479)	(152)	(1,760)
Gross impaired loans at 31 December	9,128	831	2,546	325	12,830
Provisions held at 1 January	1,852	458	1,006	59	3,375
Exchange translation differences	(123)	(47)	(41)	(3)	(214)
Amounts written off	(528)	(875)	(340)	(146)	(1,889)
Releases of acquisition fair values	(1)	-	-	-	(1)
Recoveries of amounts previously written off	2	175	4	-	181
Discount unwind	(48)	(25)	(34)	-	(107)
Transferred to assets held for sale	-	(14)	-	-	(14)
New provisions	3,061	914	1,074	93	5,142
Recoveries/provisions no longer required	(25)	(249)	(48)	-	(322)
Net individual impairment charge against profit	3,036	665	1,026	93	4,820
Other movements[2]	40	-	(5)	-	35
Individual impairment provisions held at 31 December	4,230	337	1,616	3	6,186
Net individually impaired loans	4,898	494	930	322	6,644

1. Other movements include repayments, amounts written off and disposals of loans
2. Other movements include provisions for liabilities and charges that have been drawn down and are now part of loan impairment
3. The 2015 comparatives have been represented to reflect the re-organisation of the Group's client segments. Refer to note 1 for details

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, 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.

As a result of reinforcing our collateralisation requirements, the fair value of collateral held as a percentage of amount outstanding has increased by 1 per cent since the end of 2015.

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 $229 billion (2015: $201 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. 50 per cent of the clients that have placed collateral with the Group are over-collateralised. The average amount of over-collateralisation is 47 per cent.

We have remained conservative 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.

The increase of reverse repurchase (repo) collateral from 49 per cent to 56 per cent was due to increased liquidity management activity by the Group.

The average loan-to-value (LTV) ratio of the commercial real estate (CRE) portfolio has increased to 39 per cent, compared with 37 per cent in 2015. The proportion of loans with an LTV greater than 80 per cent has remained at 1 per cent during the same period.

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 levels for Retail Banking have increased marginally compared to 2015.

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			Amount outstanding[1,2]		
		Of which			Of which	
	Total	Past due but not individually impaired loans	Individually impaired loans	Total	Past due but not individually impaired loans	Individually impaired loans
	$million	$million	$million	$million	$million	$million
As at 31 December 2016						
Corporate & Institutional Banking	**57,378**	**93**	**702**	**174,877**	**2,105**	**6,476**
Retail Banking	**73,352**	**1,527**	**255**	**93,846**	**2,102**	**720**
Commercial Banking	**7,084**	**393**	**358**	**25,042**	**700**	**2,353**
Private Banking	**7,584**	**94**	**290**	**11,926**	**97**	**294**
Central & other items	**5,912**	**-**	**-**	**25,562**	**-**	**-**
Total	**151,310**	**2,107**	**1,605**	**331,253**	**5,004**	**9,843**
As at 31 December 2015[3,4]						
Corporate & Institutional Banking	50,218	41	1,396	168,741	2,040	9,128
Retail Banking	72,017	1,563	258	95,013	2,402	831
Commercial Banking	7,934	207	449	24,525	575	2,546
Private Banking	9,859	52	322	15,297	52	325
Central & other items	5,283	-	-	25,254	-	-
Total	145,311	1,863	2,425	328,830	5,069	12,830

1. Includes loans held at fair value through profit or loss
2. Includes loans and advances to banks
3. The 2015 comparatives have been represented to reflect the re-organisation of the Group's client segments. Refer to note 1
4. In the July 2016 re-presentation of the new client segments, $14 billion of collateral on reverse repo transactions presented in Central & other items has been moved to Corporate & Institutional Banking. Total collateral against loans and advances has been reduced by $6.2 billion to $145 billion across the relevant client segments

Corporate & Institutional Banking and Commercial Banking

Collateral held against Corporate & Institutional Banking and Commercial Banking exposures amounted to $64 billion (2015: $58 billion).

Our underwriting standards encourage taking specific charges on assets and we consistently seek high-quality, investment grade collateral. 29 per cent of collateral held comprises physical assets or is property-based, with the remainder held largely in cash and investment securities.

Non-tangible collateral – such as guarantees and standby letters of credit – may also be 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 taken for longer-term and sub-investment grade Corporate loans continues to be high at 55 per cent (59 per cent in 2015). Collateral is also held against off-balance sheet exposures, including undrawn commitments and trade-related instruments.

The proportion of highly rated reverse repos to total collateral has increased from 37 per cent in 2015 to 43 per cent in 2016.

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

	2016 $million	2015[1] $million
Property	**10,763**	12,266
Plant, machinery and other stock	**4,509**	3,430
Cash	**8,842**	8,778
Reverse repo	**35,930**	28,474
AAA	**327**	225
AA- to AA+	**27,660**	21,255
BBB- to BBB+	**2,657**	3,009
Lower than BBB-	**854**	1,185
Unrated	**4,432**	2,800
Commodities	**776**	765
Ships and aircraft	**3,642**	4,439
Total value of collateral	**64,462**	58,152

1. The 2015 comparatives have been represented to reflect the re-organisation of the Group's client segments. Refer to note 1 for details
2. In the July 2016 re-presentation of the new client segments, $14 billion of collateral on reverse repo transactions presented in Central & other items has been moved to Corporate & Institutional Banking. Total collateral against loans and advances has been reduced by $5.5 billion to $58.2 billion across the relevant types of collateral

Retail Banking and Private Banking

In Retail Banking and Private Banking, 83 per cent of the portfolio is fully secured. The proportion of unsecured loans remains unchanged from 2015 at 15 per cent.

The table below presents an analysis of loans to individuals by product, split between fully secured, partially secured and unsecured.

In Retail mortgage loans, the value of property held as security significantly exceeds the value of mortgage loans. LTV ratios measure the ratio of the current mortgage outstanding to the current fair value of the properties on which they are secured.

The overall LTV ratio of our mortgage portfolio is less than 50 per cent – relatively unchanged since the end of 2015. All our key markets continue to have low portfolio LTVs. Hong Kong mortgage average LTV is at 44 per cent, while Korea, Singapore and Taiwan average mortgage LTV are at 50 per cent, 59 per cent and 49 per cent respectively.

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

	2016 Fully secured $million	2016 Partially secured $million	2016 Unsecured $million	2016 Total[1] $million	2015 Fully secured $million	2015 Partially secured $million	2015 Unsecured $million	2015 Total $million
Loans to individuals								
Mortgages	73,484	23	-	73,507	74,006	12	-	74,018
CCPL	360	690	15,156	16,206	386	632	16,534	17,552
Auto	635	-	3	638	792	-	4	796
Secured wealth products	11,036	44	-	11,080	13,689	383	14	14,086
Other	2,935	875	415	4,225	2,330	1,208	320	3,858
	88,450	1,632	15,574	105,656	91,203	2,235	16,872	110,310
Percentage of total loans	83%	2%	15%		83%	2%	15%	

1. Amounts net of individual impairment provisions
2. In the July 2016 re-presentation of the new client segments, $0.3 billion of collateral on a mortgage book presented in Central & other items has been moved to Retail Banking, Mortgages. $1 billion of collateral on Mortgages presented as Partially secured has been re-categorised to Fully secured

Mortgage loan-to-value ratios by geography

The following table provides an analysis of LTV ratios by region for the mortgages portfolio:

	2016 Greater China & North Asia %	ASEAN & South Asia %	Africa & Middle East %	Europe & Americas %	Total %
Less than 50 per cent	55.9	36.9	22.3	36.7	49.9
50 per cent to 59 per cent	18.2	16.8	16.9	37.4	18.1
60 per cent to 69 per cent	17.3	18.8	20.5	16.2	17.8
70 per cent to 79 per cent	6.4	17.6	20.7	8.3	9.7
80 per cent to 89 per cent	1.9	8.8	11.3	0.9	3.9
90 per cent to 99 per cent	0.2	0.7	4.2	0.5	0.5
100 per cent and greater	0.1	0.4	4.1	-	0.3
Average portfolio loan-to-value	46.6	54.7	64.9	44.4	49.0
Loans to individuals - mortgages ($million)	51,219	18,903	2,245	1,140	73,507

	2015 Greater China & North Asia %	ASEAN & South Asia %	Africa & Middle East %	Europe & Americas %	Total %
Less than 50 per cent	62.9	32.5	23.7	38.5	52.0
50 per cent to 59 per cent	15.1	18.4	18.0	38.5	17.0
60 per cent to 69 per cent	10.8	19.5	22.2	18.3	16.2
70 per cent to 79 per cent	6.9	18.9	17.9	4.3	9.5
80 per cent to 89 per cent	3.7	9.9	9.7	-	4.4
90 per cent to 99 per cent	0.6	0.6	3.5	0.5	0.6
100 per cent and greater	-	0.2	5.0	-	0.3
Average portfolio loan to value	45.9	55.3	63.2	44.4	48.9
Loans to individuals - Mortgages ($million)	49,266	21,194	2,245	1,313	74,018

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 available-for-sale, and the related loan written off.

The carrying value of collateral possessed and held by the Group as at 31 December 2016 is $51 million (2015: $45 million).

	2016 $million	2015 $million
Property, plant and equipment	**13.0**	11.0
Equity shares	**0.1**	2.6
Guarantees	**11.5**	3.6
Cash	**26.1**	26.1
Other	**0.4**	2.0
Total	**51.1**	45.3

Other credit risk mitigation

Other forms of credit risk mitigation are set out below.

Securitisation

The Group has transferred to third-parties by way of securitisation, the rights to any collection of principal and interest on client loan assets with a face value of $21 million (2015: $76 million). The Group continues to recognise these assets in addition to the proceeds and related liability of $15 million (2015: $43 million) arising from the securitisations. The Group considers the above client loan assets to be encumbered.

Credit default swaps

The Group has entered into credit default swaps for portfolio management purposes, referencing loan assets with a notional value of $17.5 billion (2015: $23 billion). These credit default swaps are accounted for as guarantees as they meet the accounting requirements set out in International Accounting Standards (IAS) 39. 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.

Derivatives financial instruments

The Group enters into master netting agreements, which in the event of default results 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 $40,391 million (2015: $38,934 million).

In addition, we enter 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 $7,280 million (2015: $4,194 million) under CSAs.

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 client segment and Industry and Retail products analysis by region.

Maturity analysis by client segment

The loans and advances to the Corporate & Institutional Banking and Commercial Banking segments remain predominantly short-term, with 70 per cent of loans and advances to customers in the segments maturing in under one year, an increase compared to December 2015. 96 per cent of loans to banks mature 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 as mortgages constitute the majority of the Retail Banking loan book, at 66 per cent (2016: 66 per cent).

This section covers a summary of the Group's loan portfolio, broadly analysed by client segment and geography, along with an analysis of the maturity profile, credit quality and provisioning of the loan book.

	2016			
	One year or less $million	One to five years $million	Over five years $million	Total $million
Corporate & Institutional Banking	84,199	29,919	8,374	122,492
Retail Banking	15,510	16,725	61,511	93,746
Commercial Banking	19,125	4,048	1,006	24,179
Private Banking	10,802	249	859	11,910
Central & other items	4,215	39	2	4,256
Loans and advances to customers net of individual impairment provision	133,851	50,980	71,752	256,583
Portfolio impairment provision				(687)
Net loans and advances to customers				255,896
Net loans and advances to banks	71,867	2,644	158	74,669

	2015[1]			
	One year or less $million	One to five years $million	Over five years $million	Total $million
Corporate & Institutional Banking	77,322	34,566	9,790	121,678
Retail Banking	15,214	17,304	62,495	95,013
Commercial Banking	18,738	4,266	1,521	24,525
Private Banking	13,695	494	1,108	15,297
Central & other items	5537	10	-	5,547
Loans and advances to customers net of individual impairment provision	130,506	56,640	74,914	262,060
Portfolio impairment provision				(657)
Net loans and advances to customers				261,403
Net loans and advances to banks	63,159	3,572	38	66,769

1. The 2015 comparatives have been represented to reflect the reorganisation of the Group's client segments. Refer to note 1 for details

Geographic region analysis

Loans and advances to customers (net of individual impairment provisions (IIP) and portfolio impairment provisions (PIP)) decreased by $5.5 billion since December 2015. This reduction was primarily within the Private Banking segment ($3.4 billion), Central & others items ($1.3 billion) and Retail Banking segment ($1.3 billion).

Loans and advances to banks increased by $7.9 billion since December 2015 across ASEAN & South Asia ($5.3 billion) and Greater China & North Asia ($3.1 billion). This is mostly due to the liquidity management activity of the Group. Given the nature of the book, it is predominantly short term and the maturity profile remains consistent period-on-period.

Loans and advances in the Retail Banking portfolio decreased mainly in the ASEAN & South Asia region due to the sale of the Thailand portfolio, lower new bookings for residential mortgages and Business Banking in Singapore, and lower new bookings for residential mortgages in Malaysia. This was partly offset by growth in mortgages especially in Korea and Hong Kong.

Overall, the regional split of our loans and advances to customers is very similar to 2015 and our loan portfolio remains well-diversified across our footprint countries, with our largest single country representing 24 per cent of loans and advances to customers and banks. The largest movements in loans and advances to customers are: ASEAN & South Asia, down by $13 billion, primarily due to settlements in the liquidation portfolio and a reduction in Retail Banking exposure; and Europe & Americas, up $6 billion due to increased liquidity management activity by the Group.

Industry and retail products analysis by region

In the Corporate & Institutional Banking and Commercial Banking segments our largest industry exposure is financing, insurance and non-banking, which constitutes 27 per cent of Corporate & Institutional Banking and Commercial Banking loans and advances to customers (2015: 21 per cent). Lending to financing, insurance and non-banking clients is mostly to investment grade institutions, is short dated and is part of the liquidity management of the Group.

The manufacturing sector makes up 13 per cent of the Corporate & Institutional Banking and Commercial Banking loans and advances (2015: 14 per cent). The manufacturing industry 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 4,200 clients.

Loans and advances to the energy sector have reduced to 18.8 billion from $19.7 billion in 2015 and constitutes 12 per cent (2015: 13 per cent) of total loans and advances to Corporate & Institutional Banking and Commercial Banking. The energy sector lending is spread across five subsectors and over 360 clients.

The Group provides loans to commercial real estate (CRE) counterparties of $11.3 billion (2015: $13.0 billion), which represents less than 5 per cent of total customer loans and advances. In total, $6.4 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 CRE 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.

Transport, telecom and utilities includes financial leasing exposures. This does not include operating leasing exposures of $5.6bn as these assets are owned by the bank.

Credit cards and personal loans (CCPL) and other unsecured lending of the Retail Banking portfolio remains broadly stable at 15 per cent of total Retail Banking products loans and advances.

	2016				
	Greater China & North Asia $million	ASEAN & South Asia $million	Africa & Middle East $million	Europe & Americas $million	Total $million
Industry:					
Energy	2,781	5,334	4,076	6,586	18,777
Manufacturing	8,807	5,944	3,161	1,830	19,742
Financing, insurance and non-banking	7,959	5,007	1,451	26,816	41,233
Transport, telecom and utilities	5,562	4,570	3,659	1,708	15,499
Food and household products	1,932	4,624	2,408	1,088	10,052
Commercial real estate	5,580	4,555	1,122	27	11,284
Mining and quarrying	2,063	3,568	1,234	959	7,824
Consumer durables	4,356	2,321	1,432	1,261	9,370
Construction	1,027	1,313	1,392	84	3,816
Trading companies & distributors	938	535	657	259	2,389
Government	2,290	3,053	468	504	6,315
Other	1,437	1,644	1,015	530	4,626
Retail products:					
Mortgages	51,219	18,903	2,245	1,140	73,507
CCPL and other unsecured lending	9,265	3,838	3,012	91	16,206
Auto	-	315	323	-	638
Secured wealth products	3,725	5,965	90	1,300	11,080
Other	1,790	1,908	522	5	4,225
	110,731	73,397	28,267	44,188	256,583
Portfolio impairment provision	(198)	(236)	(127)	(126)	(687)
Total loans and advances to customers	110,533	73,161	28,140	44,062	255,896
Total loans and advances to banks	32,239	14,739	7,552	20,139	74,669

	2015[1]				
	Greater China & North Asia	ASEAN & South Asia	Africa & Middle East	Europe & Americas	Total
	$million	$million	$million	$million	$million
Industry:					
Energy	1,466	7,198	4,370	6,647	19,681
Manufacturing	9,586	5,538	3,623	2,142	20,889
Financing, insurance and non-banking	5,287	6,996	1,548	17,627	31,458
Transport, telecom and utilities	4,512	6,129	4,048	1,790	16,479
Food and household products	1,825	5,763	2,762	1,278	11,628
Commercial real estate	6,821	5,008	1,162	37	13,028
Mining and quarrying	2,126	4,116	1,458	855	8,555
Consumer durables	4,491	2,350	1,394	2,624	10,859
Construction	1,307	2,080	1,741	174	5,302
Trading companies and distributors	892	701	801	35	2,429
Government	2,418	3,191	465	138	6,212
Other	1,563	1,975	1,091	601	5,230
Retail products:					
Mortgages	49,266	21,194	2,245	1,313	74,018
CCPL and other unsecured lending	9,484	4,793	3,185	90	17,552
Auto	-	445	351	-	796
Secured wealth products	3,727	7,756	98	2,505	14,086
Other	1,643	1,355	856	4	3,858
	106,414	86,588	31,198	37,860	262,060
Portfolio impairment provision	(253)	(245)	(128)	(31)	(657)
Total loans and advances to customers	106,161	86,343	31,070	37,829	261,403
Total loans and advances to banks	29,152	9,458	6,926	21,233	66,769

1. The 2015 comparatives have been represented to reflect the management view. Previously numbers were presented on a Financial view.

Selected portfolios (unaudited)

This section provides further details on commodities and commodities-related exposures, debt securities and treasury bills and asset-backed securities.

Commodities and commodities-related exposures

Commodities producers and traders

The Group's net exposure to commodities has reduced by $1.7 billion (4 per cent) over the past 12 months across producers and traders. This was driven by the continued close management of exposures across the sector in the first half of 2016, partially offset by an increase in facility utilisation for commodities traders in the final quarter of 2016 as commodities prices rose.

The commodities portfolio represented 7 per cent of the total Corporate & Institutional Banking and Commercial Banking net exposure (H1 2016: 7 per cent, H2 2015: 8 per cent).

Commodities credit exposure arises from the pursuit of the Group's strategy in its core markets, where commodities form a very significant proportion of the

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Risk profile

trade flows within and into the Group's footprint countries. Commodities will continue to be a key component of the Group's strategy and the portfolio. The Group is managing parts of the portfolio to reduce targeted exposures, increase diversification and reduce the volatility of loan impairment. The cover ratio before collateral has improved to 65 per cent without collateral from 58 per cent in H1 2016 (H2 2015: 61 per cent).

The tenor profile of the portfolio continued to remain predominantly short-dated, with 76 per cent (2015: 68 per cent) of net exposure maturing in one year or less. Long-term (maturity of greater than one year) net exposures to sub-investment grade and non-large state-owned enterprises (SOEs) have seen improved collateralisation levels over the course of 2016: 34 per cent in the first half of the year, increasing to 36 per cent in the second half of the year.

Producers are primarily from the oil and gas and metals and mining sectors. Our net exposure to oil and gas producers is $8.9 billion (H1 2016: $8.5 billion; H2 2015: $9.6 billion) and our net exposure to metals and mining producers is $7.7 billion (H1 2016: $7.7 billion; H2 2015: $7.6 billion).

87 per cent, $7.3 billion of the performing clients, can sustain an oil price of $30 per barrel for 12 months or to global majors or are large SOEs. The breakeven prices have been calculated on a debt service coverage ratio of one. Debt service coverage ratio has been computed based on the amount of cash flow available to meet the annual interest and principal payments on debt, if oil prices remain at the breakeven level for a period of up to 12 months. This analysis is conservative as it does not take into consideration refinancing options available to clients, or their ability to defer capital expenditure.

The key risk for traders, which are less directly affected by price changes, is the lack of liquidity and their risk management practices. The traders portfolio makes up 52 per cent of the commodities portfolio.

Exposure to traders increased by 4 per cent in the second half of 2016, due to higher utilisation of limits on the back of higher commodity prices. Most of the increase was in investment grade clients and strongly secured via commodity collateral.

Commodities-related sectors

As at 31 December 2016, the Group’s net exposure to commodities-related sectors consisting of refineries, oil and gas offshore support, oil and gas service providers and oil and gas shipping was $10.6 billion.

Petroleum refineries ($3.9 billion): Net exposure to refineries dropped significantly in 2016 due to the settlement of a large exposure in the liquidation portfolio. The profitability of refiners is driven by gross refining margins and the margins held broadly steady during this period despite the volatility in crude oil prices.

Oil and gas offshore support ($2.2billion): The portfolio consists of companies which provide support services allied to the offshore oil & gas industry including provision of drill ships, jack-up rigs, platform support vessels, anchor handlers, pipe laying support vessels, floating production support and operations vessels and other specialised vessels and equipment. The prolonged period of low prices has resulted in stress in this sector as the bulk of vessels are chartered a short-to-medium term basis. Although oil prices have increased, the increase is not high enough to spur capital expenditure spend by oil producers. The Group performed an account by account review and continues to take targeted risk-mitigating actions on the sector. 68 per cent of the portfolio is being closely monitored, which includes $0.2 billion of non- performing exposures.

Oil and gas service providers ($3.0 billion): The service providers sub-sector is related to oilfield equipment manufacturers and other service providers. 43 per cent of the exposure is investment grade.

Oil and gas shipping ($1.5 billion): The portfolio comprises shipping companies which are engaged in the transportation of oil and gas products. The vessels in this sector have benefited from low oil prices resulting in higher demand and charter rates. Notwithstanding, an expected increase in the supply of tankers will dampen charter rates going forward.

Standard Chartered PLC – Risk review
Risk profile
Debt securities and treasury bills

Debt securities and treasury bills are analysed as follows:

	2016 Debt securities $million	2016 Treasury bills $million	2016 Total $million	2015 Debt securities $million	2015 Treasury bills $million	2015 Total $million
Net impaired securities:						
Impaired securities	406	-	406	395	-	395
Impairment	(400)	-	(400)	(283)	-	(283)
	6	-	6	112	-	112
Securities neither past due nor impaired:						
AAA	29,807	15,008	44,815	28,996	15,778	44,774
AA- to AA+	21,472	12,640	34,112	30,688	12,930	43,618
A- to A+	12,778	2,538	15,316	10,590	451	11,041
BBB- to BBB+	10,014	2,584	12,598	9,389	1,962	11,351
Lower than BBB-	3,832	1,529	5,361	3,106	1,578	4,684
Unrated	6,950	2,090	9,040	10,998	613	11,611
	84,853	36,389	121,242	93,767	33,312	127,079
	84,859	36,389	121,248	93,879	33,312	127,191
Of which:						
Assets at fair value						
Trading	12,025	1,285	13,310	12,896	859	13,755
Designated at fair value	354	-	354	389	-	389
Available-for-sale	69,204	35,104	104,308	77,684	32,453	110,137
	81,583	36,389	117,972	90,969	33,312	124,281
Assets at amortised cost						
Loans and receivables	3,106	-	3,106	2,700	-	2,700
Held-to-maturity	170	-	170	210	-	210
	3,276	-	3,276	2,910	-	2,910
	84,859	36,389	121,248	93,879	33,312	127,191

The above table analyses debt securities and treasury bills that are neither past due nor impaired by external credit rating. 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.

Net impaired debt securities decreased during the year, primarily due to debt securities disposal in Europe and the decrease of a corporate bond exposure in India.

Debt securities in the AA- to AA+ rating category decreased by $9.2 billion to $21.5 billion in 2016, mainly driven by reduced holdings of UK Government bonds and other debt securities due to price volatility.

Unrated securities primarily relate to corporate issuers. Using internal credit ratings, $7,013 million (2015: $9,629 million) of these securities is considered to be equivalent to investment grade.

Asset backed securities (unaudited)

Total exposures to asset-backed securities

	2016				2015			
	Percentage of notional value of portfolio	Notional $million	Carrying value $million	Fair value $million[1]	Percentage of notional value of portfolio	Notional $million	Carrying value $million	Fair value $million[1]
Residential mortgage backed securities (RMBS)	**37%**	**2,248**	**2,248**	**2,244**	39%	2,988	2,983	2,980
Collateralised debt obligations (CDOs)	**0%**	**28**	**8**	**7**	0%	35	15	13
Commercial mortgage backed securities (CMBS)	**1%**	**50**	**19**	**18**	1%	75	37	36
Other asset backed securities (Other ABS)	**62%**	**3,717**	**3,716**	**3,716**	60%	4,710	4,698	4,698
	100%	**6,043**	**5,991**	**5,985**	100%	7,808	7,733	7,727
Of which included within:								
Financial assets held at fair value through profit or loss	**3%**	**172**	**172**	**172**	1%	96	97	97
Investment securities - available-for-sale	**72%**	**4,380**	**4,331**	**4,331**	84%	6,551	6,480	6,480
Investment securities - loans and receivables	**25%**	**1,491**	**1,488**	**1,482**	15%	1,161	1,156	1,150
	100%	**6,043**	**5,991**	**5,985**	100%	7,808	7,733	7,727

1 Fair value reflects the value of the entire portfolio, including assets redesignated to loans and receivables

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 (2015: 1 per cent) of the Group's total assets.

The decline in the portfolio in the year is attributable to natural amortisations and sales reflecting reductions in the Asset and Liabilities Management (ALM) liquidity portfolio.

The credit quality of the ABS portfolio remains strong, with 97 per cent of the overall portfolio rated A- or better, and over 86 per cent of the overall portfolio is rated as AAA. The portfolio is broadly diversified across asset classes and geographies, with an average credit grade of AA+.

Residential mortgage-backed securities (RMBS) make up 37 per cent of the overall portfolio and have a weighted averaged credit rating of AAA (AAA in 2015).

Note 12 to the financial statements provides details of the remaining balance of those assets reclassified in 2008.

Other ABS includes credit cards ABS, comprising 27 per cent of the overall portfolio, and auto loans ABS (23 per cent) both maintain a weighted average credit rating of AAA. The balance of Other ABS mainly includes securities backed by diversified payment types and trade receivables with a net weighted average credit rating of A.

Financial statement impact of asset-backed securities

	Available for-sale $million	Loan and receivables $million	Total $million
2016			
Credit to available-for-sale reserves	**7**	**-**	**7**
(Charge)/credit to the profit and loss account	**(9)**	**1**	**(8)**
2015			
(Charge) to available-for-sale reserves	(19)	-	(19)
Credit to the profit and loss account	17	5	22

Country cross-border risk (unaudited)

Country cross-border risk is the risk that the Group will be unable to obtain payment from its customers or third-parties 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 2016 remained consistent with its strategic focus on core franchise countries, and with the scale of the larger markets in which it operates. Changes in the pace of economic activity and portfolio management activity had an impact on the growth of cross-border exposure for certain territories.

Cross-border exposure to China remains predominantly short-term (71 per cent of such exposure had a tenor of less than 12 months). During 2016, the Group's cross-border exposure to China from lending and trade finance activity reduced in response to the moderation in Chinese and global economic conditions, with some of this reduction offset by increased exposure arising from liquidity management activity associated with the deployment of excess liquidity within the region.

Country cross-border risk exposure to Hong Kong increased during 2016. Factors contributing to the increase in exposure to Hong Kong included short-dated money market treasury and liquidity management activity, and growth in interbank placements.

The overall size of cross-border exposure to India reflects the size of the Group's franchise in the country, and the facilitation of overseas investment and trade flows supported by parent companies in India. Portfolio management activity and actions taken to ensure the most efficient use of risk appetite and capital, has contributed to the decline in cross-border exposure to India throughout 2016.

Slowing economic growth rates, weaker global demand for Korean exports, and a reduction in interbank placements associated with asset and liability management activity resulted in a decrease in country cross-border risk exposure to Korea in 2016.

Cross-border exposure to developed countries in which the Group does not have a major presence predominantly relates to short-dated money market treasury and liquidity management activities, which can change significantly from period to period. Exposure also represents global corporate business for customers with interests in our footprint. This is a key factor explaining the significant cross-border exposure to the US, Japan and France.

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.

	2016			2015		
	Less than one year $million	**More than one year $million**	**Total $million**	Less than one year $million	More than one year $million	Total $million
US	**22,063**	**14,153**	**36,216**	18,091	14,378	32,469
China	**25,644**	**10,540**	**36,184**	25,999	10,626	36,625
Hong Kong	**18,119**	**7,531**	**25,650**	15,767	7,340	23,107
Singapore	**18,235**	**3,487**	**21,722**	16,805	4,379	21,184
India	**6,333**	**9,264**	**15,597**	6,711	12,747	19,458
United Arab Emirates	**5,653**	**9,145**	**14,798**	5,756	8,562	14,318
Korea	**8,101**	**6,669**	**14,770**	10,933	7,684	18,617
Japan	**8,349**	**2,749**	**11,098**	1,746	5,265	7,011
France	**3,217**	**3,786**	**7,003**	1,784	3,729	5,513
Malaysia	**2,987**	**3,745**	**6,732**	3,555	2,675	6,230

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 these 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. From 1 August 2016, Credit and Funding Valuation Adjustment (XVA) risk was recognised in the total trading and non trading VaR, and the impact of which was not material.
- Non-trading book:
  - The Asset and Liability Management (ALM) desk is required to hold a liquid assets buffer of which $84.9 billion is held in high-quality marketable debt securities.
  - The Group has capital invested and related income streams denoninated 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 Risk management approach.

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
- Currency exchange rate risk: arising from changes in exchange rates and implied volatilities on foreign exchange options
- Commodity price risk: arising from changes in commodity prices and implied volatilities on commodity options; covering energy, precious metals, base metals and agriculture
- Credit spread risk: arising from changes in the credit spread of the Group's derivatives counterparties through CVA accounting.

Market risk changes

The average level of total trading and non-trading VaR in 2016 was lower than in 2015 by 4 per cent and the actual level of total VaR as at end of December 2016 was 17 per cent lower than in 2015. These declines were both primarily due to reduced market volatility in the historical time series. In 2015 the VaR had been elevated by events such as the devaluation of Chinese renminbi in August 2015 and uncertainty about the timing of anticipated US interest rate rises.

Foreign exchange VaR increased due to increased market volatility in the historical time series following the devaluation of the Nigerian naira in June 2016 and increased foreign exchange positions in the second half of the year.

Non-trading book equity risk VaR decreased in 2016 due to reduced non-listed Private Equity holdings.

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

	2016				2015			
Trading and non-trading	**Average $million**	**High[1] $million**	**Low[1] $million**	**Actual[2] $million**	Average $million	High[1] $million	Low[1] $million	Actual[2] $million
Interest rate risk[3]	**27.7**	**32.7**	**24.1**	**25.3**	26.9	35.5	18.9	30.7
Foreign exchange risk	**6.3**	**12.2**	**3.7**	**9.4**	4.9	9.0	2.3	4.8
Commodity risk	**1.9**	**3.1**	**1.0**	**1.4**	1.6	2.6	0.7	1.6
Equity risk	**10.0**	**13.1**	**6.9**	**8.1**	13.7	18.2	9.7	11.0
Total[4]	**31.6**	**38.8**	**26.4**	**29.9**	32.9	45.9	24.4	36.1

	2016				2015			
Trading[5]	**Average $million**	**High[1] $million**	**Low[1] $million**	**Actual[2] $million**	Average $million	High[1] $million	Low[1] $million	Actual[2] $million
Interest rate risk[3]	**6.7**	**10.3**	**4.7**	**6.8**	7.0	8.8	5.3	6.4
Foreign exchange risk	**6.3**	**12.2**	**3.7**	**9.4**	4.9	9.0	2.3	4.8
Commodity risk	**1.9**	**3.1**	**1.0**	**1.4**	1.6	2.6	0.7	1.6
Equity risk	**0.4**	**1.3**	**0.1**	**0.1**	1.7	2.8	0.7	0.8
Total[4]	**10.6**	**18.7**	**7.5**	**11.6**	9.9	13.2	6.8	9.7

	2016				2015			
Non-trading	**Average $million**	**High[1] $million**	**Low[1] $million**	**Actual[2] $million**	Average $million	High[1] $million	Low[1] $million	Actual[2] $million
Interest rate risk[3]	**26.3**	**31.4**	**21.5**	**22.8**	24.1	34.6	15.6	30.3
Equity risk	**9.8**	**12.5**	**6.9**	**8.1**	12.9	17.9	9.2	10.4
Total[3]	**30.7**	**35.1**	**24.6**	**27.3**	29.6	37.8	23.2	31.4

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 held for trading or available-for-sale.
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. This regulatory definition is narrower than the accounting definition of the trading book within IAS39 'Financial Instruments: Recognition and Measurement
'

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

	2016				2015			
	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[3]	**31.6**	**38.8**	**26.4**	**29.9**	32.9	45.9	24.4	36.1
Trading[4]								
Rates	**5.2**	**8.6**	**3.3**	**5.8**	5.5	7.0	3.5	5.1
Global Foreign Exchange	**6.3**	**12.2**	**3.7**	**9.4**	4.9	9.0	2.3	4.8
Credit Trading and Capital Markets	**3.0**	**5.3**	**2.2**	**3.2**	2.7	4.3	1.9	2.4
Commodities	**1.9**	**3.1**	**1.0**	**1.4**	1.6	2.6	0.7	1.6
Equities	**0.4**	**1.3**	**0.1**	**0.1**	1.7	2.8	0.7	0.8
Total[3,5]	**10.6**	**18.7**	**7.5**	**11.6**	9.9	13.2	6.8	9.7
XVA[3]	**9.8**	**12.0**	**6.6**	**6.6**	-	-	-	-
Non-trading								
Asset and Liability Management	**26.3**	**31.4**	**21.5**	**22.8**	24.1	34.6	15.6	30.3
Listed private equity	**9.8**	**12.5**	**6.9**	**8.1**	12.9	17.9	9.2	10.4
Total[5]	**30.7**	**35.1**	**24.6**	**27.3**	29.6	37.8	23.2	31.4

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 XVA (Credit and Funding Valuation Adjustment): The XVA trading desk was mandated to actively hedge the market exposures arising from the recognition of CVA commencing 1 January
2016. The XVA desk VaR is included in the Trading and Non-trading Interest Rate and Total VaR results from 1 August 2016, but does not contribute to the Trading Interest Rate or Total VaR
figures
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. This regulatory definition is narrower than the accounting definition of the trading book within IAS39 'Financial Instruments: Recognition and Measurement'
5. The total VaR shown in the tables above is not a sum of the component risks due to offsets between them

Risks not in VaR (unaudited)

In 2016 the main market risk not reflected in VaR was the currency risk where the exchange rate is currently pegged or managed. The VaR historical one-year 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 off-the-run bonds. Newly issued bonds are actively traded (on-the-run). Off-the-run bonds are no longer so actively traded which means that historical market price data for VaR is sometimes more limited. 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 2016 section on market risk.

Backtesting (unaudited)

Regulatory backtesting is applied at both Group and Solo levels. In 2016, negative exceptions due to exceptional market volatility occurred on two days: one at Group level (two in 2015) and two at Solo level (one in 2015). These occasions were:

- 4 February: Weak US economic data lowered expectations of a Federal Reserve rate hike causing the US dollar to depreciate against other currencies.
- 17 June: Opinion polls ahead of the UK referendum to leave the European Union (EU) on 23 June indicated a shift towards the UK remaining in the EU. This caused appreciation of major currencies against the US dollar.

Two exceptions in a year due to market events are 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).

Financial Markets loss days

	2016	2015
Number of loss days reported for Financial Markets trading book total product income[1]	**30**	5

1. Reflects total product income for Financial Markets excluding ALM business (non-trading) and periodic valuation changes for Capital Markets, expected loss provisions and OIS discounting

The increase in Financial Markets loss days in 2016 is mainly due to the recognition of CVA and FVA risk which commenced from the beginning of 2016 and was not reflected in the 2015 loss days. If CVA and FVA were not included then there would have been 12 loss days in 2016. Whilst still an increase compared with 2015, this is due to certain events which increased market volatility in 2016 including: the crash in oil prices and China equity market sell-off in January 2016; the outcome of the UK referendum to leave the European Union (Brexit) in June 2016; and the results of the US presidential elections in November 2016 which led to some initial market volatility with the longer term impact unclear.

Average daily income earned from market risk-related activities[1]

Trading	2016 $million	2015 $million
Interest rate risk	**4.5**	1.8
Foreign exchange risk	**4.6**	5.2
Commodity risk	**0.7**	1.0
Equity risk	**-**	0.3
Total	**9.8**	8.3
Non-trading		
Interest rate risk	**1.8**	2.1
Equity risk	**(0.2)**	0.4
Total	**1.6**	2.5

1. Reflects total product income which is the sum of client income and own account income. Includes 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 only 8.1 per cent of the Group's regulatory capital risk-weighted asset (RWA) requirement. As highlighted in the VaR disclosure during 2016, the majority of market risk is managed within Financial Markets, which spans both trading book and non-trading book. The non-trading equity market risk is generated by listed private equity holdings within Principal Finance. Group 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	65,509	65,148	361	Interest rate, foreign exchange, commodity or equity risk
Loans and advances to banks	74,669	18,152	56,517	Interest rate or foreign exchange risk
Loans and advances to customers	255,896	29,225	226,671	Interest rate or foreign exchange risk
Debt securities	84,859	12,294	72,565	Interest rate mainly, but also foreign exchange or equity risk
Treasury bills	36,389	1,285	35,104	Interest rate or foreign exchange risk
Equities	2,564	425	2,139	Equities risk mainly, but also interest or foreign exchange risk
Other assets	36,940	5,262	31,678	Interest rate, foreign exchange, commodity or equity risk
Total	556,826	131,791	425,035	
Financial liabilities				
Deposits by banks	37,612	-	37,612	Interest rate or foreign exchange risk
Customer accounts	378,302	-	378,302	Interest rate or foreign exchange risk
Debt securities in issue	52,370	-	52,370	Interest rate mainly, but also foreign exchange or equity risk
Derivatives financial instruments	65,712	65,255	457	Interest rate, foreign exchange, commodity or equity risk
Short positions	3,763	3,763	-	Interest rate, foreign exchange, commodity or equity risk
Total	537,759	69,018	468,741	

Standard Chartered PLC – Risk review
Risk profile

Structural foreign exchange exposures

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

	2016 $million	2015 $million
Hong Kong dollar	**6,452**	6,973
Indian rupee	**4,450**	4,434
Renminbi	**3,370**	3,577
Singapore dollar	**2,505**	2,654
Korean won	**2,460**	2,448
Taiwanese dollar	**2,140**	2,143
UAE dirham	**1,556**	1,647
Malaysian ringgit	**1,330**	1,291
Thai baht	**1,290**	1,332
Indonesian rupiah	**1,090**	994
Pakistani rupee	**573**	588
Other	**3,595**	3,535
	30,811	31,616

As at 31 December 2016, the Group had taken net investment hedges (using a combination of derivative and non-derivative financial investments) of $1,313 million (2015: $1,339 million) to partly cover its exposure to the Korean won. 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 $225 million (2015: $228 million). Changes in the valuation of these positions are taken to reserves.

Liquidity and funding risk

Liquidity and Funding risk is the potential that the Group does not have sufficient financial resources or stable sources of funding in the medium or long term, to meet its obligations as they fall due, or can access these financial resources only at excessive cost.

The Group's liquidity and funding risk framework requires each country to operate on a standalone basis without implicit reliance on Group support or recourse to extraordinary central bank support.

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.

In 2016, the Group issued $4.4 billion of senior debt securities, $1.25 billion of subordinated debt and $2 billion of Additional Tier 1 (AT1) securities from its holding company Standard Chartered PLC. (2015: $4.2 billion of term senior debt securities and $2 billion of AT1).

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 European Union has therefore not had a material first order liquidity impact.

Primary sources of funding

A substantial portion of our assets are funded by 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 and countries 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.

Debt refinancing levels are low. In the next 12 months approximately $5.7 billion of the Group's senior and subordinated debt and Additional Tier 1 securities are falling due for repayment either contractually or callable by the Group.

The information presented later in this 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.

Liquidity metrics

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

Stressed coverage (unaudited)

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

- Across major presence countries, the Group intends to be able to meet its payment and collateral obligations for at least 60 days in a combined Standard Chartered-specific and market-wide liquidity stress, without recourse to extraordinary central bank support;
- In smaller presence countries, each operating entity should be able to meet its payment and collateral obligations for at least 60 days in the event of a systemic market-wide stress in that country, without implicit reliance on Group support, or 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 only Standard Chartered, 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 is a Board approved risk appetite metric. It 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 2016, i.e. respective countries are able to survive for a period of time as defined under each scenario. The combined scenario as at 31 December 2016 showed the Group maintained liquidity resources to survive greater than 60 days, as per our Board approved 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 2016 were A+ with stable outlook (Fitch), A with stable outlook (S&P) and Aa3 with negative outlook (Moody's). A downgrade in credit rating would increase derivative collateral requirements and outflows due to rating-linked liabilities. One possible outcome of a two-notch long-term ratings downgrade could be an estimated outflow of $1.5 billion (unaudited).

Liquidity Coverage Ratio (LCR) (unaudited)

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. As at 31 December 2016 the Group LCR was comfortably above 100 per cent with a prudent surplus to both Board approved risk appetite and regulatory requirements. We also held adequate liquidity across our footprint to meet all local prudential LCR requirements, where applicable.

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 (Net Stable Funding Ratio or (NSFR)) at European Union level. The proposals aim to implement the European Banking Authority's interpretation of the Basel standard on NSFR (BCBS295).

The ratio will apply at a level of 100 per cent two years after the date of entry into force of the proposed regulation.

The Group continues to monitor NSFR in line with the BCBS' final recommendation (BCBS295), pending review and approval of the European Commission's proposals by the European Parliament and Council.

As at 31 December 2016 the Group NSFR was above 100 per cent.

Advances-to-deposits ratio

This is defined as the ratio of total loans and advances to customers relative to total customer deposits. 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. Customer deposits tend to be more stable than wholesale funding and a core portion of these deposits is likely to remain with the bank for the medium term.

The advances-to-deposits ratio (2016: 67.6 per cent) decreased from the previous year (2015: 72.8 per cent). Loans and advances to customers decreased due to reduced customer assets from more selective asset origination, deliberate de-risking and subdued corporate activity partially offset by an increase in customer reverse repurchase agreement transactions. Customer accounts increased largely due to growth in our customer repo business..

	2016 $million	2015 $million
Loans and advances to customers[1]	255,896	261,403
Customer accounts	378,302	359,127
Advances to deposits ratio	67.6%	72.8%

1. See note 13 to the financial statements]

Liquidity pool (unaudited)

Liquid assets are the total cash (less restricted balances), treasury bills, loans and advances to banks (less deposits by banks) and debt securities (less illiquid securities). Illiquid securities are debt securities that cannot be sold or exchanged easily for cash without substantial loss in value amounting to $1,508 million (2015: $1,210 million). Encumbered securities are now excluded from liquid assets for the purposes of the Group's liquidity pool.

The Group keeps sufficient liquid assets to survive a number of severe stress scenarios, both internal and regulatory.

Liquid assets increased $4.5 billion from the previous year as higher surplus liquidity, largely resulting from reduced customer lending, was in part held in cash and central bank balances primarily in Europe & Americas. Net interbank lending also increased, with strong growth in ASEAN & South Asia and Greater China & North Asia as we repositioned liquidity in some markets. Debt securities were down $9bn in the year as we reduced holdings of UK Government bonds and other debt securities due to price volatility and increased investment in treasury bills.

	2016				
	Greater China & North Asia $million	ASEAN & South Asia $million	Africa & Middle East million	Europe & Americas $million	Total $million
Cash and balances at central banks	17,770	3,868	3,585	45,483	70,706
Restricted balances	(4,247)	(1,988)	(2,027)	(386)	(8,648)
Loans and advances to banks - net of non-performing loans[1]	29,521	13,952	3,214	27,982	74,669
Deposits by banks[1]	(7,402)	(3,846)	(2,913)	(23,451)	(37,612)
Treasury bills[1]	12,889	6,558	4,782	12,160	36,389
Debt securities[1]	33,785	17,761	6,740	26,573	84,859
of which:					
Issued by governments	17,899	10,133	4,465	5,331	37,828
Issued by banks	10,636	3,027	1,205	14,675	29,543
Issued by corporate and other entities	5,250	4,601	1,070	6,567	17,488
Illiquid and encumbered securities	(3,009)	(262)	-	(4,105)	(7,376)
of which:					
Illiquid securities	(909)	(123)	-	(476)	(1,508)
Encumbered securities	(2,100)	(139)	-	(3,629)	(5,868)
Liquid assets	79,307	36,043	13,381	84,256	212,987

	2015				
	Greater China & North Asia	ASEAN & South Asia	Africa & Middle East	Europe & Americas	Total
	$million	$million	$million	$million	$million
Cash and balances at central banks	17,572	4,540	4,071	39,129	65,312
Restricted balances	(4,108)	(2,511)	(2,094)	(399)	(9,112)
Loans and advances to banks - net of non-performing loans[1]	25,972	8,292	3,222	29,242	66,728
Deposits by banks[1]	(8,313)	(5,243)	(2,729)	(21,963)	(38,248)
Treasury bills[1]	12,903	5,887	3,308	11,214	33,312
Debt securities[1]	35,549	17,043	7,654	33,633	93,879
of which:					
Issued by governments	19,553	9,056	5,332	9,395	43,336
Issued by banks	8,942	4,004	730	13,939	27,615
Issued by corporate and other entities	7,054	3,983	1,592	10,299	22,928
Illiquid and encumbered securities	(1,950)	(449)	(11)	(947)	(3,357)
of which:					
Illiquid securities	(599)	(39)	-	(572)	(1,210)
Encumbered securities	(1,351)	(410)	(11)	(375)	(2,147)
Liquid assets	77,625	27,559	13,421	89,909	208,514

1. Amounts include financial instruments held at fair value through profit or loss (see note 13)

Encumbered assets (unaudited)

Encumbered assets represent on-balance sheet assets pledged or used as collateral in respect of certain of the Group's liabilities. Hong Kong government certificates of indebtedness which secure the equivalent amount of Hong Kong currency notes in circulation, and cash collateral pledged against derivatives are included within other assets.

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

		2016							
		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 not positioned at the central bank			
	Assets	As a result of securitisations	Other	Total	Assets positioned at the central bank (ie pre-positioned plus encumbered)	Readily available for encumbrance	Other assets that are capable of being encumbered	Cannot be encumbered	Total
	$million	$million	$million	$million	$million	$million	$million	$million	$million
Cash and balances at central banks	70,706	–	–	–	8,648	62,058	–	–	70,706
Derivative financial instruments	65,509	–	–	–	–	–	–	65,509	65,509
Loans and advances to banks[1]	74,669	–	–	–	–	32,231	–	42,438	74,669
Loans and advances to customers[1]	255,896	21	–	21	–	–	–	255,875	255,875
Investment securities[1]	123,812	–	5,868	5,868	35	78,536	27,909	11,464	117,944
Other assets	36,940	–	19,674	19,674	–	–	–	17,266	17,266
Current tax assets	474	–	–	–	–	–	–	474	474
Prepayments and accrued income	2,238	–	–	–	–	–	–	2,238	2,238
Interests in associates and joint ventures	1,929	–	–	–	–	–	–	1,929	1,929
Goodwill and intangible assets	4,719	–	–	–	–	–	–	4,719	4,719
Property, plant and equipment	7,252	–	–	–	–	–	–	7,252	7,252
Deferred tax assets	1,294	–	–	–	–	–	–	1,294	1,294
Assets classified as held for sale	1,254	-	-	-	-	-	-	1,254	1,254
Total	646,692	21	25,542	25,563	8,683	172,825	27,909	411,712	621,129

		2015							
		Assets encumbered as a result of transactions with counterparties other than banks			Other assets (comprising assets encumbered at the central bank and unencumbered assets)				
						Assets not positioned at the central bank			
	Assets	As a result of securitisations	Other	Total	Assets positioned at the central bank (ie pre-positioned plus encumbered)	Readily available for encumbrance	Other assets that are capable of being encumbered	Cannot be encumbered	Total
	$million	$million	$million	$million	$million	$million	$million	$million	$million
Cash and balances at central banks	65,312	-	-	-	9,112	56,200	-	-	65,312
Derivative financial instruments	63,143	-	-	-	-	-	-	63,143	63,143
Loans and advances to banks[1]	66,769	-	-	-	-	31,121	-	35,648	66,769
Loans and advances to customers[1]	261,403	76	-	76	-	-	-	261,327	261,327
Investment securities[1]	131,846	-	2,147	2,147	230	95,539	22,425	11,505	129,699
Other assets	34,601	-	18,337	18,337	-	-	-	16,264	16,264
Current tax assets	388	-	-	-	-	-	-	388	388
Prepayments and accrued income	2,174	-	-	-	-	-	-	2,174	2,174
Interests in associates and joint ventures	1,937	-	-	-	-	-	-	1,937	1,937
Goodwill and intangible assets	4,642	-	-	-	-	-	-	4,642	4,642
Property, plant and equipment	7,209	-	-	-	-	-	-	7,209	7,209
Deferred tax assets	1,059	-	-	-	-	-	-	1,059	1,059
Total	640,483	76	20,484	20,560	9,342	182,860	22,425	405,296	619,923

1 Includes assets held at fair value through profit or loss.

In addition to the above, the Group received $54,473 million (2015: $52,841 million) as collateral under reverse repurchase agreements that was eligible for repledging; of this the Group sold or repledged $33,053 million (2015: $22,185 million) under repurchase agreements.

Readily available for encumbrance (unaudited)

Readily available for encumbrance includes unencumbered assets that can be sold outright or under repo within a few days, in line with regulatory definitions. The Group's readily available assets comprise cash and balances at central banks, loans and advances to banks, and investment securities.

Assets classified as not readily available for encumbrance include:

- Assets that have no restrictions for funding and collateral purposes, such as loans and advances to customers, which are not acquired or originated with the intent of generating liquidity value
- Assets that cannot be encumbered, such as derivatives, goodwill and intangible and deferred tax assets

Liquidity analysis of the Group's balance sheet

Contractual maturity of assets and liabilities

This above 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 cash flow.

Within the tables below cash and balances with central banks, interbank placements and investment securities that are available-for-sale are used by the Group principally for liquidity management purposes.

Assets remain predominantly short-dated, with 60 per cent maturing in under one year. Our less than three month cumulative net funding gap has improved from the previous year, in part due to shorter asset tenors including an increase in cash and balances held at central banks.

Contractual maturity

	2016								
	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	62,058	-	-	-	-	-	-	8,648	70,706
Derivative financial instruments	7,749	10,562	8,263	5,317	4,580	8,472	10,798	9,768	65,509
Loans and advances to banks[1]	32,231	23,388	10,667	3,041	2,540	1,240	1,404	158	74,669
Loans and advances to customers[1]	71,483	27,977	17,948	7,917	7,839	18,365	32,615	71,752	255,896
Investment securities	8,600	16,894	11,796	10,496	11,764	19,272	32,626	12,364	123,812
Other assets	23,357	5,379	2,857	195	1,007	60	113	23,132	56,100
Total assets	205,478	84,200	51,531	26,966	27,730	47,409	77,556	125,822	646,692
Liabilities									
Deposits by banks[1]	31,340	2,912	1,115	665	573	629	146	232	37,612
Customer accounts[1]	280,329	46,060	25,258	11,135	8,942	2,577	2,119	1,882	378,302
Derivative financial instruments	8,709	9,911	7,661	6,058	4,797	8,969	11,275	8,332	65,712
Senior debt	96	173	1,212	1,500	981	3,347	8,849	3,433	19,591
Other debt securities in issue[1]	5,916	11,188	6,883	2,687	447	860	748	4,050	32,779
Other liabilities	19,262	6,163	5,003	687	604	1,368	847	10,581	44,515
Subordinated liabilities and other borrowed funds	22	31	-	1,710	-	978	785	15,997	19,523
Total liabilities	345,674	76,438	47,132	24,442	16,344	18,728	24,769	44,507	598,034
Net liquidity gap	(140,196)	7,762	4,399	2,524	11,386	28,681	52,787	81,315	48,658

	2015								
	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	56,200	-	-	-	-	-	-	9,112	65,312
Derivative financial instruments	6,654	7,957	6,926	5,413	4,152	9,136	14,181	8,724	63,143
Loans and advances to banks[1]	31,208	16,629	9,180	3,648	2,494	1,982	1,590	38	66,769
Loans and advances to customers[1]	70,254	23,863	16,642	10,046	9,044	18,492	38,148	74,914	261,403
Investment securities[1]	7,226	14,706	15,925	10,078	7,095	19,359	40,959	16,498	131,846
Other assets	21,263	5,198	2,456	82	216	105	236	22,454	52,010
Total assets	192,805	68,353	51,129	29,267	23,001	49,074	95,114	131,740	640,483
Liabilities									
Deposits by banks[1]	32,008	2,606	1,623	867	155	414	369	206	38,248
Customer accounts[1]	283,048	33,939	20,768	8,539	7,974	1,960	1,187	1,712	359,127
Derivative financial instruments	6,830	7,510	6,878	5,137	4,324	8,552	14,304	8,404	61,939
Senior debt	1,706	170	3,484	153	1,431	2,699	7,578	4,017	21,238
Other debt securities in issue[1]	9,430	15,641	9,104	1,345	976	3,453	776	6,834	47,559
Other liabilities	17,475	5,947	3,390	553	563	797	854	12,429	42,008
Subordinated liabilities and other borrowed funds	-	-	-	-	-	3,591	4,061	14,200	21,852
Total liabilities	350,497	65,813	45,247	16,594	15,423	21,466	29,129	47,802	591,971
Net liquidity gap	(157,692)	2,540	5,882	12,673	7,578	27,608	65,985	83,938	48,512

1 Amounts include financial instruments held at fair value through profit or loss (see note 12)

Behavioural maturity of financial assets and liabilities

The cash flows 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 instruments 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. Such behavioural adjustments are identified and managed in each country through analysis of the historical behaviour of balances. The Group's expectation of when assets and liabilities are likely to become due is provided in the table below.

Behavioural maturity

	2016								
	One month or less	Between one month and three months	Between three months and six months	Between six months and nine months	Between nine months and one year	Between one year and two years	Between two years and five years	More than five years and undated	Total
	$million	$million	$million	$million	$million	$million	$million	$million	$million
Assets									
Loans and advances to banks[1]	32,287	23,359	10,668	3,091	2,654	1,187	1,265	158	74,669
Loans and advances to customers[1]	54,207	25,544	15,282	7,059	12,494	16,738	75,988	48,584	255,896
Total loans and advances	86,494	48,903	25,950	10,150	15,148	17,925	77,253	48,742	330,565
Liabilities									
Deposits by banks[1]	25,923	3,026	1,233	821	637	5,479	262	231	37,612
Customer accounts[1]	112,256	38,040	19,232	10,837	19,060	63,392	112,301	3,184	378,302
Total deposits	138,179	41,066	20,465	11,658	19,697	68,871	112,563	3,415	415,914
Net gap	(51,685)	7,837	5,485	(1,508)	(4,549)	(50,946)	(35,310)	45,327	(85,349)

	2015								
	One month or less	Between one month and three months	Between three months and six months	Between six months and nine months	Between nine months and one year	Between one year and two years	Between two years and five years	More than five years and undated	Total
	$million	$million	$million	$million	$million	$million	$million	$million	$million
Assets									
Loans and advances to banks[1]	31,091	16,647	9,053	3,549	2,779	1,965	1,647	38	66,769
Loans and advances to customers[1]	54,687	22,171	13,262	8,045	13,269	18,084	79,150	52,735	261,403
Total loans and advances	85,778	38,818	22,315	11,594	16,048	20,049	80,797	52,773	328,172
Liabilities									
Deposits by banks[1]	21,861	2,705	1,744	985	278	9,758	711	206	38,248
Customer accounts[1]	115,514	21,641	13,423	8,821	17,582	65,241	114,913	1,992	359,127
Total deposits	137,375	24,346	15,167	9,806	17,860	74,999	115,624	2,198	397,375
Net gap	(51,597)	14,472	7,148	1,788	(1,812)	(54,950)	(34,827)	50,575	(69,203)

[1] Amounts include financial instruments held at fair value through profit or loss

Maturity of financial liabilities (excluding derivative financial instruments) 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.

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.

	2016								
	One month or less	**Between one month and three months**	**Between three months and six months**	**Between six months and nine months**	**Between nine months and one year**	**Between one year and two years**	**Between two years and five years**	**More than five years and undated**	**Total**
	$million	**$million**	**$million**	**$million**	**$million**	**$million**	**$million**	**$million**	**$million**
Deposits by banks	**31,412**	**2,923**	**1,123**	**671**	**576**	**644**	**154**	**257**	**37,760**
Customer accounts	**280,731**	**46,268**	**25,539**	**11,289**	**9,074**	**2,622**	**2,177**	**2,548**	**380,248**
Debt securities in issue	**6,159**	**11,361**	**8,228**	**4,240**	**1,606**	**4,574**	**10,271**	**9,362**	**55,801**
Subordinated liabilities and other borrowed funds	**173**	**86**	**163**	**1,949**	**77**	**1,691**	**2,724**	**23,228**	**30,091**
Other liabilities	**21,139**	**6,905**	**5,059**	**769**	**612**	**1,391**	**915**	**11,459**	**48,249**
Total liabilities	**339,614**	**67,543**	**40,112**	**18,918**	**11,945**	**10,922**	**16,241**	**46,854**	**552,149**

	2015								
	One month or less	Between one month and three months	Between three months and six months	Between six months and nine months	Between nine months and one year	Between one year and two years	Between two years and five years	More than five years and undated	Total
	$million	$million	$million	$million	$million	$million	$million	$million	$million
Deposits by banks	32,030	2,615	1,629	875	161	434	393	254	38,391
Customer accounts	283,318	34,133	21,019	8,794	8,060	2,037	1,338	2,514	361,213
Debt securities in issue	11,216	15,855	12,739	1,566	2,597	6,592	9,280	13,302	73,147
Subordinated liabilities and other borrowed funds	174	92	1,200	344	147	4,571	6,415	20,136	33,079
Other liabilities	17,475	6,616	3,437	553	585	797	854	13,983	44,300
Total liabilities	344,213	59,311	40,024	12,132	11,550	14,431	18,280	50,189	550,130

1. Certain balances within Deposits by banks, Customer accounts and Other liabilities reported according to the behavioural maturity of their cash flows has been adjusted to contractual maturity. Certain transactions reported on a discounted basis have been adjusted to an undiscounted basis. The total undiscounted liabilities of the Group reported in 2015 as $549 billion has been restated to $550 billion. The relevant maturity categories have also been restated.

Maturity of derivative financial instruments on an undiscounted (notional) basis

Derivative financial instruments include those net settled derivative contracts in a net liability position, together with the pay leg of gross settled contracts regardless of whether the overall contract is in an asset or liability position. The receiving leg is not shown in this table and as a result the derivative amounts in this table are increased by their exclusion. Derivative financial instruments make up 10 per cent of the Group balance sheet.

	2016								
	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	**547,129**	**480,446**	**224,642**	**125,928**	**118,220**	**100,437**	**112,065**	**77,880**	**1,766,747**

	2015								
	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	435,036	375,963	179,355	132,034	87,710	105,856	137,942	83,673	1,537,569

Operational risk (unaudited)

We define operational risk as the potential for loss from inadequate or failed internal processes, people and systems or from the impact of external events, including legal risks.

The management of operational risk is a challenge due to its broad scope as operational risks arise from all activities carried out within the Group. To address this challenge we map risks across the Group at a processes level with controls installed to mitigate these risks. We benchmark practices against peers and regulatory requirements..

Operational risk profile

The operational risk profile is the Group's overall exposure to operational risk, at a given point in time, covering all applicable operational risk sub-types. The operational risk profile comprises both operational risk events and losses that have already occurred and the current exposures to operational risks which, at an aggregate level, includes the consideration of top risks and emerging risks.

Operational risk events and losses

Operational losses for 2016 were lower than 2015 and comprise a number of unrelated non-systemic events which were not individually significant.

The highest losses reviewed by Group committees during the year were:

- A $8.1 million provision raised in Hong Kong for alleged mis-selling. Judgement has yet to be rendered
- A $6.8 million recovery of excess spread in Nigeria

The Group's profile of operational loss events in 2016 and 2015 is summarised in the table below. It shows by Basel business line the percentage distribution of gross operational losses.

Distribution of operational losses by Basel business line	% loss	
	2016	2015[1]
Agency services	**4.7%**	0.6%
Commercial Banking	**6.5%**	23.8%
Corporate Finance	**0.0%**	0.0%
Corporate items	**15.9%**	3.7%
Payment and settlements	**13.5%**	7.8%
Retail banking	**30.6%**	46.8%
Retail brokerage	**6.0%**	1.4%
Trading and sales[2]	**22.8%**	15.9%

1. 2015 operational losses are restated to reflect incremental losses recorded

The Group's profile of operational loss events in 2016 and 2015 is also summarised by Basel event type in the table below. It shows the percentage distribution of gross operational losses by Basel event type:

Distribution of operational losses by Basel Event Type	% Loss	
	2016	2015[1]
Business disruption and system failures	**3.6%**	0.5%
Clients products and business practices	**25.3%**	15.2%
Damage to physical assets	**0.1%**	0.0%
Employment practices and workplace safety	**0.5%**	0.0%[1]
Execution delivery and process management	**49.2%**	20.1%[2]
External fraud	**19.6%**	26.7%
Internal fraud	**1.7%**	37.5%

1. 2015 operational losses are restated to reflect incremental losses recorded

Operational losses are one indicator of the effectiveness and robustness of the operational risk control environment. In addition, lessons learnt reviews and root cause analyses from external and internal loss events, including near misses, are used to improve processes and controls.

The 2016 loss distribution reflects improvements in the number of large losses compared with 2015 which impacted the Retail Banking, Trading and sales and Commercial Banking Basel business lines and the internal fraud, external fraud and clients products and business practices Basel event types. In addition, in 2016 Commercial Banking experienced a lower number of losses greater than $1m compared to 2015.

Top risks and emerging risks

A top risk is a risk exposure, or a group of highly correlated risk exposures, that has the highest potential to breach the Group's risk capacity. The objective is to identify those risks that can materially impact the Group's risk capacity, and to calibrate metrics as early warning indicators against undesirable outcomes and performance under stress. Top risk candidates are identified through a top-down assessment of concentration of exposures or aggregation of risks.

Emerging risks are also considered, both internally from the Group's internal operational risk profile and from external events. Given their significance, top risks attract closer scrutiny from management and governance committees. Top risks are expected to change over time based on the top-down assessments by management.

The Group's operational top risks as at 31 December 2016 are shown in the table below.

Standard Chartered PLC – Risk review
Risk profile

Top risk

Macro-prudential, regulatory and external risks	Internal processes, systems and change risks
• Regulatory non-compliance	• Change management
• Anti-money laundering and terrorist financing	• Data management
• International sanctions	• Major systems failure
• External fraud	• Significant business interruption
• Information and cyber security	• Rogue trading
• Critical third-party vendors	• Internal fraud
• Additional conduct	• Market misconduct
• Anti-bribery and corruption	• Mis-selling
	• Product management
	• Collateral management

Standard Chartered PLC – Capital review

Capital review

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

Capital summary

The Group's capital and leverage position is managed within the Board-approved risk appetite. We utilise capital in support of our clients, the business strategy and to meet regulatory requirements including stress testing and future loss absorption requirements. The deployment of capital is closely aligned to our strategy, which is orientated towards activities that leverage the Group's footprint and network. The Group is strongly capitalised with low leverage and high levels of loss absorbing capacity.

Capital, leverage and RWA	2016	2015
CET1 capital %	**13.6**	12.6
Tier 1 capital %	**15.7**	14.1
Total capital %	**21.3**	19.5
Leverage %	**5.7**	5.5
RWA ($million)	**269,445**	302,925

The Common Equity Tier 1 (CET1) ratio of 13.6 per cent was above the Group's target range of 12 to 13 per cent facilitating continued execution of the strategy despite the challenging external environment.

The Group has been proactive in managing its capital and loss absorbing capacity position. This was achieved through a combination of a $2 billion liability management exercise and the issuance of $2 billion Additional Tier 1 (AT1) capital, $1.25 billion Tier 2 capital and around $4.4 billion of term senior unsecured debt from the Group's holding company. Based on its understanding of the statement of policy on the Bank of England's (BoE) approach to setting a minimum requirement for own funds and eligible liabilities (MREL), the Group believes that its holding company issuance strategy positions it well for the introduction of MREL and estimates its current MREL position to be over 26 per cent of RWA and around 10 per cent of leverage exposure.

The Group's CET1 position was ahead of both the prevailing 2016 CET1 requirement of 7.1 per cent and the expected requirement for 2019 of 9.7 per cent, comprising the Pillar 1 and 2A minimum requirements and CRD IV capital buffers that are known at this time. The Group will continue to manage its capital and MREL position in the context of current and evolving requirements as they apply to the Group.

The main movements in capital in 2016 were:

- The CET1 ratio increased to 13.6 per cent due to a $33.5 billion reduction in RWAs offsetting a $1.6 billion reduction in CET1 capital as described below
- CET1 capital decreased by $1.6 billion as underlying profits were offset by restructuring charges, foreign currency translation and payments relating to Tier 1 instruments
- AT1 capital increased to $5.7 billion due to the issuance of $2 billion of AT1 securities which was partially offset by redemptions. The Group currently targets an AT1 stock of around 2.5 per cent of RWA
- Tier 2 capital decreased by $1.1 billion to $15.1 billion as the new issuance of $1.25 billion was offset by a liability management exercise, the exercise of call options and foreign currency translation
- The total capital ratio increased to 21.3 per cent due to the combination of the factors detailed above.

The Group's leverage ratio strengthened to 5.7 per cent due to the increase in end-point Tier 1 capital of $0.4 billion and a reduction in the exposure measure of $11.5 billion.

Following issuance of a further $1 billion of AT1 in January 2017 the Group's AT1 stock increased to $6.7 billion.

Standard Chartered PLC – Capital review

Capital ratios

	2016	2015
CET1	**13.6%**	12.6%
Tier 1 capital	**15.7%**	14.1%
Total capital	**21.3%**	19.5%

CRD IV Capital base

	2016 $million	2015 $million
CET1 instruments and reserves		
Capital instruments and the related share premium accounts	**5,597**	5,596
Of which: share premium accounts	**3,957**	3,957
Retained earnings[1]	**26,000**	29,128
Accumulated other comprehensive income (and other reserves)	**11,524**	12,180
Non-controlling interests (amount allowed in consolidated CET1)	**809**	582
Independently reviewed interim and year-end losses	**(247)**	(2,194)
Foreseeable dividends net of scrip	**(212)**	(115)
CET1 capital before regulatory adjustments	**43,471**	45,177
CET1 regulatory adjustments		
Additional value adjustments (prudential valuation adjustments)	**(660)**	(564)
Intangible assets (net of related tax liability)	**(4,856)**	(4,820)
Deferred tax assets that rely on future profitability (excludes those arising from temporary differences)	**(197)**	(212)
Fair value reserves related to net losses on cash flow hedges	**85**	38
Deduction of amounts resulting from the calculation of excess expected loss	**(740)**	(569)
Net gains on liabilities at fair value resulting from changes in own credit risk	**(289)**	(631)
Defined-benefit pension fund assets	**(18)**	(4)
Fair value gains arising from the institution's own credit risk related to derivative liabilities	**(20)**	(34)
Exposure amounts which could qualify for risk weighting of 1,250%	**(168)**	(199)
Of which: securitisation positions	**(134)**	(168)
Of which: free deliveries	**(34)**	(31)
Total regulatory adjustments to CET1	**(6,863)**	(6,995)
CET1 capital	**36,608**	38,182
Additional Tier 1 capital (AT1) instruments	**5,704**	4,611
AT1 regulatory adjustments	**(20)**	(20)
Tier 1 capital	**42,292**	42,773
Tier 2 capital instruments	**15,176**	16,278
Tier 2 regulatory adjustments	**(30)**	(30)
Tier 2 capital	**15,146**	16,248
Total capital	**57,438**	59,021
Total risk-weighted assets (unaudited)	**269,445**	302,925

[1] Retained earnings include the effect of regulatory consolidation adjustments

Standard Chartered PLC – Capital review

Movement in total capital

	2016 $million	2015 $million
CET1 at 1 January	**38,182**	36,013
Ordinary shares issued in the year and share premium	**1**	5,053
Loss for the year	**(247)**	(2,194)
Foreseeable dividends net of scrip deducted from CET1	**(212)**	(115)
Difference between dividends paid and forseeable dividends	**(116)**	240
Movement in goodwill and other intangible assets	**(36)**	629
Foreign currency translation differences	**(779)**	(1,878)
Unrealised gains on available-for-sale assets	**-**	481
Non-controlling interests	**227**	(1)
Movement in eligible other comprehensive income	**(579)**	(298)
Deferred tax assets that rely on future profitability	**15**	(32)
(Increase) / decrease in excess expected loss	**(171)**	1,150
Additional value adjustments (prudential valuation adjustment)	**(96)**	(368)
Own credit adjustments	**342**	(464)
Exposure amounts which could qualify for risk weighting	**31**	-
Other	**46**	(34)
CET1 at 31 December	**36,608**	38,182
AT1 at 1 January	**4,591**	2,786
Issuances net of redemptions	**1,010**	1,987
Foreign currency translation difference	**(47)**	(46)
Other	**130**	(136)
AT1 at 31 December	**5,684**	4,591
Tier 2 capital at 1 January	**16,248**	18,300
Regulatory amortisation	**(181)**	(683)
Issuances net of redemptions	**(697)**	–
Foreign currency translation difference	**(577)**	(764)
Tier 2 Ineligible minority interest	**374**	(592)
Other	**(21)**	(13)
Tier 2 capital at 31 December	**15,146**	16,248
Total capital at 31 December	**57,438**	59,021

Standard Chartered PLC – Capital review

Movements in risk-weighted assets

RWA decreased by $33.5 billion, or 11 per cent from 31 December 2015. This was mainly due to a $31.5 billion decrease in credit risk RWA and a $1.9 billion decrease in operational risk RWA. Market risk RWA remained broadly flat year-on-year.

Corporate & Institutional Banking and Commercial Banking

Corporate & Institutional Banking and Commercial Banking Credit risk RWA decreased by $24 billion due to:

- $19.1 billion reduction driven by exits from the liquidation portfolio and changes in Financial Markets and Principal Finance assets, partly offset by lower securitisation saves as a result of programme roll off
- $2.7 billion efficiencies in Financial Markets through novation, trade compressions, improved collateral and process enhancements
- $1.8 billion decrease in foreign currency translation due to depreciation of currencies in Nigeria, Europe, India and China
- $0.5 billion reduction from model, methodology and policy changes driven by credit valuation adjustment (CVA) hedges offset by other rule changes

Retail Banking

Credit risk RWA decreased by $4.8 billion, mainly due to:

- $2.7 billion reduction from model methodology and policy changes mainly due to removal of PD uplifts and a change in Taiwan where mortgages moved from the standardised approach to the advanced internal ratings-based approach (IRB)
- $1.25 billion reduction as a result of de-risking and reshaping the portfolio particularly in unsecured lending, offset by an increase in secured lending
- $0.5 billion due to the exit from the Philippines
- $0.5 billion decrease in foreign currency translation due to depreciation of currencies in China, Korea and Malaysia
- An increase of $0.1 billion in credit migration in Hong Kong and Singapore.

Private Banking

Credit risk RWA decreased by $1.2 billion to $5.1 billion, primarily due to declining asset balances driven by targeted client exits and de-risking actions, coupled with de-leveraging by clients.

Central and Other items

Credit risk RWA decreased by $1.6 billion to $41.2 billion due to:

- $1.3 billion decrease due to EU member state exposures moving from IRB to standardised
- $0.6 billion decrease in foreign currency translation due to depreciation of currencies in Nigeria, China and Ghana
- $0.2 billion decrease in credit migration relating to Treasury activities of the Group
- An increase of $0.5 billion in credit RWA due to Treasury activities and tax balances, partly offset by lower RWA balances for Investments in Associates.

Market risk

Total market risk RWA remained broadly flat at $21.9 billion. The introduction of XVA recognition and hedging in 2016 increased internal model RWA by $5.7 billion. This was offset by reductions of $5.5 billion market risk RWA across asset classes, including a reduction in our position in various structured products, especially FX Target Redemption Products. Other model, methodology and policy changes contributed a reduction of $0.2 billion RWA.

Operational risk

Operational risk RWA decreased by $1.9 billion to $33.7 billion due to the change in income over a rolling three-year time horizon with lower 2015 income replacing 2012 income.

Standard Chartered PLC – Capital review

Risk-weighted assets by business

	2016			
	Credit Risk $million	Operational Risk $million	Market Risk $million	Total Risk $million
Corporate and Institutional Banking	**106,834**	**16,703**	**19,228**	**142,765**
Retail Banking	**33,210**	**8,953**	**-**	**42,163**
Commercial Banking	**27,553**	**4,385**	**-**	**31,938**
Private Banking	**5,129**	**959**	**-**	**6,088**
Central and other items	**41,149**	**2,693**	**2,649**	**46,491**
Total risk-weighted assets	**213,875**	**33,693**	**21,877**	**269,445**

	2015			
	Credit Risk $million	Operational Risk $million	Market Risk $million	Total Risk $million
Corporate and Institutional Banking	127,528	20,547	19,660	167,735
Retail Banking	38,007	9,652	-	47,659
Commercial Banking	30,825	3,803	-	34,628
Private Banking	6,302	871	-	7,173
Central and other items	42,740	737	2,253	45,730
Total risk-weighted assets	245,402	35,610	21,913	302,925

Risk weighted assets by geographic region

	2016 $million	2015 $million
Greater China & North Asia	**76,665**	82,070
ASEAN & South Asia	**96,673**	109,730
Africa & Middle East	**52,849**	57,566
Europe & Americas	**43,487**	56,815
Central & other items	**(229)**	(3,256)
Total risk-weighted assets	**269,445**	302,925

Standard Chartered PLC – Capital review

Movement in risk weighted assets

	Credit risk								
	Corporate and Institutional Banking	Retail Banking	Commercial Banking	Private Banking	Central & other items	Total	Operational risk	Market risk	Total risk
	$million	$million	$million	$million	$million	$million	$million	$million	$million
At 1 January 2015	152,583	45,337	37,532	5,878	44,916	286,246	35,107	20,295	341,648
Assets (decline)/growth	(5,764)	(2,477)	(1,031)	213	(497)	(9,556)	–	–	(9,556)
Credit migration	(2,204)	22	(2,842)	–	(291)	(5,315)	–	–	(5,315)
Risk-weighted assets efficiencies	(15,730)	–	(1,699)	138	–	(17,291)	–	–	(17,291)
Model, methodology and policy changes	2,521	(843)	(142)	266	1,021	2,823	–	1,300	4,123
Net acquisitions and disposals	(1,108)	(1,615)	–	–	–	(2,723)	–	–	(2,723)
Foreign currency translation	(2,770)	(2,417)	(993)	(193)	(2,409)	(8,782)	–	–	(8,782)
Other non-credit risk movements	–	–	–	–	–	–	503	318	821
At 31 December 2015	127,528	38,007	30,825	6,302	42,740	245,402	35,610	21,913	302,925
Assets (decline)/growth	**(15,860)**	**(1,221)**	**(3,221)**	**(1,120)**	**493**	**(20,929)**	**-**	**-**	**(20,929)**
Credit migration	**156**	**116**	**(61)**	**-**	**(179)**	**32**	**-**	**-**	**32**
Risk-weighted assets efficiencies	**(2,722)**	**-**	**-**	**-**	**-**	**(2,722)**	**-**	**-**	**(2,722)**
Model, methodology and policy changes	**(917)**	**(2,708)**	**437**	**-**	**(1,316)**	**(4,504)**	**-**	**5,500**	**996**
Net acquisitions and disposals	**-**	**(471)**	**-**	**-**	**-**	**(471)**	**-**	**-**	**(471)**
Foreign currency translation	**(1,351)**	**(513)**	**(427)**	**(53)**	**(589)**	**(2,933)**	**-**	**-**	**(2,933)**
Other non-credit risk movements	**-**	**-**	**-**	**-**	**-**	**-**	**(1,917)**	**(5,536)**	**(7,453)**
At 31 December 2016	**106,834**	**33,210**	**27,553**	**5,129**	**41,149**	**213,875**	**33,693**	**21,877**	**269,445**

Standard Chartered PLC – Capital review

Leverage ratio

The Group's leverage ratio of 5.7 per cent was above the current minimum requirement of 3.1 per cent and the expected future requirement of 3.4 per cent from 2019 which comprises: (i) the minimum 3 per cent; (ii) a 0.35 per cent Global Systemically Important Institutions (G-SII) leverage ratio buffer; and (iii) a 0.05 per cent countercyclical leverage ratio buffer, based on currently known pending countercyclical capital buffer rates and assuming a constant proportion of exposures to the relevant jurisdictions. The strengthening of the leverage ratio in 2016 was due to a small increase in end point Tier 1 capital and a reduction in the exposure measure.

The current calculation of the leverage ratio as well as the minimum requirement could be impacted by the Basel Committee on Banking Supervision (BCBS) consultation on revisions to the Basel III leverage ratio framework.

Leverage ratio

	2016 $million	2015 $million
Tier 1 capital (transitional)	42,292	42,773
Additional Tier 1 capital subject to phase out	(1,735)	(2,624)
Tier 1 capital (end point)	40,557	40,149
Derivative financial instruments	65,509	63,143
Derivative cash collateral	14,230	13,430
Securities financing transactions (SFTs)	44,916	36,765
Loans and advances and other assets	522,037	527,145
Total-on-balance sheet assets	646,692	640,483
Regulatory consolidation adjustments	11,950	12,826
Derivatives adjustments		
Derivatives netting	(38,737)	(38,766)
Adjustments to cash collateral	(23,449)	(23,252)
Net written credit protection	7,311	8,922
Potential future exposure on derivatives	49,607	58,379
Total derivatives adjustments	(5,268)	5,283
Counterparty risk leverage exposure measure for SFTs	10,412	11,299
Regulatory deductions and other adjustments	(6,553)	(6,331)
Off-balance sheet items	60,535	65,660
Total leverage exposure (end point)	717,768	729,220
Leverage ratio (end point)	5.7%	5.5%
Quarterly average exposure measure	731,115	N/A
Quarterly average leverage ratio	5.6%	N/A
Countercyclical leverage ratio buffer	-	N/A

Advanced internal ratings-based models

Since 1 January 2008, the Group has been using the advanced internal ratings-based (IRB) approach for the calculation of credit risk capital requirements with the approval of our relevant regulators. For a market risk Internal Model Approach (IMA), where IMA permission has been granted by our relevant regulators, we use value at risk (VaR) for the calculation of our market risk capital requirements. Where our market risk exposures are not included in a regulatory IMA permission we apply the standardised approach as specified by the relevant regulator. We apply the standardised approach for determining the capital requirements for operational risk.

The Prudential Regulation Authority (PRA) has proposed changes to the treatment of certain exposures where the country-specific default experience is not deemed sufficient for modelling purposes, including the application of various loss given default floors based on the Foundation IRB (FIRB) approach. Such changes are likely to result in an increase in the RWA for these exposures, with the ultimate impact dependent on PRA approval of the revisions to the relevant models.

In December 2014, the BCBS released two consultative documents (CD306 and CD307) on:

(i) the design of a capital floor framework based on standardised approaches for credit, market and operational risk;

(ii) revisions to the standardised approach for credit risk.

In December 2015 the BCBS released a second consultation on the revisions to the standardised approaches for credit risk, significantly modifying the initial proposal following industry feedback, and in March 2016 a new consultative document (CD362) proposing additional constraints on the use of internal model approaches was published.

The proposed changes could result in an increase in the RWA calculated by such approaches, but the eventual impact will depend on the final outcome of the consultation process and the calibration of the capital floor. Regulators have expressed the expectation that the changes would not add to system-wide capital requirements.

The Group participates actively in the consultation process alongside a variety of industry associations. While the BCBS intended to publish the final standards, including their calibration and implementation arrangements, by the end of 2016, it recently communicated that it requires more time to finalise the package, with an expectation to complete this work in the near future. The extent to which the EU and/or the PRA will adopt the BCBS proposals is unknown.

CET1 requirements

Based on the Group's understanding of the rules, its current expected CET1 requirement for 2019 is 9.7 per cent, comprising:

- A minimum Pillar 1 CET1 requirement of 4.5 per cent
- A Pillar 2A CET1 requirement of around 1.6 per cent (subject to ongoing PRA assessment) being 56 per cent of the total Pillar 2A requirement
- A capital conservation buffer of 2.5 per cent by 1 January 2019
- A G-SII buffer of 1.0 per cent by 1 January 2019
- A countercyclical capital buffer of around 0.1 per cent, effective from 1 January 2017

Any further countercyclical capital buffer applied to the Group would increase the Group's CET1 requirement. The Group's countercyclical capital buffer is determined by applying various country-specific countercyclical buffer rates to the Group's qualifying credit exposures in the relevant country (based on the jurisdiction of the obligor).

The Combined Buffer comprises the Group's capital conservation buffer, G-SII buffer and the countercyclical capital buffer. The Pillar 1 and Pillar 2A CET1 requirements and Combined Buffer requirement together represent the Group's Maximum Distributable Amount threshold. The Group is expected to be subject to restrictions on discretionary distributions if the CET1 ratio goes below this threshold.

The Group expects to continue to operate with a prudent management buffer above this threshold.

Pillar 2

At 31 December 2016 the Group's Pillar 2A requirement was equivalent to around 2.8 per cent of RWA of which at least 1.6 per cent must be held in CET1. The Group's Pillar 2A requirement is expected to vary over time.

Over time, the Group may also be subject to a PRA buffer. The PRA buffer is intended to ensure the Group remains well-capitalised during periods of stress. When setting the Group's PRA buffer, it is understood that the PRA considers results from the Bank of England (BoE) stress test, the biennial exploratory scenario, and bank-specific scenarios undertaken as part of Internal Capital Adequacy Assessment Processes (ICAAPs), as well as other relevant information. The PRA buffer is additional to the existing CRD IV buffer requirements, and is applied if and to the extent that the PRA considers the existing CRD IV buffers do not adequately address the Group's risk profile. The PRA buffer is not disclosed.

Global Systemically Important Institutions

The Group has been designated a G-SII by the Financial Stability Board (FSB) since November 2012. The Group has been categorised with a 1.0 per cent G-SII CET1 buffer which began to be phased in from 1 January 2016 and will be fully implemented by 1 January 2019. The buffer phases in at a rate of 0.25 per cent per year.

Loss Absorbing Capacity

The Group will also be set an MREL requirement under the EU Bank Recovery and Resolution Directive. In November 2016, the BoE published its final statement of policy on MREL, which confirmed that the BoE intends to use its power to set MREL to implement the FSB's Total Loss Absorbing Capacity standard for G-SIIs. MREL will be phased in between 2019 and 2022. For G-SIIs, the transitional requirements are expected to be as follows:

- From 1 January 2019 – the higher of 16 per cent of RWAs or 6 per cent of leverage exposure
- From 1 January 2020 – the higher of two times Pillar 1 requirement and one times Pillar 2A requirement or two times the applicable leverage ratio requirement

- From 1 January 2022 – the higher of two times the sum of Pillar 1 and Pillar 2A requirement or the higher of two times the applicable leverage ratio requirement or 6.75 per cent of leverage exposure

Before the end of 2020, it is expected that the BoE will review its general approach to the calibration of MREL, and the final transition date, prior to setting end-state MRELs. The BoE has indicated that in doing so, it will have particular regard to any intervening changes in the UK regulatory framework as well as institutions' experience in issuing MREL resources to meet their interim MRELs. The BoE has also indicated it will also take into account any changes to regulatory capital requirements, including the likely changes to the capital framework arising from the work of the BCBS.

The PRA also published a supervisory statement in November 2016 on the relationship between MREL and regulatory buffers, in which the PRA set out its policy, based on key aspects of the FSB standards, that CET1 used to meet the MREL cannot also be used to meet the Combined Buffer or the PRA Buffer.

On 23 November 2016, the European Commission published legislative proposals for amendments to the Capital Requirements Regulation, CRD IV, the Bank Recovery and Resolution Directive and the Single Resolution Mechanism Regulation. The proposed reforms are to be considered by the European Parliament and the Council of the European Union and remain subject to change. The final package of reforms may not include all elements of the proposals and new or amended elements may be introduced. Until the proposals are in final form it is uncertain how they will affect the Group.

Based on the methodology set out in the BoE's final statement of policy, the Group estimates its MREL position, as at 31 December 2016, to be over 26 per cent of RWA and around 10 per cent of leverage exposure. This estimate is the sum of:

- Regulatory capital with at least one year remaining to maturity, excluding some externally issued regulatory capital instruments issued under non-EEA law
- That part of subordinated debt (issued by Standard Chartered PLC) with at least one year remaining to maturity, which is outside the scope of regulatory capital recognition due to: (i) amortisation over the last five years of the relevant instrument's duration or (ii) other regulatory de-recognition
- Senior liabilities issued by Standard Chartered PLC with at least one year remaining to maturity.

Bank of England stress test

In 2016, the BoE adopted a stress test assuming an annual cyclical scenario approach whereby the severity of stress applied would negatively correspond to the current strength of a particular economy. Overall the 2016 stress test was more severe than the 2015 stress test.

In November 2016, the BoE released the results of the 2016 stress test. The Group met both the CET1 capital ratio and the Leverage ratio requirements after the impact of strategic management actions. The PRA Board concluded that the Group did not meet its Tier 1 risk-weighted capital requirement including Pillar 2A but determined that, in light of the steps the Group subsequently took in 2016 to strengthen its capital position, it did not require the Group to submit a revised capital plan. The Group has a strong and liquid balance sheet and the results of the 2016 stress test demonstrate its resilience to a severe global stress scenario.

The Group's stress test hurdle rates are (i) a CET1 hurdle rate comprising the Pillar 1 CET1 minimum and the Group's prevailing CET1 Pillar 2A requirement; and (ii) a Tier 1 leverage hurdle rate of 3 per cent. The Group's systemic reference points for both CET1 and leverage also include the phased component of the Group's G-SII buffer. In deciding whether a bank should take action to strengthen its capital position the PRA may also consider a bank's Tier 1 and total capital ratios under stress.

IFRS 9 Financial Instruments

IFRS 9 introduces new requirements for loan loss provisions to be determined based on forward-looking expected credit loss models, the adoption of which may also have a capital impact, in particular on the CET1 capital base reflecting an anticipated increase in the stock of impairment provisions under an expected credit loss model.

Other than that noted there are no proposed changes to the overall regulatory framework in response to IFRS 9 before the effective date of 1 January 2018. On that basis the Group continues to assess the impact that IFRS 9 will have on its consolidated financial statements. At this stage it is impracticable to provide a robust and reliable estimate of the potential effect and the subsequent impact on regulatory capital.

Standard Chartered PLC – Capital review

Capital management and governance

The Group seeks to maintain a strong capital base to support the development of its business and to meet regulatory capital, leverage and loss absorbing capacity requirements.

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 and an efficient mix of the different components of capital are maintained to support our strategy and business plans. Group 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
- Demand for capital due to business outlook, loan impairment outlook and potential market shocks or stresses
- Available supply of capital and capital raising options.

The Group formulates a capital plan with the help of internal models and other quantitative techniques. The Group uses a capital model to assess the capital demand for material risks and supports this with our internal capital adequacy assessment. Other internal models help to estimate potential future losses arising from credit, market and other risks and, using regulatory formulae, the amount of capital required to support them. In addition the models enable the Group to gain an enhanced understanding of its risk profile, for example by identifying potential concentrations and assessing the impact of portfolio management actions.

Stress testing and scenario analysis are an integral part of capital planning, and are used to ensure that the Group's internal capital adequacy assessment considers the impact of extreme but plausible scenarios on its risk profile and capital position. They provide an insight into the potential impact of significant adverse events and how these could be mitigated through appropriate management actions. The capital modelling process is a key part of our management discipline.

A strong governance and process framework is embedded in our capital planning and assessment methodology. The key capital management committee is the Group Asset and Liability Committee (GALCO). In 2016, members of the GALCO included the Group Executive Directors, the Group Chief Risk Officer, the Group Treasurer, Regional CEOs and the heads of the Group's businesses, with additional senior attendees from Finance, Risk and the businesses. The GALCO regularly reviews the capital plan and approves capital management policies and guidelines.

Additionally the Operational Balance Sheet Committee (OBSC), focuses on ensuring that, in executing the business strategy, the Group operates within internally approved and externally required capital, loss absorbing capacity, liquidity and leverage risk appetite.

The Group's capital position, including its relationship to the Group's risk appetite statement, is regularly considered by the Board Risk Committee. At a country level, capital is monitored by the Country Asset and Liability Committee. Appropriate policies are in place governing the transfer of capital within the Group.

The Group's view is that, in light of the uncertain economic environment and continuing uncertainty as to the end state for banks' regulatory capital and other loss absorbency requirements, it is appropriate to remain both strongly capitalised and above regulatory requirements.

The capital that the Group is required to hold is determined by its balance sheet, off-balance sheet, counterparty and other risk exposures.

Capital in branches and subsidiaries is maintained on the basis of host regulators' requirements and the Group's assessment of capital requirements under normal and stressed conditions. Suitable processes and controls are in place to monitor and manage capital adequacy and ensure compliance with local regulatory requirements in all Group entities. These processes are designed to ensure that we have sufficient capital available to meet local regulatory capital requirements.

Standard Chartered Bank is authorised by the PRA and regulated by the Financial Conduct Authority and the PRA. The Group operates through branches and a number of significant subsidiaries including Standard Chartered Bank, Standard Chartered Bank (HK) Limited and Standard Chartered Bank Korea Limited. These subsidiaries are subject to local regulation and, therefore may be subject to different rules relating to capital and RWA requirements and the implementation and phasing of Basel III. The Group's 2016 Pillar 3 Disclosures provide further details on these subsidiaries.

Standard Chartered PLC – Statement of directors' responsibilities

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

Company law requires the directors to prepare the 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 (IFRS), as adopted by the European Union (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 year. 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 and prudent
- State whether they have been prepared in accordance with IFRS as adopted by the EU
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and the Company will continue in business

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 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 Directors' report, Strategic report, Directors' remuneration report and Corporate governance statement that comply 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.

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

Directors' responsibility statement

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
- 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

By order of the Board

Andy Halford
Group Chief Financial Officer
24 February 2017

Standard Chartered PLC
Consolidated income statement
For the year ended 31 December 2016

	Notes	2016 $million	2015 $million
Interest income		13,010	14,613
Interest expense		(5,216)	(5,206)
Net interest income	3	7,794	9,407
Fees and commission income		3,671	4,088
Fees and commission expense		(440)	(481)
Net fees and commission income	4	3,231	3,607
Net trading income	5	1,886	912
Other operating income	6	1,149	1,363
Operating income		14,060	15,289
Staff costs		(6,303)	(7,119)
Premises costs		(797)	(831)
General administrative expenses		(2,372)	(2,559)
Depreciation and amortisation		(739)	(664)
Operating expenses		(10,211)	(11,173)
Operating profit before impairment losses and taxation		3, 849	4,116
Impairment losses on loans and advances and other credit risk provisions	7	(2,791)	(4,976)
Other impairment			
Goodwill	8	(166)	(488)
Other	8	(446)	(367)
(Loss)/profit from associates and joint ventures		(37)	192
Profit/(loss) before taxation		409	(1,523)
Taxation	9	(600)	(673)
Loss for the year		(191)	(2,196)

		2016	2015
Profit/(loss) attributable to:			
Non-controlling interests		56	(2)
Parent company shareholders		(247)	(2,194)
Loss for the year		(191)	(2,196)

		cents	cents
Earnings per share:			
Basic loss per ordinary share	11	(14.5)	(91.9)
Diluted loss per ordinary share	11	(14.5)	(91.9)

The notes form an integral part of these financial statements.

Standard Chartered PLC
Consolidated statement of comprehensive income
For the year ended 31 December 2016

	2016 $million	2015 $million
Loss for the year	**(191)**	(2,196)
Other comprehensive loss		
Items that will not be reclassified to income statement:	**(445)**	(67)
Own credit losses on financial liabilities designated at fair value through profit or loss	(372)	-
Actuarial losses on retirement benefit obligations	(105)	(57)
Taxation relating to components of other comprehensive income	32	(10)
Items that may be reclassified subsequently to income statement:	**(968)**	(2,227)
Exchange differences on translation of foreign operations:		
Net losses taken to equity	(817)	(2,003)
Net gains on net investment hedges	30	90
Share of other comprehensive loss from associates and joint ventures	(11)	-
Available-for-sale investments:		
Net valuation gains/(losses) taken to equity	48	(57)
Reclassified to income statement	(188)	(328)
Cash flow hedges:		
Net losses taken to equity	(79)	(71)
Reclassified to income statement	57	107
Taxation relating to components of other comprehensive income	(8)	35
Other comprehensive loss for the year, net of taxation	**(1,413)**	(2,294)
Total comprehensive loss for the year	**(1,604)**	(4,490)
Total comprehensive loss attributable to:		
Non-controlling interests	45	(40)
Parent company shareholders	(1,649)	(4,450)
	(1,604)	(4,490)

Standard Chartered PLC
Consolidated balance sheet
As at 31 December 2016

	Notes	2016 $million	2015 $million
Assets			
Cash and balances at central banks		**70,706**	65,312
Financial assets held at fair value through profit or loss	12	**20,077**	23,401
Derivative financial instruments		**65,509**	63,143
Loans and advances to banks		**72,609**	64,494
Loans and advances to customers		**252,719**	257,356
Investment securities		**108,972**	114,767
Other assets		**36,940**	34,252
Current tax assets		**474**	388
Prepayments and accrued income		**2,238**	2,174
Interests in associates and joint ventures		**1,929**	1,937
Goodwill and intangible assets		**4,719**	4,642
Property, plant and equipment		**7,252**	7,209
Deferred tax assets		**1,294**	1,059
Assets classified as held for sale		**1,254**	349
Total assets		**646,692**	640,483
Liabilities			
Deposits by banks		**36,894**	37,611
Customer accounts		**371,855**	350,633
Financial liabilities held at fair value through profit or loss		**16,598**	20,872
Derivative financial instruments		**65,712**	61,939
Debt securities in issue		**46,700**	59,880
Other liabilities		**33,146**	31,939
Current tax liabilities		**327**	769
Accruals and deferred income		**5,223**	5,451
Subordinated liabilities and other borrowed funds		**19,523**	21,852
Deferred tax liabilities		**353**	293
Provisions for liabilities and charges		**213**	215
Retirement benefit obligations		**525**	445
Liabilities included in disposal groups held for sale		**965**	72
Total liabilities		**598,034**	591,971
Equity			
Share capital and share premium account		**7,091**	7,088
Other reserves		**11,524**	12,182
Retained earnings		**25,753**	26,934
Total parent company shareholders' equity		**44,368**	46,204
Other equity instruments		**3,969**	1,987
Total equity excluding non-controlling interests		**48,337**	48,191
Non-controlling interests		**321**	321
Total equity		**48,658**	48,512
Total equity and liabilities		**646,692**	640,483

The notes to the accounts form an integral part of these financial statements.

These financial statements were approved by the Board of directors and authorised for issue on 24 February 2017 and signed on its behalf by:

José Viñals	**Bill Winters**	**Andy Halford**
Chairman	Group Chief Executive	Group Chief Financial Officer

Standard Chartered PLC
Consolidated statement of changes in equity
For the year ended 31 December 2016

	Share capital and share premium account $million	Capital and merger reserve[1] $million	Own credit adjustment reserve $million	Available-for-sale 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
At 1 January 2015	6,718	12,439	-	456	(57)	(3,148)	30,024	46,432	-	306	46,738
Loss for the year	-	-	-	-	-	-	(2,194)	(2,194)	-	(2)	(2,196)
Other comprehensive (loss)/income, net of taxation	-	-	-	(324)	11	(1,878)	(65)[2]	(2,256)	-	(38)	(2,294)
Distributions	-	-	-	-	-	-	-	-	-	(26)	(26)
Shares issued, net of expenses	370	4,683	-	-	-	-	-	5,053	-	-	5,053
Other equity instruments issued, net of expenses	-	-	-	-	-	-	-	-	1,987	-	1,987
Net own shares adjustment	-	-	-	-	-	-	(58)	(58)	-	-	(58)
Share option expense, net of taxation	-	-	-	-	-	-	148	148	-	-	148
Dividends, net of scrip[3]	-	-	-	-	-	-	(921)	(921)	-	-	(921)
Other movements[4]	-	-	-	-	-	-	-	-	-	81	81
As at 31 December 2015	**7,088**	**17,122**	**-**	**132**	**(46)**	**(5,026)**	**26,934**	**46,204**	**1,987**	**321**	**48,512**
Transfer of own credit adjustment[5]	**-**	**-**	**631**	**-**	**-**	**-**	**(631)**	**-**	**-**	**-**	**-**
(Loss)/profit for the year	**-**	**-**	**-**	**-**	**-**	**-**	**(247)**	**(247)**	**-**	**56**	**(191)**
Other comprehensive loss, net of taxation	**-**	**-**	**(342)**	**(136)**	**(39)**	**(779)**	**(106)[2]**	**(1,402)**	**-**	**(11)**	**(1,413)**
Distributions	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(37)**	**(37)**
Shares issued, net of expenses	**3**	**7**	**-**	**-**	**-**	**-**	**-**	**10**	**-**	**-**	**10**
Other equity instruments issued, net of expenses	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**1,982**	**-**	**1,982**
Net own shares adjustment	**-**	**-**	**-**	**-**	**-**	**-**	**(46)**	**(46)**	**-**	**-**	**(46)**
Share option expense, net of taxation	**-**	**-**	**-**	**-**	**-**	**-**	**80**	**80**	**-**	**-**	**80**
Dividends, net of scrip[3]	**-**	**-**	**-**	**-**	**-**	**-**	**(231)**	**(231)**	**-**	**-**	**(231)**
Other movements[6]	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**(8)**	**(8)**
As at 31 December 2016	**7,091**	**17,129**	**289**	**(4)**	**(85)**	**(5,805)**	**25,753**	**44,368**	**3,969**	**321**	**48,658**

1 Includes capital reserve of $5 million and capital redemption reserve of $13 million

2 Comprises actuarial loss, net of taxation and share from associates and joint ventures of $106 million (2015: $67 million)

3 Comprises dividends paid $nil million (2015: $755 million) and dividends on preferences shares classified as equity and Additional Tier 1 securities $231 million (2015: $166 million)

4 Additional investment from non-controlling interests in one of the Group's subsidiary undertakings

5 Following Group early adopting IFRS 9 Financial Instruments to present own credit adjustments within Other comprehensive income (rather than Net trading income)

6 Predominantly due to completion of sale of business with non-controlling interest in Pakistan and issuance of shares to non-controlling interests in Angola

The notes to the accounts form an integral part of these financial statements.

Standard Chartered PLC
Cash flow statement
For the year ended 31 December 2016

	Notes	Group 2016 $million	Group 2015 $million	Company 2016 $million	Company 2015 $million
Cash flows from operating activities					
Profit/(loss) before taxation		**409**	(1,523)	**192**	883
Adjustments for non-cash items and other adjustments included within income statement		**4,615**	6,949	**703**	(246)
Change in operating assets		**(8,286)**	36,812	**110**	209
Change in operating liabilities		**13,080**	(70,244)	**(619)**	(57)
Contributions to defined benefit schemes		**(98)**	(109)	**-**	-
UK and overseas taxes paid		**(1,287)**	(1,285)	**(12)**	(23)
Net cash from/(used) in operating activities		**8,433**	(29,400)	**374**	766
Cash flows from investing activities					
Purchase of property, plant and equipment		**(195)**	(130)	**-**	-
Disposal of property, plant and equipment		**23**	109	**-**	-
Acquisition of investment in subsidiaries, associates and joint ventures, net of cash acquired		**(238)**	-	**(5,500)**	(3,500)
Dividends received from associates and joint ventures		**3**	12	**204**	973
Disposal of subsidiaries		**636**	667	**-**	-
Purchase of investment securities		**(207,274)**	(209,519)	**(4,000)**	-
Disposal and maturity of investment securities		**210,857**	195,457	**1,300**	-
Net cash from/(used) in investing activities		**3,812**	(13,404)	**(7,996)**	(2,527)
Cash flows from financing activities					
Issue of ordinary and preference share capital, net of expenses		**10**	5,053	**10**	5,053
Exercise of share options		**5**	10	**5**	10
Purchase of own shares	16	**(51)**	(68)	**(51)**	(68)
Issue of Additional Tier 1 capital, net of expenses		**1,982**	1,987	**1,982**	1,987
Proceeds from issue of subordinated liabilities		**1,250**	-	**1,250**	-
Interest paid on subordinated liabilities		**(920)**	(1,082)	**(604)**	(606)
Repayment of subordinated liabilities		**(2,666)**	(5)	**(105)**	-
Proceeds from issue of senior debt		**5,453**	5,388	**4,385**	4,248
Repayment of senior debt		**(6,470)**	(6,947)	**(3,941)**	(4,548)
Interest paid on senior debt		**(454)**	(584)	**(365)**	**(460)**
(Investment in)/repayment from non-controlling interests		**(8)**	82	**-**	-
Dividends paid to non-controlling interests and preference shareholders		**(268)**	(192)	**(231)**	(166)
Dividends paid to ordinary shareholders, net of scrip		**-**	(755)	**-**	(755)
Net cash (used in)/from financing activities		**(2,137)**	2,887	**2,335**	4,695
Net increase/(decrease) in cash and cash equivalents		**10,108**	(39,917)	**(5,287)**	2,934
Cash and cash equivalents at beginning of the year		**88,428**	129,870	**20,517**	17,583
Effect of exchange rate movements on cash and cash equivalents		**(1,559)**	(1,525)	**-**	-
Cash and cash equivalents at end of the year		**96,977**	88,428	**15,230**	20,517

The notes to the accounts form an integral part of these financial statements.

Standard Chartered PLC – Notes to the financial statements

1. Accounting Policies

Basis of preparation and significant accounting policies

The basis of preparation and summary of significant accounting policies applicable to these consolidated financial statements can be found in Note 1, or the relevant Note, in the Annual Report and Accounts 2016.

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 Group financial statements have been prepared and approved by the directors in accordance with IFRS and IFRS Interpretations Committee interpretations as endorsed by the EU.

At 31 December 2016, there were no unendorsed standards effective for the year end 31 December 2016 that affect these consolidated financial statements and there was no difference between IFRSs endorsed by the EU and IFRSs issued by the IASB in terms of their application to the Group.

Prior period re-presentation

In November 2015 the Group announced a reorganisation of its business to better align the Group's structure to client segments with clear local or global needs and to streamline the geographic regions. This approach aligns with how the client segments and regions are managed internally. These changes became effective on 1 January 2016. In accordance with IFRS 8 *Operating Segments* the Group has therefore made changes to the composition of its client segments and geographic regions. This representation has not resulted in any changes to the reported income or balances in total at a Group level and now is the basis upon which the Group reports.

Comparatives

Certain comparatives have been changed to comply with current year disclosures. Details of these changes are set out in the relevant notes below:

- Note 12 Financial instruments
- Note 13 Contingent liabilities and commitments

IFRS and Hong Kong Listing Rules

There are no significant differences between EU-endorsed IFRS and Hong Kong Financial Reporting Standards, and would be no significant differences had these accounts been prepared in accordance with Hong Kong Financial Reporting Standards.

New standards applicable during the year

There were no new standards applied during the year ended 31 December 2016.

Following the EU adoption of IFRS 9 Financial Instruments in November 2016, the Group elected to early apply the requirements for the presentation of gains and losses on financial liabilities designated as at fair value through profit or loss relating to own credit in other comprehensive income rather than net trading income (without applying the other requirements in IFRS 9). As a result, in 2016 the Group's own credit adjustment loss of $372 million was reported within equity instead of through the income statement. The own credit amounts are accounted for as a separate category of equity. Opening retained earnings has been adjusted to reclassify the cumulative own credit adjustment component of the cumulative fair value adjustment on financial liabilities designated at fair value through profit or loss. These amounts will not be recycled to the income statement but will be recycled to retained earnings on derecognition of the applicable instruments. In accordance with IFRS.9 prior periods have not been restated

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, Private Banking, Commercial Banking and Retail Banking. The four geographic regions are Greater China & North Asia, ASEAN & South Asia, Africa & Middle East, and Europe & America. Activities not directly related to a client segment and/or geographic region is included in Central & other items. This mainly includes Corporate Centre costs, Asset and Liability Management, 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
- Asset and Liability Management, 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 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 allocates central costs (excluding Corporate Centre costs) relating to client segments and geographic regions using appropriate business drivers and these are reported within operating expenses. An analysis of the Group's performance by client segment and geographic regions is set out the Client business review and Regional review section.

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 location is more important for an assessment. Segmental information is therefore on a Management View unless otherwise stated.

Restructuring items excluded from underlying results

Income, costs and impairment relating to identifiable business units, products or portfolios from the date that have been approved for restructuring, disposal, wind down or redundancy as a consequence of the Strategy Review announced 3 November 2015 are presented as restructuring and excluded from the underlying results of the Group. This includes realised and unrealised gains and losses from management's decisions to dispose of assets as well as residual income, direct costs and impairment of related legacy assets of those identifiable business units, products or portfolios.

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3. Net Interest income

	2016 $million	2015 $million
Balances at central banks	**213**	238
Treasury bills	**593**	647
Loans and advances to banks	**1,282**	1,020
Loans and advances to customers	**8,461**	10,266
Listed debt securities	**604**	712
Unlisted debt securities	**1,569**	1,623
Accrued on impaired assets (discount unwind)	**288**	107
Interest income	**13,010**	14,613
Deposits by banks	**494**	396
Customer accounts	**3,187**	3,472
Debt securities in issue	**700**	773
Subordinated liabilities and other borrowed funds	**835**	565
Interest expense	**5,216**	5,206
Net interest income	**7,794**	9,407
Of which from financial instruments held at:		
Amortised cost	**10,056**	11,808
Available-for-sale	**2,291**	2,425
Fair value through profit or loss	**663**	380
Interest income	**13,010**	14,613
Of which from financial instruments held at:		
Amortised cost	**5,107**	5,073
Fair value through profit or loss	**109**	133
Interest expense	**5,216**	5,206
Net interest income	**7,794**	9,407

4. Net fees and commission

	2016 $million	2015 $million
Fees and commissions income	**3,671**	4,088
Fees and commissions expense	**(440)**	(481)
Net fees and commission	**3,231**	3,607
Transaction Banking	**1,194**	1,302
Financial Markets	**(62)**	(73)
Corporate Finance	**521**	552
Wealth Management	**1,089**	1,210
Retail Products	**464**	557
Asset and Liability Management	**(22)**	(29)
Lending and Portfolio Management	**50**	66
Principal Finance	**3**	4
Others	**(6)**	18
Net fees and commission	**3,231**	3,607

Total fee income arising from financial instruments that are not fair valued through profit or loss is $1,035 million (2015: $1,190 million) and arising from trust and other fiduciary activities of $115 million (2015: $156 million)

Total fee expense arising from financial instruments that are not fair valued through profit or loss is $56 million (2015: $40 million) and arising from trust and other fiduciary activities of $17 million (2015: $25 million)

5. Net trading income

	2016 $million	2015 $million
Trading income	1,886	417[1]
Own credit adjustment[2]	-	495
	1,886	912

[1] 2015 Trading income includes $863 million valuation losses relating to the change in the methodology of calculating the CVA and FVA
[2] 2016 balance reported in other comprehensive income

Significant items within net trading income include:

- Gains of $2,102 million (2015: $760 million) on instruments held for trading
- Losses of $73 million (2015: $118 million) on financial assets designated at fair value through profit or loss and losses of $178 million (2015: $391 million) on financial liabilities designated at fair value

6. Other operating income

	2016 $million	2015 $million
Other operating income includes:		
Rental income from operating lease assets	561	550
Gains less losses on disposal of financial instruments:	192	336
Available-for-sale	192	332
Loans and receivables	-	4
Net gain on sale of businesses	284	222
Dividend income	52	111
Other	60	144
	1,149	1,363

7. Impairment losses on loans and advances and other credit risk provisions

	2016 $million	2015 $million
Net charge against profit on loans and advances:		
Individual impairment charge	2,553	4,820
Portfolio impairment charge/(release)	52	(4)
	2,605	4,816
Impairment charges related to credit commitments	45	94
Impairment charges relating to debt securities classified as loans and receivables	97	66
Impairment charges relating to credit risk mitigation instruments	44	-
Total impairment losses and other credit risk provisions on loans and advances	2,791	4,976

Impairment charges relating to credit risk mitigation instruments

The Group executed funded credit mitigation transactions related to the Liquidation Portfolio, which did not achieve derecognition and are recorded as liabilities on an amortised cost basis. The liability balances are adjusted for revisions to the impairment estimates for the loans referenced in the transactions. Both impairment losses on the referenced loans and the related impairment on these credit mitigation transactions are recorded in total impairment losses and other credit risk provisions on loans and advances.

An analysis of impairment provisions on loans and advances by client segment is set out within the Risk review

8. Other impairment

	2016 $million	2015 $million
Impairment of goodwill	166	488
Other impairment		
Impairment of fixed assets	131	149
Impairment losses on available-for-sale financial assets:		
- Debt securities	54	5
- Equity shares	246	142
Impairment of investment in associates	-	46
Impairment of acquired intangible assets	-	1
Other	15	42
Recovery of impairment on disposal of instruments[1]	-	(18)
	446	367
Total other impairment	612	855

[1] Relates to private equity instruments sold that had impairment provisions raised against them in prior years

9. Taxation

The following table provides analysis of taxation charge in the year.

	2016 $million	2015 $million
The charge for taxation based upon the profit/(loss) for the year comprises:		
Current tax:		
United Kingdom corporation tax at 20.0 per cent (2015: 20.25 per cent):		
Current tax charge/(credit) on income for the year	10	(15)
Adjustments in respect of prior years (including double taxation relief)	(74)	57
Double taxation relief	-	(4)
Foreign tax:		
Current tax charge on income for the year	786	1,084
Adjustments in respect of prior years	84	49
	806	1,171
Deferred tax:		
Origination/reversal of temporary differences	(136)	(526)
Adjustments in respect of prior years	(70)	28
	(206)	(498)
Tax on profit/(loss) on ordinary activities	600	673
Effective tax rate	nm[1]	nm[1]

[1] Not meaningful

Foreign taxation includes current taxation on Hong Kong profits of $109 million (31 December 2015: $131 million) on the profits assessable in Hong Kong.

Deferred taxation includes origination or reversal of temporary differences in Hong Kong profits of $(4) million (2015: $(12) million) provided at a rate of 16.5 per cent (2015: 16.5 per cent) on the profits assessable to Hong Kong.

The tax charge for the year of $600 million (2015: $673 million) on a profit before taxation of $409 million (2015: loss before taxation of $1,523 million) reflects the impact of deferred tax assets not recognised relating to UK tax losses, non-deductible expenses and the impact of countries with tax rates higher or lower than the UK, the most significant of which is India. In addition, the impact of non-taxable losses on investments increased due to losses on Principal Finance investments.

Taxation rate: The taxation charge for the year is higher than the charge at the rate of corporation tax in the United Kingdom, 20.0 per cent. The differences are explained below:

	2016 $million	2015 $million
Profits/(loss) on ordinary activities before taxation	**409**	(1,523)
Tax at 20.0 per cent (2015: 20.25 per cent)	**82**	(308)
Lower tax rates on overseas earnings	**(5)**	(42)
Higher tax rates on overseas earnings	**269**	230
Tax free income	**(117)**	(131)
Share of associates and joint ventures	**13**	(30)
Non-deductible expenses	**201**	201
Bank levy	**77**	89
Non-taxable losses on investments	**120**	36
Non-taxable gains on investments and disposals of businesses	**(41)**	(44)
Goodwill impairment	**33**	99
Deferred tax not recognised	**93**	314
Adjustments to tax charge in respect of prior years	**(60)**	134
Other items	**(65)**	125
Tax on profit/(loss) on ordinary activities	**600**	673

10. Dividends

Ordinary equity shares

	2016		2015	
	Cents per share	$million	Cents per share	$million
2015/2014 final dividend declared and paid during the year	-	-	54.44	1,412
2016/2015 interim dividend declared and paid during the year	-	-	13.71	366
		-		1,778

Preference shares and Additional Tier 1 securities

Dividends on these preference shares and securities classified as equity are recorded in the year in which they are declared.

		2016 $million	2015 $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	**48**	48
		101	101
Additional Tier 1 securities: $2 billion fixed rate resetting perpetual subordinated contingent convertible securities		**130**	65
		231	166

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	**10**	11
	8 ¼ per cent preference shares of £1 each	**11**	13
		21	24

11. Earnings per share

The table below provides the basis of normalised earnings.

	2016 $million	2015 $million
Loss for the year attributable to equity holders	(191)	(2,196)
Non-controlling interest	(56)	2
Dividends payable on preference shares and AT1 classified as equity	(231)	(166)
Loss for the year attributable to ordinary shareholders	(478)	(2,360)
Items normalised:		
Restructuring	855	1,845
Gains arising on repurchase of subordinated liabilities	(84)	-
Goodwill impairment (Included within Other impairment)	166	362
Net gain on business disposed/held for sale (Included within Other operating income)	(253)	(218)
Other items	-	13
Tax on normalised items (included within Taxation)[1]	(95)	(179)
Credit and funding valuation methodology adjustment (included within Net trading income)	-	863
Own credit adjustment (included within net trading income)	-	(495)
`		
Normalised profit/(loss)	111	(169)
Basic - Weighted average number of shares (millions)	3,291	2,568
Diluted - Weighted average number of shares (millions)	3,305	2,568
Basic loss per ordinary share (cents)	(14.5)	(91.9)
Diluted loss per ordinary share (cents)[2]	(14.5)	(91.9)
Normalised basic earnings/(loss) per ordinary share (cents)	3.4	(6.6)
Normalised diluted earnings/(loss) per ordinary share (cents)	3.4	(6.6)

1 No tax is included in respect of the impairment of goodwill as no tax relief is available

2 The impact of any diluted options has been excluded from this amount as required by IAS 33 *Earnings per share*

12. Financial Instruments

Classification

Assets	Assets at fair value: Trading $million	Assets at fair value: Derivatives held for hedging $million	Assets at fair value: Designated at fair value through profit or loss $million	Assets at fair value: Available-for-sale $million	Assets at amortised cost: Loans and receivables $million	Assets at amortised cost: Held-to-maturity $million	Non-financial assets $million	Total $million
Cash and balances at central banks	-	-	-	-	70,706	-	-	70,706
Financial assets held at fair value through profit or loss								
Loans and advances to banks[1]	267	-	1,793	-	-	-	-	2,060
Loans and advances to customers[1]	936	-	2,241	-	-	-	-	3,177
Debt securities	12,025	-	354	-	-	-	-	12,379
Equity shares	425	-	751	-	-	-	-	1,176
Treasury bills	1,285	-	-	-	-	-	-	1,285
	14,938	-	5,139	-	-	-	-	20,077
Derivative financial instruments	64,433	1,076	-	-	-	-	-	65,509
Loans and advances to banks[1]	-	-	-	-	72,609	-	-	72,609
Loans and advances to customers[1]	-	-	-	-	252,719	-	-	252,719
Investment securities								
Debt securities	-	-	-	69,204	3,106	170	-	72,480
Equity shares	-	-	-	1,388	-	-	-	1,388
Treasury bills	-	-	-	35,104	-	-	-	35,104
	-	-	-	105,696	3,106	170	-	108,972
Other assets	-	-	-	-	33,942	-	2,998	36,940
Assets held for sale	-	-	-	-	1,102	-	152	1,254
Total at 31 December 2016	79,371	1,076	5,139	105,696	434,184	170	3,150	628,786

Assets	Assets at fair value: Trading $million	Assets at fair value: Derivatives held for hedging $million	Assets at fair value: Designated at fair value through profit or loss $million	Assets at fair value: Available-for-sale $million	Assets at amortised cost: Loans and receivables $million	Assets at amortised cost: Held-to-maturity $million	Non-financial assets $million	Total $million
Cash and balances at central banks	-	-	-	-	65,312	-	-	65,312
Financial assets held at fair value through profit or loss								
Loans and advances to banks[1]	92	-	2,183	-	-	-	-	2,275
Loans and advances to customers[1]	3,008	-	1,039	-	-	-	-	4,047
Debt securities	12,896	-	389	-	-	-	-	13,285
Equity shares	2,237	-	698	-	-	-	-	2,935
Treasury bills	859	-	-	-	-	-	-	859
	19,092	-	4,309	-	-	-	-	23,401
Derivative financial instruments	61,812	1,331	-	-	-	-	-	63,143
Loans and advances to banks[1]	-	-	-	-	64,494	-	-	64,494
Loans and advances to customers[1]	-	-	-	-	257,356	-	-	257,356
Investment securities								
Debt securities	-	-	-	77,684	2,700	210	-	80,594
Equity shares	-	-	-	1,720	-	-	-	1,720
Treasury bills	-	-	-	32,453	-	-	-	32,453
	-	-	-	111,857	2,700	210	-	114,767
Other assets	-	-	-	-	32,408	-	1,844	34,252
Assets held for sale[2]	-	-	-	-	-	-	349	349
Total at 31 December 2015	80,904	1,331	4,309	111,857	422,270	210	2,193	623,074

1 Further analysed in Risk review

2 $1.3 billion of Loans and advances to banks presented as 'Trading' in 2015 has been re-categorised to'Designated at fair value through profit or loss'. These loans were designated at inception as fair value through profit or loss and have always been measured at fair value. There is no change in measurement or classification on the balance sheet. There was no impact to the relevant income statement disclosures.

Liabilities	Liabilities at fair value: Trading $million	Liabilities at fair value: Derivatives held for hedging $million	Liabilities at fair value: Designated at fair value through profit or loss $million	Amortised cost $million	Non-financial liabilities $million	Total $million
Financial liabilities held at fair value through profit or loss						
Deposits by banks	-	-	718	-	-	718
Customer accounts	-	-	6,447	-	-	6,447
Debt securities in issue	-	-	5,670	-	-	5,670
Short positions	3,763	-	-	-	-	3,763
	3,763	-	12,835	-	-	16,598
Derivative financial instruments	62,917	2,795	-	-	-	65,712
Deposits by banks	-	-	-	36,894	-	36,894
Customer accounts	-	-	-	371,855	-	371,855
Debt securities in issue	-	-	-	46,700	-	46,700
Other liabilities	-	-	-	32,958	188	33,146
Subordinated liabilities and other borrowed funds	-	-	-	19,523	-	19,523
Liabilities included in disposal groups held for sale	-	-	-	958	7	965
Total at 31 December 2016	66,680	2,795	12,835	508,888	195	591,393

Liabilities	Liabilities at fair value					
	Trading	Derivatives held for hedging	Designated at fair value through profit or loss	Amortised cost	Non-financial liabilities	Total
	$million	$million	$million	$million	$million	$million
Financial liabilities held at fair value through profit or loss						
Deposits by banks	-	-	637	-	-	637
Customer accounts	-	-	8,494	-	-	8,494
Debt securities in issue	-	-	8,917	-	-	8,917
Short positions	2,824	-	-	-	-	2,824
	2,824	-	18,048	-	-	20,872
Derivative financial instruments	59,390	2,549	-	-	-	61,939
Deposits by banks	-	-	-	37,611	-	37,611
Customer accounts	-	-	-	350,633	-	350,633
Debt securities in issue	-	-	-	59,880	-	59,880
Other liabilities	-	-	-	31,525	414	31,939
Subordinated liabilities and other borrowed funds	-	-	-	21,852	-	21,852
Liabilities included in disposal groups held for sale[1]	-	-	-	-	72	72
Total at 31 December 2015	62,214	2,549	18,048	501,501	486	584,798

1 Previously included within Other liabilities

Debt securities, equity shares and treasury bills held at fair value through profit or loss

	2016			
	Debt Securities	Equity Shares	Treasury bills	Total
	$million	$million	$million	$million
Issued by public bodies:				
Government securities	7,343			
Other public sector securities	77			
	7,420			
Issued by banks:				
Certificates of deposit	406			
Other debt securities	1,546			
	1,952			
Issued by corporate entities and other issuers:				
Other debt securities	3,007			
Total debt securities	12,379			
Of which:				
Listed on a recognised UK exchange	164	-	-	164
Listed elsewhere	7,595	44	504	8,143
Unlisted	4,620	1,132	781	6,533
	12,379	1,176	1,285	14,840
Market value of listed securities	7,759	44	504	8,307

	2015			
	Debt Securities	Equity Shares	Treasury bills	Total
	$million	$million	$million	$million
Issued by public bodies:				
Government securities	8,091			
Other public sector securities	88			
	8,179			
Issued by banks:				
Certificates of deposit	87			
Other debt securities	1,327			
	1,414			
Issued by corporate entities and other issuers:				
Other debt securities	3,692			
Total debt securities	13,285			
Of which:				
Listed on a recognised UK exchange	116	-	-	116
Listed elsewhere	8,516	1,648	282	10,446
Unlisted	4,653	1,287	577	6,517
	13,285	2,935	859	17,079
Market value of listed securities	8,632	1,648	282	10,562

Reclassification of financial assets

In 2008, the Group reclassified certain eligible financial assets from trading and available for sale, to loans and receivables where the Group had the intent and ability to hold the reclassified assets for the foreseeable future or until maturity. This reclassification was made possible through the circumstances of the credit crisis in financial markets which significantly impacted the liquidity in certain markets. The carrying value and fair value of securities reclassified into loans and advances is $79 million (2015: $123 million) and $80 million (2015: $120 million) respectively. If the reclassifications had not been made, the Group's income statement for 2016 would have included a net gain on the reclassified trading assets of $1 million (2015: loss of $2 million). There have been no reclassifications since 2008.

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 obtain (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.

	2016					
				Related amount not offset in the balance sheet		
	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	Financial instruments $million	Financial collateral $million	Net amount $million
Assets						
Derivative financial instruments	**73,822**	**(8,313)**	**65,509**	**(40,391)**	**(9,624)**	**15,494**
Reverse repurchase agreements	**42,389**	**-**	**42,389**	**-**	**(42,389)**	**-**
As at 31 December 2016	**116,211**	**(8,313)**	**107,898**	**(40,391)**	**(52,013)**	**15,494**
Liabilities						
Derivative financial instruments	**74,025**	**(8,313)**	**65,712**	**(40,391)**	**(14,230)**	**11,091**
Sale and repurchase liabilities	**37,692**	**-**	**37,692**	**-**	**(37,692)**	**-**
As at 31 December 2016	**111,717**	**(8,313)**	**103,404**	**(40,391)**	**(51,922)**	**11,091**

	2015					
				Related amount not offset in the balance sheet		
	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	Financial instruments $million	Financial collateral $million	Net amount $million
Assets						
Derivative financial instruments	69,872	(6,729)	63,143	(38,934)	(10,074)	14,135
Reverse repurchase agreements	32,637	-	32,637	-	(32,637)	-
As at 31 December 2015	102,509	(6,729)	95,780	(38,934)	(42,711)	14,135
Liabilities						
Derivative financial instruments	68,668	(6,729)	61,939	(38,934)	(13,430)	9,575
Sale and repurchase liabilities	20,606	-	20,606	-	(20,606)	-
As at 31 December 2015	89,274	(6,729)	82,545	(38,934)	(34,036)	9,575

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 repo and repo agreements respectively and excludes the effect of over-collateralisation.

Loans and advances held at fair value through profit or loss

The maximum exposure to credit risk for loans designated at fair value through profit or loss was $4,034 million (2015: $3,222 million). The net fair value gain on loans and advances to customers designated at fair value through profit or loss was $17 million (2015: $2 million). Of this, $1 million (2015: $ nil million) related to changes in credit risk. The cumulative fair value movement relating to changes in credit risk was $2 million (2015: $3 million).

Financial liabilities designated at fair value through profit or loss

	2016 $million	2015 $million
Carrying balance aggregate fair value	12,835	18,048
Amount contractually obliged to repay at maturity	12,941	18,404
Difference between aggregate fair value and contractually obliged to repay at maturity	(106)	(356)
Cumulative change in FV accredited to credit risk Difference[1]	331	703

[1] The Group has early adopted IFRS 9 Financial Instruments to present own credit adjustments within other comprehensive income

The net fair value gain on financial liabilities designated at fair value through profit or loss was $178 million for the year (2015: net loss of $104 million). The amount includes $nil million (2015: gain $495 million) relating to changes in credit risk.

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 to instruments with 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 adjustments and escalation of valuation issues. Independent price verification is the process of determining 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 those 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.

Formal committees for the business clusters, consisting of representatives from Group Market Risk, Product Control, Valuation Control and the business meet monthly to discuss and approve the valuations of the inventory. The Principal Finance valuation committee meetings are held on a quarterly basis. The business cluster valuation committees fall under the Valuation Benchmarks Committee (VBC) as part of the valuation governance structure.

Valuation techniques

Refer to Fair value hierarchy – Financial instruments held at fair value for definitions

- **Financial instruments held at fair value**

  Loans and advances: These include loans in the global syndications business which were not syndicated as of the balance sheet date and other financing transactions within Financial Markets. These loans are generally bilateral in nature and their valuation is primarily based on recent trades or proxies i.e. comparable loans with similar credit grade, sector. Products are classified as Level 2 in cases where observable credit spreads applicable to those products are available. Where there are no recent transactions and reliable comparable loans to proxy from, the valuation of these loans is based on unobservable inputs resulting in them being classified as Level 3.

  Debt securities - asset backed securities: Asset backed securities are priced 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 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.

  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.

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. 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, alternate valuation techniques (for example, discounted cash flow models), which use predominantly unobservable inputs or level 3 inputs, may be applied. Even though earnings 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, OTC prices) are classified as Level 3 on the basis that the valuation methods involve judgments ranging from determining comparable companies to discount rates where the discounted cash flow method is applied.

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. These unobservable correlation parameters could only be implied from the market, through methods such as historical analysis and comparison to historical levels or benchmark data.

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, valuation 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.

- Financial instruments held at amortised cost

  The following sets out the Group's basis of 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 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.
  - ***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 amounts. 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 re-prices 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, subject to any significant movement in credit spreads. 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, where appropriate, credit spreads. 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.
  - ***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 inputs proxies from the same or closely related underlying (for example, bond spreads from the same or closely related issuer) or inputs 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 relate to asset backed securities. The fair value for such instruments is usually proxies from internal assessments of the underlying cash flows. The Group has a wide range of individual investments within the unlisted debt securities portfolio. Given the number of instruments involved, providing quantification of the key assumptions used to value such instruments is impractical, with no one assumption being material.
  - ***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. Following the adoption of IFRS 13 the Group also adjusts the fair value of deposits and borrowings for own credit adjustment using the principles described above.
  - ***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.

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 in determining fair value for financial assets and financial liabilities are as follows:

Valuation adjustments	2016 $million	2015 $million
Bid-offer	**106**	72
Credit[1]	**443**	815
Own Credit	**331**	703
Model	**6**	13
Funding	**248**	366
Others (including day one)	**132**	169
Total	**1,266**	2,138

[1] Includes debit valuation adjustments on derivatives

- ***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 adjustments 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 applying the probability of default (PD) on the potential estimated future positive exposure of the counterparty using market-implied PD. Where market-implied data is not readily available, we use market based proxies to estimate the PD. The methodologies do not, in general, account for 'wrong-way risk'. Wrong-way risk arises when the underlying value of the derivative prior to any CVA is positively correlated to the probability of default by the counterparty. The Group continues to include 'wrong-way risk' in its Prudential Valuation Adjustments.

  In 2015 the Group enhanced its methodology for estimating the CVA for derivatives. Prior to 2015 the CVA was based on an expected counterparty loss calculation using historical default probabilities whereas the enhanced methodology uses market-implied default probabilities. In addition, the funding valuation adjustment (FVA) was also enhanced moving from bank internal funding rates to market-based rates. The net effect of the changes in estimates in 2015 was to reduce net trading income by $863 million.
- ***Debit valuation adjustment (DVA):*** The Group calculates DVA adjustments to reflect changes in its own credit standing. The Group's DVA adjustments are calculated on its derivative liabilities. The Group's DVA adjustments will increase if its credit standing worsens and conversely, decrease if its credit standing improves. The Group's DVA adjustments will reverse over time as its derivatives mature. 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 internally assessed credit ratings and market standard recovery levels. The expected exposure is modelled based on simulation methodology and is generated through simulation of 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. The methodology used to determine a DVA adjustment on derivative liabilities is consistent with the methodology used to determine CVA on derivative assets
- ***Own credit adjustment (OCA):*** The Group calculates OCA adjustments to reflect changes in its own credit standing. The Group's OCA adjustments are calculated on its issued debt designated at fair value, including structured notes. 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 debt issuance spreads above average interbank rates

  In December 2016, the Group refined its calculation of OCA by incorporating a more accurate calculation of the expected maturity of callable structured notes. This calculation change is treated as a change in estimate and resulted in a decrease in the OCA balance of $141 million
- ***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

- ***Funding valuation adjustment (FVA):*** The Group makes FVA adjustment 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. The FVA calculation was previously based on the Group's internal funding rates. As at 31 December 2015, the calculation was revised to use market based rates. The change in estimate reduced net trading income by $151 million
- ***Day one 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 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

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.

Assets	Level 1 $million	Level 2 $million	Level 3 $million	Total $million
Financial instruments held at fair value through profit or loss				
Loans and advances to banks	-	2,060	-	2,060
Loans and advances to customers	-	2,998	179	3,177
Treasury bills	795	490	-	1,285
Debt securities	3,454	8,921	4	12,379
Of which:				
Government bonds	3,249	3,752	-	7,001
Issued by corporates other than financial institutions	77	2,467	3	2,547
Issued by financial institutions	128	2,702	1	2,831
Equity shares	181	-	995	1,176
Derivative financial instruments	513	64,636	360	65,509
Of which:				
Foreign exchange	52	53,706	324	54,082
Interest rate	14	9,858	6	9,878
Commodity	447	879	-	1,326
Credit	-	171	-	171
Equity and stock index	-	22	30	52
Investment securities				
Treasury bills	29,602	5,367	135	35,104
Debt securities	28,945	40,195	64	69,204
Of which:				
Government bonds	17,400	9,124	38	26,562
Issued by corporates other than financial institutions	6,928	7,741	24	14,693
Issued by financial institutions	4,617	23,330	2	27,949
Equity shares	798	41	549	1,388
Total at 31 December 2016	64,288	124,708	2,286	191,282

Liabilities	Level 1 $million	Level 2 $million	Level 3 $million	Total $million
Financial instruments held at fair value through profit or loss				
Deposits by banks	-	718	-	718
Customer accounts	-	6,447	-	6,447
Debt securities in issue	-	5,140	530	5,670
Short positions	1,845	1,918	-	3,763
Derivative financial instruments	547	64,849	316	65,712
Of which:				
Foreign exchange	52	53,838	233	54,123
Interest rate	25	9,911	25	9,961
Commodity	470	628	-	1,098
Credit	-	442	30	472
Equity and stock index	-	30	28	58
Total at 31 December 2016	2,392	79,072	846	82,310

There have been no significant changes to valuation or levelling approaches in 2016.

There are no significant transfers of financial assets and liabilities measured at fair value between Level 1 and Level 2 during the year.

Assets	Level 1 $million	Level 2 $million	Level 3 $million	Total $million
Financial instruments held at fair value through profit or loss				
Loans and advances to banks	-	2,275	-	2,275
Loans and advances to customers	-	3,815	232	4,047
Treasury bills	810	49	-	859
Debt securities	4,492	8,537	256	13,285
Of which:				
Government bonds	4,181	3,993	12	8,186
Issued by corporates other than financial institutions	21	2,555	141	2,717
Issued by financial institutions	290	1,989	103	2,382
Equity shares	2,122	-	813	2,935
Derivative financial instruments	736	61,929	478	63,143
Of which:				
Foreign exchange	67	46,901	291	47,259
Interest rate	1	11,735	9	11,745
Commodity	668	2,838	-	3,506
Credit	-	303	35	338
Equity and stock index	-	152	143	295
Investment securities				
Treasury bills	28,978	3,393	82	32,453
Debt securities	34,868	42,559	257	77,684
Of which:				
Government bonds	20,435	10,356	53	30,844
Issued by corporates other than financial institutions	10,005	8,818	204	19,027
Issued by financial institutions	4,428	23,385	-	27,813
Equity shares	872	7	841	1,720
Total at 31 December 2015	72,878	122,564	2,959	198,401

Liabilities	Level 1 $million	Level 2 $million	Level 3 $million	Total $million
Financial instruments held at fair value through profit or loss				
Deposits by banks	-	637	-	637
Customer accounts	-	8,493	1	8,494
Debt securities in issue	-	8,422	495	8,917
Short positions	1,222	1,602	-	2,824
Derivative financial instruments	695	60,925	319	61,939
Of which:				
Foreign exchange	86	47,681	246	48,013
Interest rate	-	11,913	38	11,951
Commodity	609	818	-	1,427
Credit	-	300	14	314
Equity and stock index	-	213	21	234
Total at 31 December 2015	1,917	80,079	815	82,811

There are no significant transfers of financial assets and liabilities measured at fair value between Level 1 and Level 2 during 2015

Standard Chartered PLC – Notes to the financial statements

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.

		Fair value			
	Carrying value $million	Level 1 $million	Level 2 $million	Level 3 $million	Total $million
Assets					
Cash and balances at central banks[1]	70,706	-	70,706	-	70,706
Loans and advances to banks	72,609	-	72,545	-	72,545
Loans and advances to customers	252,719	-	7,762	244,662	252,424
Investment securities	3,276	-	3,252	6	3,258
Other assets[1]	33,942	-	33,942	-	33,942
Assets held for sale	1,102	-	-	1,102	1,102
At 31 December 2016	434,354	-	188,207	245,770	433,977
Liabilities					
Deposits by banks	36,894	-	36,762	-	36,762
Customer accounts	371,855	-	371,823	-	371,823
Debt securities in issue	46,700	17,132	29,568	-	46,700
Subordinated liabilities and other borrowed funds	19,523	18,655	177	-	18,832
Other liabilities[1]	32,958	-	32,958	-	32,958
Liabilities included in disposal group held for sale	958	-	958	-	958
At 31 December 2016	508,888	35,787	472,246	-	508,033

[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

		Fair value			
	Carrying value $million	Level 1 $million	Level 2 $million	Level 3 $million	Total $million
Assets					
Cash and balances at central banks[1]	65,312	-	65,312	-	65,312
Loans and advances to banks	64,494	-	64,522	161	64,683
Loans and advances to customers	257,356	-	6,547	250,334	256,881
Investment securities	2,910	-	2,836	71	2,907
Other assets [1]	32,408	-	32,409	-	32,409
At 31 December 2015	422,480	-	171,626	250,566	422,192
Liabilities					
Deposits by banks	37,611	-	38,058	-	38,058
Customer accounts	350,633	-	350,614	-	350,614
Debt securities in issue	59,880	17,612	42,230	-	59,842
Subordinated liabilities and other borrowed funds	21,852	20,495	426	-	20,921
Other liabilities[1]	31,525	-	31,525	-	31,525
At 31 December 2015	501,501	38,107	462,853	-	500,960

[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

Standard Chartered PLC – Notes to the financial statements

Level 3 Summary and significant unobservable inputs

The following table presents the Group's primary Level 3 financial instruments which are held at the fair value and the valuation techniques used to measure those instruments, the significant unobservable inputs, the range of values for those inputs and the weighted average of those inputs.

Instrument	Value at 31 December 2016 Assets $million	Liabilities $million	Principal valuation technique	Significant unobservable inputs	Range[1]	Weighted average[2]
Loans and advances to customers	179	-	Comparable pricing/yield	Recovery rates	2.7% to 45.8%	18.7%
Debt securities[2]	25	-	Comparable pricing/yield	Price/yield	3.5% to 14.5%	9.3%
Asset backed securities	5	-	Discounted cash flows	Credit spreads	0.4% to 13.5%	6.5%
Debt securities in issue	-	530	Discounted cash flows	Price/yield	0.5% to 4.0%	1.7%
Government bonds	173	-	Discounted cash flows	Price/yield	2.3% to 23.8%	10.9%
Derivative financial instruments of which:						
Foreign exchange	324	233	Option pricing model	Foreign exchange option implied volatility	10.4% to 18.8%	16.7%
Interest rate	6	25	Discounted cash flows	Interest rate curves	0.2% to 20.8%	7.0%
Credit	-	30	Discounted cash flows	Credit spreads	0.5% to 4.0%	2.0%
Equity	30	28	Internal pricing model	Equity correlation	-35.0% to 92.0%	N/A
				Equity-FX correlation	-87.0% to 91.0%	N/A
Equity shares (includes private equity investments)	1,544	-	Comparable pricing/Yield	EV/EBITDA multiples	7.7x to 26.6x	10.6x
				P/E multiples	7.6x to 22.3x	16.9x
				P/B multiples	1.4x	1.4x
				P/S multiple	1.7x to 2.6x	2.4x
				Liquidity discount	10% to 20%	19.0%
			Discounted cash flows	Discount rates	9.9%	9.9%
Total	2,286	846				

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 2016. 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.

The following section describes the significant unobservable inputs identified in the valuation technique table:

- **Credit spreads** represent the additional yield that a market participant would demand for taking exposure to the credit risk of an instrument.
- **Recovery rates** is 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.
- **Comparable price/yield** is a valuation methodology in which a 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.
- **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.
- **Interest rate curves** is the term structure of interest rates and measure of future interest rates at a particular point of time.
- **EV/EBITDA ratio multiples 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 multiple in isolation, will result in a favourable movement in the fair value of the unlisted firm.
- **Price-Earnings (P/E) multiples** 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.
- **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-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.

Level 3 movement

The table below analyses movements in Level 3 financial assets carried at fair value.

	Held at fair value through profit or loss				Investment securities			
	Loans and advances to customers	Debt securities	Equity shares	Derivative financial instruments	Treasury bills	Debt securities	Equity shares	Total
Assets	$million	$million	$million	$million	$million	$million	$million	$million
At 1 January 2016	232	256	813	478	82	257	841	2,959
Total (losses)/gains recognised in income statement	(87)	4	(268)	44	-	(64)	(198)	(569)
Net trading income	(87)	4	(268)	44	-	-	-	(307)
Other operating income	-	-	-	-	-	-	(7)	(7)
Impairment charge	-	-	-	-	-	(64)	(191)	(255)
Total (losses)/gains recognised in other comprehensive income	-	-	-	-	-	(4)	1	(3)
Available-for-sale	-	-	-	-	-	-	5	5
Exchange difference	-	-	-	-	-	(4)	(4)	(8)
Purchases	-	73	300	32	91	13	121	630
Sales	(6)	(197)	(60)	(13)	-	(50)	(36)	(362)
Settlements	(67)	(10)	-	(54)	-	(23)	-	(154)
Transfers out[1]	(100)	(122)	-	(127)	(38)	(82)	(180)	(649)
Transfers in[2]	207	-	210	-	-	17	-	434
At 31 December 2016	179	4	995	360	135	64	549	2,286
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 2016	(87)	5	(258)	24	-	-	-	(316)
Total unrealised losses recognised in the income statement, within impairment charges at 31 December 2016	-	-	-	-	-	(64)	(191)	(255)

[1]Transfers out during the year primarily relate to certain equity loans and advances and corporate debt securities where the valuation parameters became observable during the year and were transferred to Level 1 and Level 2 financial assets

[2]Transfers in during the year primarily relate to loans and advances, equity shares and debt securities where the valuation parameters become unobservable during the year

	Held at fair value through profit or loss				Investment securities			
Assets	Loans and advances to customers $million	Debt securities $million	Equity shares $million	Derivative financial instruments $million	Treasury bills $million	Debt securities $million	Equity shares $million	Total $million
At 1 January 2015	640	395	808	575	-	360	953	3,731
Total (losses)/gains recognised in income statement	(441)	5	(75)	22	-	(17)	(24)	(530)
Net trading income	(441)	5	(75)	22	-	-	19	(470)
Other operating income	-	-	-	-	-	-	30	30
Impairment charge	-	-	-	-	-	(17)	(73)	(90)
Total losses recognised in other comprehensive income	-	-	-	(4)	(1)	(49)	(20)	(74)
Available-for-sale reserve	-	-	-	-	-	(29)	(15)	(44)
Exchange difference	-	-	-	(4)	(1)	(20)	(5)	(30)
Purchases	3	80	375	101	44	-	398	1,001
Sales	-	(161)	(357)	(72)	-	(116)	(304)	(1,010)
Settlements	-	(25)	-	(81)	(22)	(52)	-	(180)
Transfers out[1]	-	(185)	-	(78)	(78)	(123)	(162)	(626)
Transfers in[2]	30	147	62	15	139	254	-	647
At 31 December 2015	232	256	813	478	82	257	841	2,959
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 2015	(430)	6	(66)	33	-	-	-	(457)
Total unrealised (losses)/gains recognised in the income statement, within impairment charges at 31 December 2015						(17)	1	(16)

[1]Transfers out during the year primarily relate to debt securities in issue and 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 debt securities in issue and derivative financial instruments for which parameters became unobservable during the year

Level 3 movement tables – Financial liabilities

	2016			
	Customer accounts	Debt securities in issue	Derivative financial instruments	Total
	$million	$million	$million	$million
At 1 January 2016	1	495	319	815
Total (gains)/losses recognised in income statement - Net trading income	-	1	31	32
Issues	-	268	78	346
Settlements	-	(237)	(74)	(311)
Transfers out[1]	(1)	-	(38)	(39)
Transfers in[2]	-	3	-	3
At 31 December 2016	-	530	316	846
Total losses recognised in the income statement, within net trading income, relating to change in fair value of liabilities held at 31 December 2016	-	5	39	44

	2015			
	Customer accounts	Debt securities in issue	Derivative financial instruments	Total
	$million	$million	$million	$million
At 1 January 2015	1	208	296	505
Total losses recognised in income statement - Net trading income	-	11	6	17
Issues	-	310	40	350
Settlements	-	(176)	(26)	(202)
Transfers out[1]	-	-	(3)	(3)
Transfers in[2]	-	142	6	148
At 31 December 2015	1	495	319	815
Total losses recognised in the income statement, within net trading income, relating to change in fair value of liabilities held at 31 December 2015	-	-	16	16

[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 debt securities for which parameters became 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 apply a 10 per cent increase or decrease on the values of these unobservable reasonably possible alternatives inputs, which could have increased fair values of financial instruments 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			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	**4**	**4**	**4**	**64**	**64**	**64**
Equity shares	**995**	**1,095**	**896**	**549**	**604**	**494**
Loan and advances	**179**	**187**	**171**	**-**	**-**	**-**
Treasury bills	**-**	**-**	**-**	**135**	**136**	**134**
Derivative financial instruments	**44**	**158**	**25**	**-**	**-**	**-**
Debt securities in issue	**(530)**	**(521)**	**(539)**	**-**	**-**	**-**
At 31 December 2016	**692**	**923**	**557**	**748**	**804**	**692**
Financial instruments held at fair value						
Debt securities	256	261	251	257	266	247
Equity shares	813	895	731	841	937	745
Loan and advances	231	259	217	-	-	-
Treasury bills	-	-	-	82	83	81
Derivative financial instruments	159	423	(106)	-	-	-
Debt securities in issue	(495)	(482)	(508)	-	-	-
At 31 December 2015	964	1,356	585	1,180	1,286	1,073

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 available-for-sale by the amounts disclosed below.

Financial instruments	Fair value changes	**2016 $million**	2015 $million
Designated at fair value through profit or loss	Possible increase	**231**	392
	Possible decrease	**(135)**	(379)
Available-for-sale	Possible increase	**56**	106
	Possible decrease	**(56)**	(107)

13. Contingent liabilities and commitments

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.

	2016 $million	2015 $million
Contingent liabilities		
Guarantees and irrevocable letters of credit	**33,551**	29,694
Other contingent liabilities	**3,839**	9,361
	37,390	39,055
Commitments		
Documentary credits and short-term trade-related transactions	**4,120**	4,852
Forward asset purchases and forward deposits placed	**6**	69
Undrawn formal standby facilities, credit lines and other commitments to lend		
One year and over	**38,108**	45,327
Less than one year	**17,547**	14,104
Unconditionally cancellable	**118,330**	123,036
	178,111	187,388

Capital commitments

Contracted capital expenditure approved by the directors but not provided for in these accounts	**1,736**	1

[1] $461 million of derivative notionals reported in 2015 as forward asset purchases and forward deposits placed has been restated to $69 million. Accordingly, total reported commitments of the Group in 2015 was $187.8 billion and has been restated to $187.4 billion.

The Group's share of contingent liabilities and commitments relating to joint ventures is $246 million (2015: $286 million).

The Group has committed to purchase 16 aircraft for delivery in 2017 and 2018. The combined purchase commitment for these orders totals a maximum of $1.7 billion. Pre-delivery payments of $0.4 billion have been made to date in respect of these aircraft.

14. Legal and regulatory matters

The Group receives legal claims against it in a number of jurisdictions and is a party to regulatory matters arising in the normal course of business. Apart from the matters described below, the Group currently considers none of these claims and proceedings as material.

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'). 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). These obligations are managed under a programme of work referred to as the US Supervisory Remediation Program (SRP). The SRP comprises work streams designed to ensure compliance with the remediation requirements contained in all of the Settlements.

On 9 December 2014, the Group announced that the DOJ, DANY and the Group had agreed to a three-year extension of the DPAs until 10 December 2017, and to the retention of a monitor to evaluate and make recommendations regarding the Group's sanctions compliance programme. The DOJ agreement acknowledges that the Group has taken a number of steps to comply with the requirements of the original DPAs and to enhance and optimise its sanctions compliance, including the implementation of more rigorous US sanctions policies and procedures, certified staff training, hiring of senior legal and financial crime compliance staff, and recently implementing additional measures to block payment instructions for countries subject to US sanctions laws and regulations. The Group will work closely with the authorities to make additional substantial improvements to its US sanctions programme to reach the standard required by the DPAs.

The Group is engaged with all relevant authorities to implement these programmes and meet the obligations under the Settlements.

2014 Settlement with NYDFS

On 19 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 are summarised as follows:

(i) A civil monetary penalty of $300 million

(ii) Enhancements to the transaction surveillance system at the Branch

(iii) A two-year extension to the term of the Monitor which we expect to be further extended

(iv) The following set of temporary remediation measures, which will remain in place until the transaction surveillance system's detection scenarios are operating to a standard approved by the Monitor:

  (a) The Branch will not, without prior approval of the NYDFS in consultation with the Monitor, open a dollar demand deposit account for any client that does not already have such an account with the Branch

  (b) Requirements for inclusion of identifying information for originators and beneficiaries of some affiliate and third-party payment messages cleared through the Branch

  (c) A restriction on dollar-clearing services for certain Hong Kong retail business clients

  (d) Enhanced monitoring of certain small and medium-sized enterprise clients in the UAE. The Group decided to exit this business as part of its broader efforts to sharpen its strategic focus, withdrawing from or realigning non-strategic businesses, including those where increased regulatory costs undermine their economic viability. The exit process is largely complete and, in accordance with the settlement agreement, dollar clearance restrictions were implemented effective 17 November 2014.

The remit of the SRP has been expanded to cover the management of these obligations.

Other ongoing reviews

The Group is cooperating with an investigation by the US authorities and the New York State Attorney General relating to possible 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, the ongoing 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 and the extent to which any such failures were shared with relevant US authorities in 2012.

The Financial Conduct Authority (FCA) is investigating Standard Chartered Bank's financial crime controls, looking at the effectiveness and governance of those controls within the correspondent banking business carried out by Standard Chartered Bank'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 Standard Chartered Bank's overseas branches and the oversight exercised at Group level over those controls.

As part of their remit to oversee market conduct, regulators and other agencies in certain markets are conducting investigations or requesting reviews into a number of areas of regulatory compliance and market conduct, including sales and trading, involving a range of financial products, and submissions made to set various market interest rates and other financial benchmarks, such as foreign exchange. At relevant times, certain of the Group's branches and/or subsidiaries were (and are) participants in some of those markets, in some cases submitting data to bodies that set such rates and other financial benchmarks and responding to inquiries and investigations by relevant authorities. The Group is contributing to industry proposals to strengthen financial benchmarks processes in certain markets and continues to review its practices and processes in the light of the investigations, reviews and the industry proposals.

The Securities and Futures Commission (SFC) in Hong Kong has been investigating Standard Chartered Securities (Hong Kong) Limited's (SCSHK) role as a joint sponsor of an initial public offering of China Forestry Holdings Limited, listed on the Hong Kong Stock Exchange in 2009. In October 2016 SFC informed the Group that it intends to commence action against SCSHK and other parties. On 16 January 2017 a writ was filed by the SFC with Hong Kong's High Court. The writ names SCSHK as one of six defendants from whom the SFC is seeking compensation for an unspecified amount of losses incurred by certain shareholders in relation to the initial public offering. There may be financial consequences for SCSHK in connection with this matter.

15. 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.

	2016 $million	2015 $million
Salaries, allowances and benefits in kind	**37**	42
Pension contributions	**-**	3
Share-based payments	**34**	40
Bonuses paid or receivable	**5**	-
	76	85

Transactions with directors and others

At 31 December 2016, 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:

	2016		2015	
	Number	$million	Number	$million
Directors	**2**	**-**	1	-

The loan transaction provided to the director of Standard Chartered PLC was a connected transaction under Chapter 14A of the HK Listing Rule. 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 2016, Standard Chartered Bank had created a charge over $68 million (2015: $74 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 $751 million (2015: $627 million) of interest income from Standard Chartered Bank. The Company issues debt externally and lends proceeds to Group companies. At 31 December 2016, it had loans to and debt instruments issued by Standard Chartered Bank of $11,625 million (2015: $16,209 million), derivative financial assets of $529 million (2015: $639 million) and $1,541 million derivative financial liabilities (2015: $1,438 million) with Standard Chartered Bank, loans of $80 million (2015: $130 million) to Standard Chartered Holdings Limited. At 31 December 2016, it had loans to Standard Chartered International Holdings of $1,054 million (2015: $1,801 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

	2016			2015		
	China Bohai Bank $million	Clifford Capital $million	PT Bank Permata $million	China Bohai Bank $million	Clifford Capital $million	PT Bank Permata $million
Assets						
Loans and advances	**-**	**40**	**90**	11	-	69
Debt securities	**-**	**27**	**-**	-	-	112
Derivative assets	**-**	**-**	**-**	18	6	-
Total assets	**-**	**67**	**90**	29	6	181
Liabilities						
Deposits	**7**	**-**	**29**	70	-	16
Debt securities issued	**14**	**-**	**-**	-	-	-
Derivative liabilities	**-**	**-**	**-**	3	-	-
Total liabilities	**21**	**-**	**29**	73	-	16
Loan commitments and other guarantees	**-**	**10**	**-**	-	50	-

16. Post balance sheet events

On 18 January 2017, Standard Chartered PLC issued $1 billion 7.75 per cent fixed rate resetting perpetual subordinated contingent convertible securities with the first reset date being 2 April 2023.

17. Dealings in Standard Chartered PLC listed securities

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	**2016**	2015	**2016**	2015	**2016**	2015
Shares purchased during the year	**6,160,185**	6,448,053	**-**	439,906	**6,160,185**	6,887,959
Market price of shares purchased ($ million)	**51**	63	**-**	5	**51**	68
Shares held at the end of the year	**6,104,154**	4,861,846	**78,313**	137,850	**6,182,467**	4,999,696
Maximum number of shares held during the year					**6,183,210**	7,517,013

18. 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 2016. 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.

Standard Chartered PLC – 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.

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Further information for the Full Year Results 2016 will be available on our website:

2016 Annual Report and Accounts

An investor presentation in pdf format

A live and on demand audio webcast of the investor and analyst presentation in London with Q&A

Images of our Board of directors and senior management are available for the media at http://www.sc.com/en/about-us/ourpeople/index.html

Information regarding the Group's commitment to Sustainability is available at ttp://www.sc.com/sustainability

Standard Chartered PLC LEI: U4LOSYZ7YG4W3S5F2G91

By Order of the Board
Elizabeth Lloyd, CBE
Group Company Secretary

Hong Kong, 24 February 2017

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:
Om Prakash Bhatt; Dr Kurt Michael Campbell; Dr Louis Chi-Yan Cheung; David Philbrick Conner; Dr Byron Elmer Grote; Dr Han Seung-soo, KBE; Christine Mary Hodgson; Gay Huey Evans, OBE; Naguib Kheraj (Deputy Chairman and Senior Independent Director) and Jasmine Mary Whitbread