

# Enhanced Disclosure Task Force

## 2015 Progress Report

### Appendix 4: Leading Practice Examples of EDTF Recommendations

October 2015

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### Notes

- **Risk disclosures are complex and presentation differs across institutions.** Examples shown are meant to highlight leading practice and are not necessarily comprehensive or exclusive
- **Examples shown are not exclusive.** The EDTF Users Group has highlighted only a subset of the good disclosures available, selecting examples from a broad set of institutions across geographies
- **Examples shown may be partial.** The EDTF recommends that readers refer to banks' annual reports and Pillar 3 documents to review complete disclosures

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## Section 1

# **General recommendations**



## Recommendation 1: Present all risk information together or provide an index to aid in navigation

The management of risk plays a central role in the execution of Barclays' strategy and insight into the level of risk across businesses and portfolios and the material risks and uncertainties the Group face are key areas of management focus.

For a more detailed breakdown of our Risk Management and Risk Performance contents please see pages 123 and 141. Barclays' risk disclosures are located across the Annual Report and Barclays 2014 Pillar 3 Report.

	Annual Report	Pillar 3 Report
<b>Material existing and emerging risks</b>		
Insight into the level of risk across our business and portfolios, the material existing and emerging risks and uncertainties we face and the key areas of management focus.	<ul style="list-style-type: none"> <li>Business conditions, general economy and geopolitical issues</li> <li>UK political and policy environment</li> <li>Model risk</li> <li>Credit risk</li> <li>Market risk</li> <li>Funding risk</li> <li>Operational risk</li> <li>Conduct risk</li> </ul>	<ul style="list-style-type: none"> <li>n/a</li> <li>n/a</li> <li>n/a</li> <li>n/a</li> <li>n/a</li> <li>n/a</li> <li>n/a</li> <li>n/a</li> </ul>
<b>Risk management</b>		
Overview of Barclays' approach to risk management. A more comprehensive overview together with more specific information on policies that the Group determines to be of particular significance in the current operating environment can be found in Barclays PLC 2014 Pillar 3 Report or at barclays.com.	<ul style="list-style-type: none"> <li>Risk management strategy</li> <li>Governance structure</li> <li>Risk governance and assigning responsibilities</li> <li>Principal risks</li> <li>Credit risk management</li> <li>Management of credit risk mitigation techniques and counterparty credit risk</li> <li>Market risk management</li> <li>Management of securitisation exposures</li> <li>Capital risk management</li> <li>Liquidity risk management</li> <li>Operational risk management</li> <li>Conduct risk management</li> <li>Reputation risk management</li> <li>Environmental risk</li> </ul>	<ul style="list-style-type: none"> <li>99</li> <li>100</li> <li>104</li> <li>105</li> <li>111</li> <li>132</li> <li>136</li> <li>147</li> <li>158</li> <li>156</li> <li>151</li> <li>163</li> <li>161</li> <li>164</li> </ul>
<b>Risk performance</b>		
<b>Credit risk:</b> The risk of suffering financial loss should the Group's customers, clients or market counterparties fail to fulfil their contractual obligations.	<ul style="list-style-type: none"> <li>Credit risk overview and summary of performance</li> <li>Analysis of maximum exposure and collateral and other credit enhancement held</li> <li>Analysis of the balance sheet</li> <li>The Group's approach to manage and represent credit quality</li> <li>Loans and advances to customers and banks</li> <li>Analysis of the concentration of credit risk</li> <li>Exposures to Eurozone countries</li> <li>Analysis of specific portfolios and asset types</li> <li>Analysis of loans on concession programmes</li> <li>Analysis of problem loans</li> <li>Impairment</li> </ul>	<ul style="list-style-type: none"> <li>111</li> <li>36, 45</li> <li>43, 47</li> <li>46, 49</li> <li>n/a</li> <li>39, 41</li> <li>n/a</li> <li>n/a</li> <li>n/a</li> <li>61</li> <li>61</li> </ul>
<b>Market risk:</b> The risk of a reduction to earnings or capital due to volatility of the trading book positions or an inability to hedge the banking book balance sheet.	<ul style="list-style-type: none"> <li>Market risk overview and measures in the Group</li> <li>Balance sheet view of trading and banking books</li> <li>Traded market risk</li> <li>Business scenario stresses</li> <li>Review of regulatory measures</li> <li>Capital requirements for market risk</li> <li>Non-traded market risk</li> <li>Foreign exchange risk</li> <li>Pension risk review</li> <li>Insurance risk review</li> </ul>	<ul style="list-style-type: none"> <li>72</li> <li>73</li> <li>74</li> <li>77</li> <li>77</li> <li>78</li> <li>78</li> <li>80</li> <li>81</li> <li>82</li> </ul>
<b>Funding risk – Capital:</b> The risk that the Group is unable to maintain appropriate capital ratios.	<ul style="list-style-type: none"> <li>Capital risk overview</li> <li>CRD IV capital</li> <li>Analysis of capital requirements and RWA movements</li> <li>Relationship between accounting and regulatory reporting scope</li> <li>Leverage ratio requirements</li> <li>Economic capital</li> </ul>	<ul style="list-style-type: none"> <li>158</li> <li>15</li> <li>23</li> <li>38</li> <li>34</li> <li>n/a</li> </ul>

Barclays provides detailed cross references to risk disclosures in both its Annual Report and Pillar 3 documents, including an Index of Tables and a CRD IV reference for regulatory disclosures

An overview of Barclays' approach to risk management

- For a more detailed breakdown on our Risk review and Risk management contents please see pages 113 and 114.
- More detailed information on how Barclays manages these risks can be found in Barclays plc Pillar 3 Report.

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### Appendices Appendix D – CRD IV reference

Table 75: CRD IV reference

CRD ref.	High-level summary	Compliance reference
<b>Scope of disclosure requirements</b>		
431 (1)	Requirement to publish Pillar 3 disclosures.	Barclays publishes Pillar 3 disclosures.
431 (2)	Firms with permission to use specific operational risk methodologies must disclose operational risk information.	The Operational Risk section on pages 152 and 153 contains a description of the operational risk framework, and required Pillar 3 disclosures.
431 (3)	Institution must have a policy covering frequency of disclosures. Their verification, comprehensiveness and overall appropriateness.	Barclays has a dedicated Pillar 3 policy.
431 (4)	Explanation of ratings decision upon request.	Barclays provides explanations of rating decisions to SMEs whose loan applications were declined in writing, and suggests alternative sources of finance. Barclays participates in a formal appeals process, one of the successful initiatives implemented as part of Business Finance Taskforce, with a government-appointed overseer. In the case of larger corporates, written explanations are not usually requested as direct discussions with relationship managers take place.






Non-material, proprietary or confidential information

432 (1)	Institutions may omit information that is not material if certain conditions are respected.	Compliance with this provision is covered by Barclays' policy.
432 (2)	Institutions may omit information that is proprietary or confidential if certain conditions are respected.	Compliance with this provision is covered by Barclays' policy.
432 (3)	Where 432 (1) and (2) apply this must be stated in the disclosures, and more general information must be disclosed.	This table specifies where disclosures are omitted.
432 (4)	Use of 432 (1) or (2) is without prejudice to scope of liability for failure to disclose material information.	


## Recommendation 1: Present all risk information together or provide an index to aid in navigation

### Index of Information related to Risk Management (FY2014)




#### Overview of Risk Management

Risk Management Structure	<a href="#">2015 Integrated Report: P.72 (PDF/10,276KB)</a> 
	<a href="#">2015 Integrated Report: P.95 (PDF/10,276KB)</a> 
Major Risk Types and Management	<a href="#">Information Material related to Risk Management (Mar 2015): P.3 (PDF/308KB)</a> 
Allocation of Risk Capital	<a href="#">IR presentation (May 2015): Appendices P.12 (PDF/610KB)</a> 
Risk Appetite Framework	<a href="#">2015 Integrated Report: P.70 (PDF/10,276KB)</a> 




#### Credit Risk

Credit Risk Management Structure	<a href="#">2015 Integrated Report: P.97 (PDF/10,276KB)</a> 
Status of Credit Risk Exposure	<a href="#">2015 Integrated Report: P.266 (PDF/10,276KB)</a> 
Credit Risk-weighted Assets by Asset Class and Ratings Segment	<a href="#">Information Material related to Risk Management (Mar 2015): P.6 (PDF/308KB)</a> 
Methods for Credit Risk Mitigation	<a href="#">2015 Integrated Report: P.281 (PDF/10,276KB)</a> 
Counterparty Risk in Derivatives Transactions and Long-settlement Transactions	<a href="#">2015 Integrated Report: P.283 (PDF/10,276KB)</a> 
Outstanding Loan Balances and Non-Accrual, Past Due & Restructured Loans	<a href="#">Information Material related to Risk Management (Mar 2015): P.5 (PDF/308KB)</a> 
Relationship between Obligor Ratings, Definition of Obligor Classifications of Self-Assessments and Claims Disclosed under the Financial Reconstruction Law	<a href="#">Information Material related to Risk Management (Mar 2015): P.7 (PDF/308KB)</a> 
Securitization Exposure	<a href="#">2015 Integrated Report: P.285 (PDF/10,276KB)</a> 
Equity Exposure in Banking Book	<a href="#">2015 Integrated Report: P.308 (PDF/10,276KB)</a> 

#### Market Risk

Market Risk Management Structure	<a href="#">2015 Integrated Report: P.100 (PDF/10,276KB)</a> 
Status of Market Risk	<a href="#">2015 Integrated Report: P.101 (PDF/10,276KB)</a> 
Outlier Criteria	<a href="#">2015 Integrated Report: P.103 (PDF/10,276KB)</a> 




#### Liquidity Risk

Liquidity Risk Management Structure	<a href="#">2015 Integrated Report: P.104 (PDF/10,276KB)</a> 
Status of Liquid Assets	<a href="#">Information Material related to Risk Management (Mar 2015): P.8 (PDF/308KB)</a> 
Projected Repayment Amounts for Bonds and Notes, Borrowed Money, and Other Interest-bearing Liabilities	<a href="#">2015 Integrated Report: P.192 (PDF/10,276KB)</a> 

#### Operational Risk

Operational Risk Management Structure	<a href="#">2015 Integrated Report: P.105 (PDF/10,276KB)</a> 
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#### BIS Capital

Composition of Capital	<a href="#">2015 Integrated Report: P.246 (PDF/10,276KB)</a> 
Required Capital by Portfolio Classification	<a href="#">2015 Integrated Report: P.263 (PDF/10,276KB)</a> 
Risk-weighted Assets by Risk Type and Operating Entity	<a href="#">Information Material (Mar 2015): P.4 (PDF/308KB)</a> 

### Information Material related to Risk Management (FY2014)

[Information Material related to Risk Management \(Mar 2015\) \(PDF/308KB\)](#) 

#### Archives

- [Information related to Risk Management \(Second Quarter of FY2014\)](#)
- [Information related to Risk Management \(FY2013\)](#)

*Mizuho and its Japanese peers (MUFG, Sumitomo) each maintain an online index which links to the most-recent risk reports for each risk category*

## Recommendation 2: Define the bank's risk terminology and risk measures and present key parameter values used

## EDTF recommendations and our disclosures

## Location of the disclosures

Operating environment and strategy / risk, treasury and capital management / corporate governance, responsibility and compensation	
General	
<b>1. Presentation of related information</b> Table with cross-references to the locations of the disclosures in our Annual Report 2014 and Pillar 3 section	→ EDTF index p. 159–165
<b>2. Risk terminology</b> Definition of the risk terms and risk measures which we use, including indication of key parameters in our risk models	Risk terms → Risk definitions p. 170 → Risk concentrations p. 180 Risk measures → Risk measurement p. 178–180 Key parameters and measurement models → Credit risk: Credit risk models p. 199; Probability of default p. 200 / 201; Internal UBS rating scale and mapping of external ratings. Key features of our main credit risk models p. 200; Loss given default, Exposure at default, Expected loss p. 201, Stress loss p. 201 → Market risk: Market risk stress loss, Value-at-Risk (VaR) p. 209; Stressed VaR p. 214; Incremental Risk Charge p. 217; Comprehensive Risk Measure p. 218 → Country risk exposure measure p. 223 → Operational risk: Advanced measurement approach model p. 230–231 → Pro-forma LCR, Pro-forma NSFR p. 235–237 → Asset funding p. 241 → Business risk: Measurement of performance p. 43/45

Risk categories			
We categorize the risks faced by our business divisions and Corporate Center as outlined in the table below.			
EDTF   Pillar 3   Risk definitions			
	Risk managed by	Independent oversight by	Captured in our risk appetite framework
<b>Primary risks: the risks that our businesses may take in pursuit of their business objectives</b>			
<b>Audited   Credit risk:</b> the risk of loss resulting from the failure of a client or counterparty to meet its contractual obligations. This includes settlement risk and loan underwriting risk: <i>Settlement risk:</i> the risk of loss resulting from transactions involving exchange of value where we must fulfill our obligation to deliver without first being able to determine with certainty that we will receive the counter value <i>Loan underwriting risk:</i> the risk of loss arising during the holding period of financing transactions which are intended for further distribution ▲	Business management	Risk Control	●
<b>Audited   Market risk (traded and non-traded):</b> the risk of loss resulting from changes in general market risk factors (e.g., interest rates, equity index levels, exchange rates, commodity prices and general credit spreads) and changes in prices of debt and equity instruments which result from factors and events specific to individual companies or entities. Market risk includes issuer risk and investment risk: <i>Issuer risk:</i> the risk of loss from changes in fair value resulting from credit-related events affecting an issuer or group of related issuers, including sovereigns, to which we are exposed through tradable securities or derivatives referencing the issuer <i>Investment risk:</i> issuer risk associated with positions held as financial investments ▲	Business management	Risk Control	●
<b>Country risk:</b> the risk of losses resulting from country-specific events. It includes transfer risk, whereby a country's authorities prevent or restrict the payment of an obligation, as well as systemic risk events arising from country-specific political or macroeconomic developments	Business management	Risk Control	●
<b>Consequential risks: the risks to which our businesses are exposed as a consequence of being in business</b>			
<b>Audited   Liquidity risk:</b> the risk of being unable to generate sufficient funds from assets to meet payment obligations when they fall due, including in times of stress ▲	Group Treasury	Risk Control	●
<b>Audited   Funding risk:</b> the risk of higher than expected funding costs due to higher than expected UBS credit spreads when existing funding positions mature and need to be rolled over, or replaced by other more expensive funding sources. If a shortage of available funding sources is expected in a stress event, funding risk also covers potential additional losses from forced asset sales ▲			●

UBS provides an index to more-detailed disclosures of its risk terminology throughout the Annual Report. Page references within the PDF link directly to the associated pages of the report.

Only the summary risk definitions and key parameters of the bank's credit risk models are shown here

EDTF   Pillar 3   Key features of our main credit risk models				
	Portfolio in scope	Model approach	Main drivers	Number of years loss data
<b>Probability of default</b>	Swiss owner-occupied mortgages	Score card	Behavioral data, affordability relative to income, property type, loan-to-value	20
	Income Producing Real Estate mortgages	Transaction rating	Loan-to-value, debt-service-coverage	20
	Lombard lending	Merton type	Loan-to-value, portfolio volatility	10–15
	Retail & Corporate – Corporates	Score card	Financial data including balance sheet ratios and profit and loss, and qualitative risk factors	16
	Investment Bank – Banks	Score card	Financial data including balance sheet ratios and profit and loss	5–10
	Investment Bank – Corporates	Score card / market data	Financial data including balance sheet ratios and profit and loss, and market data	5–10
<b>Loss given default</b>	Swiss owner-occupied mortgages	Actuarial model	Historical observed loss rates, loan-to-value, property type	20
	Income Producing Real Estate mortgages	Actuarial model	Historical observed loss rates	20
	Lombard lending	Actuarial model	Historical observed loss rates	10–15
	Retail & Corporate – Corporates	Actuarial model	Historical observed loss rates	16
	Investment Bank – all counterparties	Actuarial model	Counterparty and facility specific, including industry segment, collateral, seniority, legal environment and bankruptcy procedures	5–10
<b>Exposure at default</b>	Banking products	Statistical model	Exposure type (committed credit lines, revocable credit lines, contingent products)	> 10
	Traded products	Statistical model	Product specific market drivers, e.g., interest rates	n/a



## Recommendation 3: Discuss top and emerging risks, including quantitative disclosure and recent changes

### Top and emerging risks

(Unaudited)

Our approach to identifying and monitoring top and emerging risks is described on page 22.

During 2014, senior management paid particular attention to a number of top and emerging risks. Our current top and emerging risks are as follows:

#### Macroeconomic and geopolitical risks

- E** Economic outlook and government intervention
- E** Increased geopolitical risk

#### **E** Economic outlook and government intervention

Economic growth in both developed and emerging market countries remained weak in 2014.

Oil and commodity prices have declined significantly since the middle of 2014 as a result of increasing global demand-supply imbalances. The precipitous fall in energy prices over such a short span of time changes both the nature and the distribution of risks. It sharpens fiscal and financing challenges for energy exporters, and although it brings benefits for oil importers, it also accentuates deflationary risks among some of these (particularly in the eurozone). In addition, the prospect of low oil prices for a prolonged period may reduce investment in exploration and thus poses the danger of significantly reduced future supply.

The economic recovery in the eurozone is still at risk. Deflationary pressures persist as a result of low oil prices and despite much looser monetary policy. Acceleration in the structural reform agenda could also accentuate deflationary pressures in the short-term. The eurozone is discussed further in 'Areas of special interest' on page 126. Japan fell into a technical recession in the third quarter of 2014 and policy responses may not be sufficient to support a recovery in economic activity. Resilience in US economic activity represents an upside to the world economy.

*HSBC clearly separates Top vs Emerging risks and outlines their potential impact on the company as well as mitigating actions. The list itself changed meaningfully between the 2013 and 2014 Annual Reports*

Emerging markets, particularly those with domestic vulnerabilities, remain exposed to monetary policy normalisation in the US and to greater risk aversion. While high by international standards, mainland China's GDP growth in 2014 was the lowest in over two decades and recent forecasts indicate a lower trajectory than in recent years. Years of excessive investment, notably in the property market, has stoked potential financial bubbles, requiring the implementation of a new economic growth model.

#### Potential impact on HSBC

- HSBC's results could be adversely affected by a prolonged period of low or negative interest rates, low inflation levels or deflation and/or low oil prices.
  - We earn a significant proportion of our profits from our operations in emerging markets. Our results could be adversely affected by a prolonged slowdown in emerging market growth.
  - Global trade and capital flows may contract as a result of weaker economic growth, the introduction of protectionist measures, the emergence of geopolitical risks or increasing redenomination risk. This may curtail our profitability.
- #### Mitigating actions
- We closely monitor economic developments in key markets and sectors with the aim of ensuring trends are identified, the implications for specific customers, customer segments or portfolios are assessed and appropriate mitigating action, which may include revising key risk appetite metrics and limits, is taken as circumstances evolve.
  - We use stress testing, both internal and regulatory programmes, to assess the effect of changes in economic conditions on our operations. Regulatory stress tests are discussed on page 124.

#### **E** Increased geopolitical risk

Our operations are exposed to risks arising from political instability and civil unrest in many parts of the world, which may have a wider effect on regional stability and regional and global economies.

Geopolitical risk increased during 2014. Military escalation and/or civil war remain a possibility in Ukraine, while sanctions targeting the Russian government, institutions and individuals, together with falling oil prices, have had an adverse effect on the Russian economy.

In the Middle East, the civil war in Syria has been complicated by the seizure of parts of Iraq and Syria by Islamic State, a terrorist group. Elsewhere in the region, chaos in Libya, ongoing tensions between Israel and Palestine and fraught negotiations over Iran's nuclear programme are combining to increase risks to stability. In Asia, there was no easing in the maritime sovereignty disputes involving mainland China and its neighbours, while tensions remain high over the line of control between India and Pakistan, raising concerns over a possible wider conflict between the two nuclear-armed neighbours.

Civil unrest and demonstrations in a number of countries during 2014, including Turkey and Hong Kong, have also contributed to geopolitical risk as governments took measures to contain them.

A number of emerging and developed markets will hold elections in 2015, which could lead to further market volatility. In addition, a sustained period of low oil prices may affect stability in countries that rely heavily on oil production as a significant source of revenue.

#### Potential impact on HSBC

- Our results are subject to the risk of loss from unfavourable political developments, currency fluctuations, social instability and changes in government policies on matters such as expropriation, authorisations, international ownership, interest-rate caps, foreign exchange transferability and tax in the jurisdictions in which we operate.
- Actual conflict could expose our staff to physical risk and/or result in physical damage to our assets.

#### Mitigating actions

- We continuously monitor the geopolitical outlook, in particular in countries where we have material exposures and/or a physical presence.
- Our internal credit risk rating of sovereign counterparties takes these factors into account and drives our appetite for conducting business in those countries. Where necessary, we adjust our country limits and exposures to reflect our risk appetite and mitigate risks as appropriate.

#### Macro-prudential, regulatory and legal risks to our business model

- T** Regulatory developments affecting our business model and Group profitability
- T** Regulatory investigations, fines, sanctions, commitments and consent orders and requirements relating to conduct of business and financial crime negatively affecting our results and brand
- T** Dispute risk

Financial service providers face increasingly stringent and costly regulatory and supervisory requirements, often involving the provision of large amounts of data, particularly in the areas of capital and liquidity management, conduct of business, operational structures and the integrity of financial services delivery. Increased government intervention and control over financial institutions both on a sector-wide basis and individually, together with measures to reduce systemic risk, may significantly alter the competitive landscape locally, regionally and/or globally for some or all of the Group's businesses. These measures may be introduced as formal requirements in a supra-equivalent manner and to differing timetables by different regulatory regimes.

#### **T** Regulatory developments affecting our business model and Group profitability

Regulatory changes affect our activities, both of the Group as a whole and of some or all of our principal subsidiaries. These changes include:

- the UK's Financial Services (Banking Reform) Act 2013 which requires the ring-fencing of our UK retail banking activities from wholesale banking, together with the structural separation of other activities as envisaged in the legislation and rules adopted in the US (including the Volcker Rule adopted in December 2013 under the Dodd-Frank Act), measures adopted in France restricting certain trading activities and potential further changes under European Commission proposals for structural measures for larger EU banks;
- the implementation of extra-territorial laws, including the US Foreign Account Tax Compliance Act ('FATCA') and other related initiatives to share tax information such as those being pursued by the OECD more generally;
- changes in the regime for the operation of capital markets, notably mandatory central clearing of over the counter ('OTC') derivatives, including under the Dodd-Frank Act and the EU's European Market Infrastructure Regulation ('EMIR');
- changes arising from the increasing focus by regulators on how institutions conduct business, particularly with regard to the delivery of fair outcomes for customers and orderly/transparent markets, promoting effective competition in the interests of consumers (including the outcome of the current investigation by the UK Competition and Markets Authority on the personal current account and SME banking market in the UK and recent indications of further FCA focus on UK wholesale markets);
- the outcome of the Fair and Effective Financial Markets Review being undertaken by the Bank of England which will consider changes in the operation of wholesale financial markets in the UK;
- restrictions on the structure of remuneration imposed under CRD IV and UK regulations and increasing requirements to detail management accountability within the Group to meet the requirements of the Senior Managers' Regime in the UK (including the continued focus in the UK on the progress being made in implementing wider recommendations made by the Parliamentary Commission on Banking Standards on matters relating to institutional 'culture', employee conduct and obligations more generally such as whistleblowing etc.);
- the implementation of CRD IV, notably the UK application of the capital buffer framework and its interaction with Pillar 2;
- the effect of proposals for the UK Financial Policy Committee to be given more powers to impose leverage constraints on UK banks;

#### **T** Regulatory investigations, fines, sanctions, commitments and consent orders and requirements relating to conduct of business and financial crime negatively affecting our results and brand

Financial service providers are at risk of regulatory sanctions or fines related to conduct of business and financial crime. The incidence of regulatory proceedings against financial service firms is increasing, with a consequent increase also in civil litigation arising from or relating to issues which are subject to regulatory investigation, sanction or fine. In addition, criminal prosecutions of financial institutions for, among other alleged conduct, breaches of AML and sanctions regulations, antitrust violations, market manipulation, aiding and abetting tax evasion, and providing unlicensed cross-border banking services, have become more commonplace and may increase in frequency due to increased media attention and higher expectations from prosecutors and the public. Moreover, financial service providers may face similar or broader legal proceedings, investigations or regulatory actions across many jurisdictions as a result of, among other things, increased media attention and higher expectations from regulators and the public. Any such prosecution or investigation of, or legal proceeding or regulatory action brought against, HSBC or one or more of its subsidiaries could result in substantial fines, penalties and/or forfeitures and could have a material adverse effect on our results, business, financial condition, prospects and reputation, including the potential loss of key licences, requirement to exit certain businesses and withdrawal of funding from depositors and other stakeholders.

#### Regulatory commitments and consent orders

In December 2012, HSBC Holdings, HSBC North America Holdings Inc. ('HNAH') and HSBC Bank USA, N.A. ('HSBC Bank USA') entered into agreements with US and UK authorities regarding past inadequate compliance with AML and sanctions laws. Among these agreements, HSBC Holdings and HSBC Bank USA entered into a five-year deferred prosecution agreement ('US DPA') with the US Department of Justice ('DoJ') and HSBC Holdings entered

## Recommendation 3: Discuss top and emerging risks, including quantitative disclosure and recent changes

### 5. Risk environment

As a result of the environment in which Banco Santander operates, there are different potential risks that could threaten the development of business and meeting the Group's strategic objectives. The risk division identifies and assesses these risks and presents them regularly for analysis to senior management and the board, which take the opportune measures to mitigate and control them. The main focuses of risk are:

- **Macroeconomic environment:** at the end of 2014, the main sources of macroeconomic uncertainty were:
  - **Economic slowdown** in Europe.
  - The **adjustment** to the **Chinese economy**, which could impact emerging as well and developed markets.
  - **Change in the US interest rate scenario** and its possible impact on emerging markets (flight to quality).
  - **Evolution of commodity prices** and their possible impact on various economies.

Banco Santander's business model, based on geographic diversification and a customer-focused bank, strengthens the stability of results in the face of macroeconomic uncertainty, ensuring a medium-low profile.

The Group uses techniques of scenario analysis and stress tests to analyse the possible evolution of macroeconomic indicators and their impact on the income statement, capital and liquidity. These analyses are incorporated to risk management when planning capital (section 12.3), risk appetite (section 4.4) and risk management of the different types of risk (section 6.5.2 on credit, 7.2.1.6. on market and 8.2.2. on liquidity).

- **Competitive environment:** the financial industry has undergone in the last few years a process of restructuring and consolidation that could still continue in the coming years. These movements are changing the competitive environment, as a result of which senior management continuously monitors the competitive environment, reviewing the Bank's business and strategic plan. The risk division ensures that the changes in the plans are compatible with the risk appetite limits.

- **Regulatory environment:** a regulatory environment for the financial industry more demanding in capital and liquidity has been shaped in the last few years, as well as a greater supervisory focus on risk management and business processes.

In this line the Single Supervisory Mechanism came into force in November 2014. Previously, during 2014, the European Central Bank, in coordination with the European Banking Authority, conducted a global evaluation to enhance the transparency, control and credibility of European banks (see more detail in section 1 of this chapter). This context will mark the regulatory environment of the coming months. Of note are the following aspects:

- The entry into force of joint supervisory teams, formed from teams from the relevant national authorities and the European Central Bank.
- The gradual harmonisation of criteria, concepts, authorisation procedures, etc, seeking an homogenisation that equals the regulation and supervision that affects European banks.
- In the same line, supervision of all European banks under a common methodology: the Supervisory Review and Evaluation Process (SREP).
- The importance of the relations established between the Single Supervisory Mechanism and the rest of supervisors in countries where the Group operates, through supervisory colleges and the signing of memories of understanding with them.

The Bank is attaching greater priority to these issues by permanently monitoring the changes in the regulatory environment, which enables it to rapidly adapt to the new requirements. The Group is strengthening teams in all spheres of its activity in order to comply with the supervisors' requirements.

The Group also has a coordination mechanism, fostered and backed by the board and senior management, among the different management areas and countries, in order to ensure a consistent response at Group level and implement the best practices in managing projects with regulatory impact.

Of note, among others, are the projects in order to adjust to:

- The requirements of the Basel capital regulations which have been transposed in most countries where the Group operates, particularly in Europe via the CRR/CRD IV.
- The international standards on risk data aggregation (RDA).
- The US Volcker rule that limits the own account operations that banks can carry out.
- The European investor protection rule (MIFID II) which strengthens the requirements related to the functioning of securities markets and marketing of financial products.
- **Non-financial and transversal risks** (operational, conduct, reputational, strategic, etc): these risks are assuming increasing importance because of the attention paid to them by regulators and supervisors, which see in them a reflection of the way banks behave toward their stakeholders (employees, clients, shareholders, investors and social agents). Of particular note in the financial industry are:
  - With operational risk, **cyber risk** or the risk of suffering attacks by third parties on the Bank's IT systems, which could alter the integrity of the information or normal development of

operations. The Bank has been strengthening in the last few years its computer security system and continues to invest in this area in the face of potential threats (for more detail see section 9).

- **Conduct risk:** in the last few years there has been a growing tightening of regulations regarding the treatment that banks must provide to their customers. These changes in regulations and their application could entail an impact for banks involving potential judicial demands or fines by supervisors as well as the necessary changes to processes and structure that must be carried out to comply with the new standards.

Banco Santander is strengthening control of this risk and has launched a global plan to improve the marketing of investment products and analysis of the costs incurred (paid or provisioned) as a result of compensation to clients and sanctions.

- In line with the regulatory recommendations in the corporate governance sphere, the board agreed to appoint an executive vice-chairman to whom the compliance function reports.

More information is available in the section on compliance, conduct and reputational risk in this report.



## Recommendation 4: Once the applicable rules are finalized, outline plans to meet each new key regulatory ratio, e.g. the net stable funding ratio, liquidity coverage ratio and leverage ratio

### Supplementary Leverage Ratio

The following table sets forth Citi's estimated Basel III Supplementary Leverage ratio and related components, under the Revised Final Basel III Rules, for the three months ended December 31, 2014 and December 31, 2013.

#### Citigroup Estimated Basel III Supplementary Leverage Ratios and Related Components <sup>(1)</sup>

	December 31, 2014	December 31, 2013 <sup>(2)</sup>
<i>In millions of dollars, except ratios</i>		
<b>Tier 1 Capital</b>	<b>\$ 148,275</b>	<b>\$ 133,412</b>
<b>Total Leverage Exposure (TLE)</b>		
On-balance sheet assets <sup>(3)</sup>	\$1,899,955	\$1,886,613
Certain off-balance sheet exposures: <sup>(4)</sup>		
Potential future exposure (PFE) on derivative contracts	240,712	240,534
Effective notional of sold credit derivatives, net <sup>(5)</sup>	96,869	102,061
Counterparty credit risk for repo-style transactions <sup>(6)</sup>	21,894	26,035
Unconditionally cancellable commitments	61,673	63,782
Other off-balance sheet exposures	229,672	210,571
<b>Total of certain off-balance sheet exposures</b>	<b>\$ 650,820</b>	<b>\$ 642,983</b>
Less: Tier 1 Capital deductions	64,458	73,590
<b>Total Leverage Exposure</b>	<b>\$2,486,317</b>	<b>\$2,456,006</b>
<b>Supplementary Leverage ratio</b>	<b>5.96%</b>	<b>5.43%</b>

- (1) Citi's estimated Basel III Supplementary Leverage ratio and certain related components are non-GAAP financial measures. Citi believes this ratio and its components provide useful information to investors and others by measuring Citigroup's progress against future regulatory capital standards.  
 (2) Pro forma presentation based on application of the Revised Final Basel III Rules consistent with current period presentation.  
 (3) Represents the daily average of on-balance sheet assets for the quarter.  
 (4) Represents the average of certain off-balance sheet exposures calculated as of the last day of each month in the quarter.  
 (5) Under the Revised Final Basel III Rules, banking organizations are required to include in TLE the effective notional amount of sold credit derivatives, with netting of exposures permitted if certain conditions are met.  
 (6) Repo-style transactions include repurchase or reverse repurchase transactions and securities borrowing or securities lending transactions.

Citigroup's estimated Basel III Supplementary Leverage ratio under the Revised Final Basel III Rules was 6.0% for the fourth quarter of 2014, unchanged from the third quarter of 2014, and increased from 5.4% for the fourth quarter of 2013 (on a pro forma basis to conform to current period presentation). Citi's estimated Basel III Supplementary Leverage ratio remained unchanged quarter-over-quarter as the Tier 1 Capital benefits resulting from preferred stock issuances and a decrease in goodwill were offset by a decrease in *Accumulated other comprehensive income (loss)*, with Total Leverage Exposure also remaining substantially unchanged. The growth in the ratio from the fourth quarter of 2013 was principally driven by an increase in Tier 1 Capital attributable largely to net income of \$7.3 billion, approximately \$3.3 billion of DTA utilization and approximately \$3.7 billion of perpetual preferred stock issuances, offset in part by a reduction in *Accumulated other comprehensive income (loss)* and a marginal increase in Total Leverage Exposure.

Citibank, N.A.'s estimated Basel III Supplementary Leverage ratio under the Revised Final Basel III Rules was 6.3% for the fourth quarter of 2014, unchanged from the third quarter of 2014 and, on a pro forma basis, from the fourth quarter of 2013. Tier 1 Capital benefits resulting from quarterly and annual net income and DTA utilization were largely offset by an increase in Total Leverage Exposure and a reduction in *Accumulated other comprehensive income (loss)* and, for the year only, cash dividends paid by Citibank, N.A. to its parent, Citicorp, and which were subsequently remitted to Citigroup.

**Long-Term Liquidity Measurement: Net Stable Funding Ratio (NSFR)**  
 For 12-month liquidity stress periods, Citi uses several measures, including its internal long-term liquidity measure, based on a 12-month scenario assuming market, credit and economic conditions are moderately to highly stressed with potential further deterioration. It is broadly defined as the ratio of unencumbered liquidity resources to net stressed cumulative outflows over a 12-month period.

In addition, in October 2014, the Basel Committee issued final standards for the implementation of the Basel III NSFR, with full compliance required by January 1, 2018. Similar to Citi's internal long-term liquidity measure, the NSFR is intended to measure the stability of a banking organization's stable funding over a one-year time horizon. The NSFR is calculated by dividing the level of its available stable funding by its required stable funding. The ratio is required to be greater than 100%. Under the Basel III standards, available stable funding includes portions of equity, deposits and long-term debt, while required stable funding includes the portion of long-term assets which are deemed illiquid. Citi anticipates that the U.S. regulators will propose a U.S. version of the NSFR during 2015.

### Liquidity Coverage Ratio

#### Short-Term Liquidity Measurement: Liquidity Coverage Ratio (LCR)

In addition to internal measures that Citi has developed for a 30-day stress scenario, Citi also monitors its liquidity by reference to the LCR, as calculated pursuant to the final U.S. LCR rules.

Generally, the LCR is designed to ensure that banks maintain an adequate level of HQLA to meet liquidity needs under an acute 30-day stress scenario. Under the final U.S. rules, the LCR is calculated by dividing HQLA by estimated net outflows over a stressed 30-day period, with the net outflows determined by applying assumed outflow factors, prescribed in the rules, to various categories of liabilities, such as deposits, unsecured and secured wholesale borrowings, unused commitments and derivatives-related exposures, partially offset by inflows from assets maturing within 30 days. In addition, the final U.S. rules require that banks estimate net outflows based on the highest individual day's mismatch between contractual and certain non-defined maturity inflows and outflows, known as the "peak day" outflow requirement. Citi's LCR is subject to a minimum requirement of 100%.

The table below sets forth the components of Citi's estimated LCR calculation and HQLA in excess of estimated net outflows as of December 31, 2014 and September 30, 2014.

	Dec. 31, 2014	Sept. 30, 2014
<i>In billions of dollars</i>		
High quality liquid assets	\$412.6	\$416.4
Estimated net outflows	\$368.6	\$374.5
Liquidity coverage ratio	112%	111%
HQLA in excess of estimated net outflows	\$ 44.0	\$ 42.0

Note: Amounts set forth in the table above are estimated based on the final U.S. LCR rules.

#### High-Quality Liquid Assets

	Parent		Significant Citibank Entities		Other Citibank and Banamex Entities		Total	
	Dec. 31, 2014	Sept. 30, 2014	Dec. 31, 2014	Sept. 30, 2014	Dec. 31, 2014	Sept. 30, 2014	Dec. 31, 2014	Sept. 30, 2014
<i>In billions of dollars</i>								
Available cash	\$37.5	\$27.3	\$ 54.6	\$ 77.8	\$10.6	\$ 8.5	\$102.7	\$113.6
Unencumbered liquid securities	35.0	31.8	203.1	197.5	71.8	73.6	\$309.9	\$302.9
<b>Total</b>	<b>\$72.5</b>	<b>\$59.1</b>	<b>\$257.7</b>	<b>\$275.3</b>	<b>\$82.4</b>	<b>\$82.1</b>	<b>\$412.6</b>	<b>\$416.4</b>

Note: Amounts as of December 31, 2014 and September 30, 2014 set forth in the table above are estimated based on the final U.S. Liquidity Coverage Ratio (LCR) rules (see "Liquidity Management, Stress Testing and Measurement" below). All amounts are as of period end and may increase or decrease intra-period in the ordinary course of business.

As set forth in the table above, Citi's HQLA under the final U.S. LCR rules as of December 31, 2014 was \$412.6 billion, compared to \$416.4 billion as of September 30, 2014. The decrease in HQLA quarter-over-quarter was primarily driven by a reduction in deposits in the significant Citibank entities (see "Deposits" below), partially offset by long-term debt issuance, increased short-term borrowings and replacement of non-HQLA securities with HQLA-eligible securities, each in the parent entity.

Prior to September 30, 2014, Citi reported its HQLA based on the Basel Committee's final LCR rules. On this basis, Citi's total HQLA was \$423.7 billion as of December 31, 2013. Year-over-year, the decrease in Citi's HQLA was primarily due to the impact of the final U.S. LCR rules, which excluded municipal securities, covered bonds and residential mortgage-backed securities from the definition of HQLA, partially offset by an increase in credit card securitizations and Federal Home Loan Banks (FHLB) advances, each in Citibank, N.A.

The following table shows further detail of the composition of Citi's HQLA by type of asset as of December 31, 2014 and September 30, 2014. For securities, the amounts represent the liquidity value that potentially could be realized, and thus exclude any securities that are encumbered, as well as the haircuts that would be required for secured financing transactions.

As set forth in the table above, Citi's estimated LCR under the final U.S. LCR rules was 112% as of December 31, 2014 and 111% as of September 30, 2014. The increase quarter-over-quarter was primarily driven by deposit flows and improvements in the quality of Citi's deposit base.

Prior to September 30, 2014, Citi reported its LCR based on the Basel Committee's final LCR rules. On this basis, Citi's estimated LCR was 117% as of December 31, 2013. Year-over-year, the decrease in Citi's estimated LCR was primarily due to the impact of the final U.S. LCR rules. Specifically, as discussed under "High Quality Liquid Assets" above, the final U.S. LCR rules excluded certain assets from the calculation of HQLA. In addition, estimated net outflows are higher under the final U.S. LCR rules, primarily due to the "peak day" outflow requirement discussed above as well as higher deposit outflow assumptions resulting from the more stringent deposit classifications (e.g., the nature of the deposit balance or counterparty designation) under the final U.S. LCR rules.

	Dec. 31, 2014	Sept. 30, 2014
<i>In billions of dollars</i>		
Available cash	\$102.7	\$113.6
U.S. Treasuries	139.5	117.1
U.S. Agencies/Agency MBS	57.1	60.7
Foreign government <sup>(1)</sup>	110.2	121.6
Other investment grade	3.1	3.4
<b>Total</b>	<b>\$412.6</b>	<b>\$416.4</b>

Note: Amounts set forth in the table above are estimated based on the final U.S. LCR rules.

- (1) Foreign government includes securities issued or guaranteed by foreign sovereigns, agencies and multilateral development banks. Foreign government securities are held largely to support local liquidity requirements and Citi's local franchises and principally included government bonds from Brazil, Hong Kong, India, Japan, Korea, Mexico, Poland, Singapore and Taiwan.

Citi's HQLA as set forth above does not include additional potential liquidity in the form of Citigroup's borrowing capacity from the various FHLB, which was approximately \$26 billion as of December 31, 2014 (compared to \$22 billion as of September 30, 2014 and \$30 billion as of December 31, 2013) and is maintained by pledged collateral to all such banks. The HQLA shown above also does not include Citi's borrowing capacity at the U.S. Federal Reserve Bank discount window or international central banks, which would be in addition to the resources noted above.

In general, Citigroup can freely fund legal entities within its bank vehicles. Citigroup's bank subsidiaries, including Citibank, N.A., can lend to the Citigroup parent and broker-dealer entities in accordance with Section 23A of the Federal Reserve Act. As of December 31, 2014, the amount available for lending to these entities under Section 23A was approximately \$17 billion (unchanged from September 30, 2014 and December 31, 2013), subject to collateral requirements.

*To be considered leading practice, members of the User Group expect banks to disclose pro-forma ratios as well as the underlying components of the measures (e.g., leverage exposure, HQLA and net outflows, fully loaded risk weighed assets for Standardized / Advanced)*

## Recommendation 4: Once the applicable rules are finalized, outline plans to meet each new key regulatory ratio, e.g. the net stable funding ratio, liquidity coverage ratio and leverage ratio

### Leverage Ratio

#### Leverage ratio requirements

The leverage exposure below has been prepared in line with the PRA's revised Supervisory Statement SS3/13, which requires the exposure measure to be calculated on a BCBS 270 basis and Barclays to meet a 3% end point Tier 1 leverage ratio.

In January 2014, the Basel Committee finalised its revised standards (BCBS 270) for calculating the Basel III leverage ratio. The European Commission is implementing the amendments into the CRR via a delegated act which came into force from January 2015. Barclays does not believe that there is a material difference between the BCBS 270 leverage ratio and a leverage ratio calculated in accordance with the delegated act.

At 31 December 2014, Barclays' BCBS 270 leverage ratio was 3.7%, which is in line with the expected minimum end state requirement outlined by the Financial Policy Committee (FPC).

BCBS 270 leverage ratio			
	As at 31.12.14 £bn	As at 30.09.14 £bn	As at 30.06.14 £bn
<b>Leverage exposure</b>			
Accounting assets			
Derivative financial instruments	440	383	333
Cash collateral	73	60	60
Reverse repurchase agreements (SFTs)	132	158	172
Loans and advances and other assets	713	765	750
Total IFRS assets	1,358	1,366	1,315
<b>Regulatory consolidation adjustments</b>	(8)	(8)	(8)
<b>Derivatives adjustments</b>			
Derivatives netting	(395)	(345)	(298)
Adjustments to cash collateral	(53)	(42)	(31)
Net written credit protection	27	28	29
Potential future exposure on derivatives	179	195	195
Total derivatives adjustments	(242)	(164)	(105)
<b>Securities financing transactions (SFTs) adjustments</b>	25	34	56
<b>Regulatory deductions and other adjustments</b>	(15)	(14)	(10)
Weighted off balance sheet commitments	115	110	105
Total fully loaded leverage exposure	1,233	1,324	1,353
Fully loaded CET1 capital	41.5	42.0	40.8
Fully loaded AT1 capital	4.6	4.6	4.6
Fully loaded Tier 1 capital	46.0	46.6	45.4
Fully loaded leverage ratio	3.7%	3.5%	3.4%

#### Group Transform targets

Definition	Why it is important and how the Group performed
<p><b>BCBS 270 fully loaded leverage ratio</b></p> <p>From 30 June 2014, Barclays adopted the January 2014 BCBS 270 rules for leverage exposure as the primary measure to manage leverage exposure for the Group, and ultimately derive the related leverage ratio for the Group. These rules supersede the previously recognised PRA leverage basis, with the PRA also adopting the BCBS based metric as the primary measure.</p> <p>The ratio is calculated as fully loaded Tier 1 Capital divided by BCBS 270 fully loaded leverage exposure.</p>	<p>The leverage ratio is non-risk based and is intended to act as a supplementary measure to the risk-based capital metrics such as the CET1 ratio.</p> <p>The BCBS 270 leverage ratio increased to 3.7% (30 June 2014: 3.4%), reflecting a reduction in the BCBS 270 leverage exposure of £120bn to £1,233bn and an increase in Tier 1 Capital to £46.0bn (30 June 2014: £45.4bn). Tier 1 Capital includes £4.6bn of Additional Tier 1 (AT1) securities.</p> <p>Transform target: BCBS 270 leverage ratio &gt; 4.0% by 2016.</p>

*In addition to quantifying its leverage exposure and components of LCR, Barclays outlines its internal targets for these ratios over time*

### Liquidity Coverage Ratio

#### Comparing internal and regulatory liquidity stress tests

The LRA stress scenarios, the PRA ILG and the CRD IV LCR are all broadly comparable short term stress scenarios in which the adequacy of defined liquidity resources is assessed against contractual and contingent stress outflows. The PRA ILG and the CRD IV LCR stress tests provide an independent assessment of the Group's liquidity risk profile.

Stress Test	Barclays LRA	PRA ILG	CRD IV LCR	Basel III NSFR
Time Horizon	30 – 90 days	3 months	30 days	6+ months
Calculation	Liquid assets to net cash outflows	Liquid assets to net cash outflows	Liquid assets to net cash outflows	Stable funding resources to stable funding requirements

As at 31 December 2014, the Group held eligible liquid assets in excess of 100% of stress requirements for all three LRA scenarios and the CRD IV LCR requirement.

Compliance with internal and regulatory stress tests			
	Barclays' LRA (one-month Barclays-specific requirement)* £bn	Estimated CRD IV LCR £bn	
<b>As at 31 December 2014</b>			
Total eligible liquidity pool	149	153	
<b>Asset inflows</b>	7	20	
<b>Stress outflows</b>			
Retail and commercial deposit outflows	(49)	(71)	
Wholesale funding	(26)	(17)	
Net secured funding	(12)	(6)	
Derivatives	(7)	(10)	
Contractual credit rating downgrade exposure	(13)	(13)	
Drawdowns of loan commitments	(8)	(26)	
Intraday	(12)	–	
Total stress net cash flows	(120)	(123)	
Surplus	29	30	
Liquidity pool as a percentage of anticipated net cash flows	124%	124%	
As at 31 December 2013	104%	96%	

During 2014, the Group strengthened its liquidity position, building a larger surplus to its internal and regulatory requirements. This positions the Group well for potential rating changes as credit rating agencies assess sovereign support in Barclays Bank PLC credit ratings. The Group plans to maintain its surplus to the internal and regulatory stress requirements at an efficient level, while considering risks to market funding conditions and its liquidity position. The continuous reassessment of these risks may lead to appropriate actions being taken with respect to sizing of the liquidity pool.

#### Liquidity risk stress testing

Under the Liquidity Framework, the Group has established a Liquidity Risk Appetite (LRA) together with the appropriate limits for the management of the liquidity risk. This is the level of liquidity risk the Group chooses to take in pursuit of its business objectives and in meeting its regulatory obligations. The key expression of the liquidity risk is through internal stress tests. It is measured with reference to the liquidity pool compared to anticipated stressed net contractual and contingent outflows for each of three stress scenarios.

#### Liquidity Risk Appetite

As part of the LRA, the Group runs three primary liquidity stress scenarios, aligned to the PRA's prescribed stresses:

- A 90-day market-wide stress event;
- A 30-day Barclays-specific stress event; and
- A combined 30-day market-wide and Barclays-specific stress event.

Under normal market conditions, the liquidity pool is managed to be at a target of at least 100% of anticipated outflows under each of these stress scenarios. The 30-day Barclays-specific stress scenario, results in the greatest net outflows of each of the liquidity stress tests. The combined 30-day scenario assumes outflows consistent with a firm-specific stress for the first two weeks of the stress period, followed by relatively lower outflows consistent with a market-wide stress for the remainder of the stress period.

## Section 2

# **Risk governance and risk management strategies / business model**



## Recommendation 5: Bank's risk management organisation, processes and key functions

### RISK MANAGEMENT OVERSIGHT

Fundamental to our business is the prudent taking of risk in line with our strategic priorities. The primary objectives of risk management are to protect our financial strength and reputation, while ensuring that capital is well deployed to support business activities and grow shareholder value. Our risk management framework is based on transparency, management accountability and independent oversight. Risk management is an integral part of our business planning process with strong involvement of senior management and the Board of Directors (Board).

To meet the challenges of a volatile market environment and changing regulatory frameworks, we are working to continuously strengthen risk management throughout the Group. We have comprehensive risk management processes and sophisticated control systems. We are working to limit the impact of negative developments that may arise by carefully managing risk concentrations.

### Risk governance

Effective risk management begins with effective risk governance. Our risk governance framework is based on a "three lines of defense" governance model, where each line has a specific role and defined responsibilities and works in close collaboration to identify, assess and mitigate risks.

The first line of defense is the front office, which is responsible for pursuing suitable business opportunities within the strategic

risk objectives and compliance requirements of the Group, including primary responsibility for compliance with relevant legal and regulatory requirements and internal controls.

The second line of defense includes functions such as risk management, legal and compliance and product control. It articulates standards and expectations for the management of risk and effectiveness of controls, including advising on applicable legal and regulatory requirements and publishing related policies, and monitors compliance with the same. The second line of defense is separate from the front office and acts as an independent control function, responsible for reviewing and challenging front office activities and producing independent management information and risk management reporting for senior management and regulatory authorities.

The third line of defense is the internal audit function, which monitors the effectiveness of controls across various functions and operations, including risk management and governance practices.

Our operations are regulated by authorities in each of the jurisdictions in which we conduct business. Central banks and other bank regulators, financial services agencies, securities agencies and exchanges and self-regulatory organizations are among the regulatory authorities that oversee our businesses. The Swiss Financial Market Supervisory Authority FINMA (FINMA) is our primary regulator providing global supervision.

► Refer to "Regulation and supervision" in I – Information on the company for further information.

### Key management bodies and committees covering risk management matters

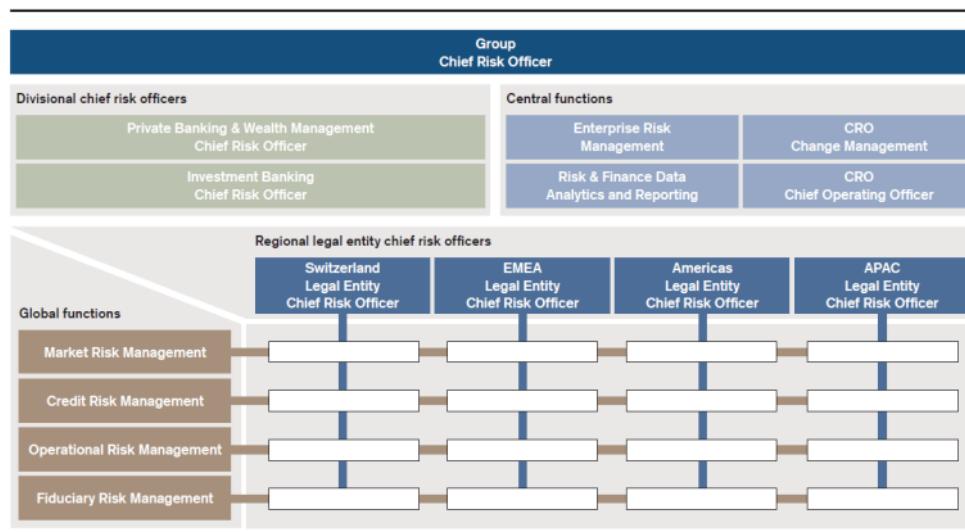


### Risk organization

The risk management function is responsible for providing risk management oversight and establishing an organizational basis to manage risk matters.

Our risk organization has been restructured in light of the increasing complexity of the regulatory environment and the strong emphasis on legal entity considerations. A core mandate of the risk management function is to contribute to an effective and independent second line of defense.

### Risk organization



The restructured risk management organization was developed in the second half of 2014, it became effective in January 2015 and its implementation continues during 2015. The key elements of the risk organization include:

#### Matrix structure

Our matrix structure reflects the Group's business strategy and emphasizes the Group's legal entity considerations.

The global functions comprise market, credit, operational and fiduciary risk management, and they are accountable for functional risk oversight and the limit framework both at global and local legal entity level. They are also responsible for functional models, methodologies and policies and function-related regulatory change.

The regional legal entity chief risk officers comprise our four regions and provide risk oversight for legal entities. They define the local risk management and risk appetite frameworks and are responsible for meeting the legal-entity-specific regulatory requirements. The global functions and the regional legal entity chief risk officers jointly manage the functional teams in each location.

#### Enterprise Risk Management

The Enterprise Risk Management central function, with its head directly reporting to the Group CRO, strengthens holistic risk

coverage. By consolidating our cross-functional and cross-business risk initiatives in Enterprise Risk Management, we enhance effectiveness and harmonize our overarching risk framework and concepts. The Enterprise Risk Management mandate is focused on the overarching risk framework including risk appetite and stress testing, Group risk reporting, model risk management, risk-related regulatory management and coordination of our reputational risk-related activities.

#### Divisional chief risk officers

The two divisional chief risk officer roles for Investment Banking and Private Banking & Wealth Management ensure alignment of the risk management function within our businesses.

#### Other central functions

Risk & Finance Data Analytics and Reporting provides consistent reporting production, analytics and data management shared with finance functions. CRO Change Management is responsible for the portfolio of strategic change programs across the risk management function. The CRO's chief operating officer facilitates business management within the risk management function.

## Recommendation 5: Bank's risk management organisation, processes and key functions

### MAIN TYPES OF RISK

#### Credit risk

##### Organization

Risk measurement relies on rating systems adapted to each category of customer and transaction, of which the Groupe BPCE Risk Management division is responsible for defining and controlling performance.

Decisions are made at Groupe BPCE – subject to regulatory ceilings, a system of internal ceilings and limits, relating to major groups (a company composed of its subsidiaries) – on a consolidated basis, and a principle of counter-analysis involving the Risk Management function, with a right of appeal that may result in submission to the higher-level Credit Committee. Decision-making in each Groupe BPCE entity is carried out within the framework of delegation procedures.

The Risk Management division measures and monitors compliance with regulatory ceilings at the Group level for the BPCE Group Risk Management Committee, in accordance with regulation No. 93-05 of December 21, 1993 relating to the control of large risk exposures. Monitoring of compliance with internal ceilings and limits is regularly checked by the Group Risk Management Committee and the Group Audit and Risk Committee.

Within Groupe BPCE, an internal rating methodology shared by both networks (specific to each customer segment) is applied for individual and professional retail customers, as well as for the corporate, "central banks and other sovereign exposures", "central administrations", "Public-sector and similar debt" and "financial institutions".

Risk monitoring within Groupe BPCE focuses on the quality of information, which is necessary for proper risk assessment, on the one hand, and the level of and trend in risks taken on the other. Compliance with the application of standards and quality of data is managed through monitoring established in all asset classes for which applications are shared by both the Banque Populaire and Caisse d'Épargne networks. In conjunction with the consolidated Risk Management and Modeling department, the supervision teams analyze portfolios to help identify the main concentrations of risk.

The different levels of control within Groupe BPCE operate under the supervision of the Risk Management division, which is also responsible for consolidated summary reporting to the various decision-making bodies.

Sensitive matters (cases on the watchlist) and the provisioning policy for the main risks shared by several entities (including Natixis) are regularly examined by the Group Watchlist and Provisions Committee.

*BPCE's report has a clear and comprehensive organization chart and good narrative discussion on risk management process, including the recent developments in 2014.*

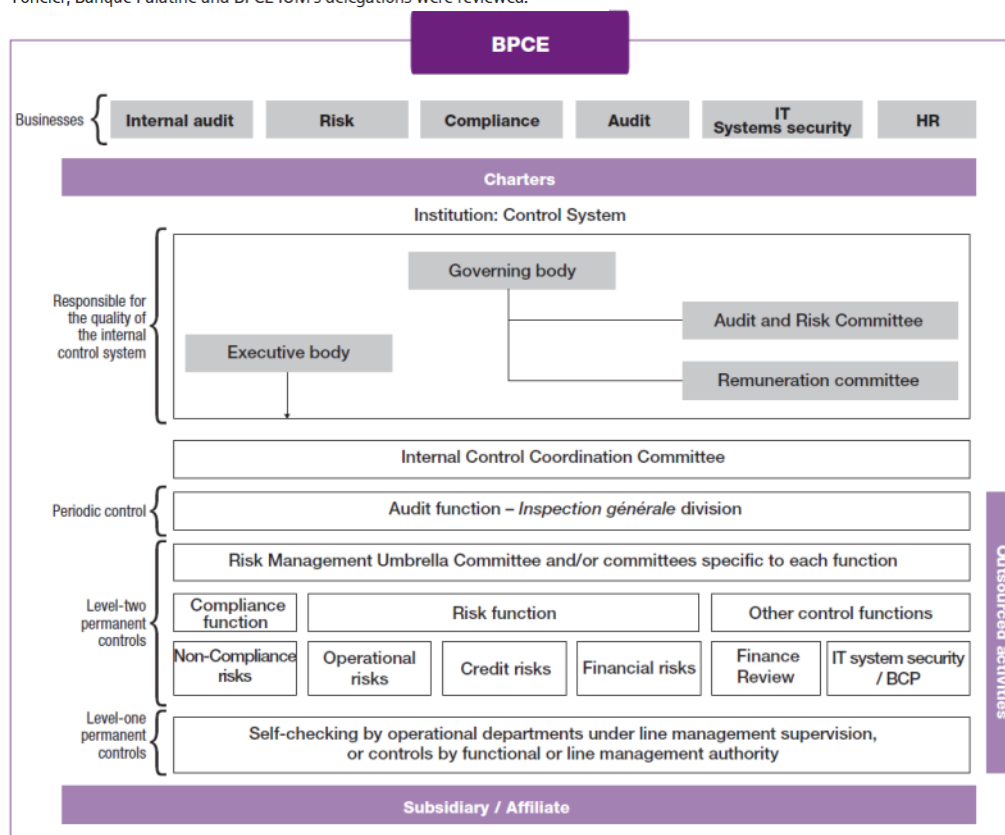
#### Activities in 2014

Within the framework of the Group Credit Committee, the Groupe BPCE Risk Management division renewed the Group's limits for counterparties in the banking, corporate, regional public authority and investment sectors, as well as for real estate professionals and commodities traders.

In order to supplement its credit risk monitoring system, Groupe BPCE implemented several risk management policies in the Group's key structural segments: home loan, consumer loan, real estate professional, and LBO policies. The existing sector policy system, which is intended to define recommendations on sectors to which the Group's institutions have the most sensitive exposure, is complete and is subject to annual review.

The Group's watchlist monitoring process was also expanded to include banking and sovereign asset classes alongside existing asset classes in order to ensure consistency in provisioning for the main doubtful loans shared by several entities. The loans on the performing loan watchlist are also subject to closer supervision.

Finally, the control of the review of major risks incurred by networks was strengthened as part of the ex-post system. In addition, subsidiaries Crédit Foncier, Banque Palatine and BPCE IOM's delegations were reviewed.



## Recommendation 6: Bank's risk culture, and how procedures and strategies are applied to support the culture

### Risk Culture

We seek to promote a strong risk culture throughout our organization. A strong risk culture is designed to help reinforce our resilience by encouraging a holistic approach to the management of risk and return throughout our organization as well as the effective management of our risk, capital and reputational profile. We actively take risks in connection with our business and as such the following principles underpin risk culture within our group:

- Risk is taken within a defined risk appetite;
- Every risk taken needs to be approved within the risk management framework;
- Risk taken needs to be adequately compensated; and
- Risk should be continuously monitored and managed.

Employees at all levels are responsible for the management and escalation of risks. We expect employees to exhibit behaviors that support a strong risk culture. To promote this our policies require that behavior assessment is incorporated into our performance assessment and compensation processes. We have communicated the following risk culture behaviors through various communication vehicles:

- Being fully responsible for our risks;
- Being rigorous, forward looking and comprehensive in the assessment of risk;
- Inviting, providing and respecting challenges;
- Trouble shooting collectively; and
- Placing Deutsche Bank and its reputation at the heart of all decisions.

To reinforce these expected behaviors and strengthen our risk culture, we conduct a number of group-wide activities. Our Board members and senior management frequently communicate the importance of a strong risk culture to support a consistent tone from the top. To further strengthen this message, we have reinforced our targeted training. In 2014, our employees attended more than 88,000 mandatory training modules globally including, for example, Global Information Security Awareness, An Introduction to MaRisk and the newly introduced 'Tone from the Top' module. As part of our ongoing efforts to strengthen our risk culture, we review our training suite regularly to develop further modules or enhance existing components.

In addition, along with other measures to strengthen our performance management processes, we have designed and implemented a process to tie formal measurement of risk culture-related behaviors to our employee performance assessment, promotion and compensation processes. This process has been in place in our CB&S and GTB divisions since 2010 and has subsequently been rolled out to all divisions and functions, with PBC Germany being the latest to have implemented the process in January 2015. This process is designed to further strengthen employee accountability.

We have also developed a dashboard to measure risk culture at a divisional and regional level. This was piloted in CB&S and AWM in 2014 and will be further developed over the coming months.

Further measures are already being reviewed and will be added to the program in 2015.

### Risk Appetite and Capacity

Risk appetite expresses the level of risk that we are willing to assume within our risk capacity in order to achieve our business objectives, as defined by a set of minimum quantitative metrics and qualitative standards. Risk capacity is defined as the maximum level of risk we can assume in both normal and distressed situations before breaching regulatory constraints and our obligations to stakeholders.

Risk appetite is an integral element in our business planning processes via our Risk and Capital Demand Plan, to promote the appropriate alignment of risk, capital and performance targets, while at the same time considering risk capacity and appetite constraints. We leverage the stress testing process to test the compliance of the plan also under stressed market conditions. Top-down risk appetite serves as the limit for risk-taking for the bottom-up planning from the business functions.

The Management Board reviews and approves our risk appetite and capacity on an annual basis, or more frequently in the event of unexpected changes to the risk environment, with the aim of ensuring that they are consistent with our Group's strategy, business and regulatory environment and stakeholders' requirements.

In order to determine our risk appetite and capacity, we set different group level triggers and thresholds on a forward looking basis and define the escalation requirements for further action. We assign risk metrics that are sensitive to the material risks to which we are exposed and which are able to function as key indicators of financial health. In addition to that, we link our risk and recovery management governance framework with the risk appetite framework. In detail, we assess a suite of metrics under stress (CRR/CRD 4 fully loaded Common Equity Tier 1 ("CET 1") ratio, Internal Capital Adequacy ("ICA") ratio, and Stressed Net Liquidity Position ("SNLP")) within the regularly performed benchmark and more severe group-wide stress tests and compare them to the Red-Amber-Green ("RAG") levels as defined in the table below.

#### Risk Appetite Thresholds for key metrics

RAG levels	CRR/CRD 4 fully loaded CET1 ratio	Internal capital adequacy	Stressed net liquidity position
Normal	> 8.0 %	> 135 %	> € 5 billion
Critical	8.0 % – 5.5 %	135 % – 120 %	€ 5 billion – € 0 billion
Crisis	< 5.5 %	< 120 %	< € 0 billion

Reports relating to our risk profile as compared to our risk appetite and strategy and our monitoring thereof are presented regularly up to the Management Board. Throughout the year 2014, our actual risk profile has remained in the normal levels as defined in the table above. In the event that our desired risk appetite is breached under either normal or stressed scenarios, a predefined escalation governance matrix is applied so these breaches are highlighted to the respective committees, and ultimately to the Chief Risk Officer and the Management Board. Amendments to the risk appetite and capacity must be approved by the Chief Risk Officer or the full Management Board, depending on their significance. As part of our annual risk appetite thresholds calibration exercise, we have furthermore adjusted our normal level of CRR/CRD 4 fully loaded CET1 ratio to 8.5 % and our ICA ratio to 140 % effective 2015 onwards. Therefore, the upper bound of the critical level for CRR/CRD 4 fully loaded CET1 ratio and ICA ratio will be adjusted for these changes as well.

*Deutsche Bank describes its risk culture and quantifies its risk appetite. Members of the User Group noted that very few banks quantified their risk appetite to any meaningful degree*



## Recommendation 6: Bank's risk culture, and how procedures and strategies are applied to support the culture

### RISK MANAGEMENT

Effective risk management is fundamental to the success of the Bank, and is recognized as a core deliverable in the Bank's overall approach to strategy management. Scotiabank has a strong, disciplined risk management culture where risk management is a responsibility shared by all of the Bank's employees. A key aspect of this culture is diversification across business lines, geographies, products, and industries.

#### Risk management framework

The primary goals of risk management are to ensure that the outcomes of risk-taking activities are consistent with the Bank's strategies and risk appetite, and that there is an appropriate balance between risk and reward in order to maximize shareholder returns. The Bank's enterprise-wide risk management framework provides the foundation for achieving these goals.

This framework is subject to constant evaluation to ensure that it meets the challenges and requirements of the global markets in which the Bank operates, including regulatory standards and industry best practices. The risk management programs of the Bank's subsidiaries conform in all material respects to the Bank's risk management framework, although the actual execution of their programs may be different. For new acquisitions, or situations where control of a subsidiary has been recently established, the Bank assesses existing risk management programs and, if necessary, develops an action plan to make improvements in a timely fashion.

The Bank's risk management framework is predicated on the three-lines-of-defence model. Within this model, functional Business Line staff and management (the first line) incur and own the risks, while Global Risk Management and other control functions (the second line) provide independent oversight and objective challenge to the first line of defence, as well as monitoring and control of risk. Internal Audit Department (the third line) provides assurance that control objectives are achieved by the first and second lines of defence.

#### 1 Business Line/Corporate Function

- Own the risks associated with business activities.
- Exercise business judgement to evaluate risk.
- Ensure activities are within the Bank's risk appetite and risk management policies.

#### 2 Global Risk Management and Other Control Functions

- Independently facilitate and monitor the implementation of effective risk management practices.
- Responsible for policy development, measurement & reporting, limits & controls, oversight & monitoring.
- Provide objective challenge to the first line of defence.
- Provide training, tools and advice to support policy and compliance.

#### 3 Internal Audit

- Independent monitoring and oversight function.
- Focus on governance framework and control systems.
- Audit findings reported to management and Audit Committee.

#### Risk governance

Effective risk management begins with effective risk governance.

The Bank has a well-established risk governance structure, with an active and engaged Board of Directors supported by an experienced senior management team and a centralized risk management group that is independent of the business lines. Decision-making is highly centralized through a number of senior and executive risk management committees.

#### The Board of Directors

The Board of Directors, either directly or through its committees ensures that decision-making is aligned with the Bank's strategies and risk appetite. The Board approves key risk policies, limits and risk appetite frameworks, and on a quarterly basis receives a comprehensive summary of the Bank's risk profile and performance of the portfolio against defined goals. The Bank's Internal Audit department reports independently to the Board (through the Audit and Conduct Review Committee) on the effectiveness of the risk governance structure and risk management framework.



The Bank's risk management framework is applied on an enterprise-wide basis and consists of three key elements:

- Risk Governance,
- Risk Appetite, and
- Risk Management Tools.

#### Risk management culture

Effective risk management requires a strong, robust, and pervasive risk management culture.

The business lines are responsible for the development and execution of business plans that are aligned with the Bank's risk management framework, and are accountable for the risks they incur. Understanding and managing these risks is a fundamental element of each business plan. Business lines work in partnership with Global Risk Management to ensure that risks arising from their business are thoroughly evaluated and appropriately addressed.

Risk education programs, and documented policies and procedures are jointly available to staff in the business lines and Global Risk Management.

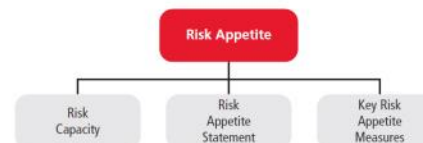
Decision-making on risk issues is highly centralized. The membership of senior and executive management committees responsible for the review, approval and monitoring of transactions and the related risk exposures, includes business line heads and senior risk officers from Global Risk Management. The flow of information and transactions to these committees keeps senior and executive management well informed of the risks the Bank faces, and ensures that transactions and risks are aligned with the Bank's risk appetite. The interaction between senior risk officers and business line heads at committee meetings is robust, with constructive discussions and objective challenge by all participants in order to fully identify and address all relevant risks applicable to a transaction.

The Bank's material incentive compensation programs are structured to reflect the Bank's risk appetite, with a substantial portion deferred in order to achieve stronger alignment with the results of risk-taking activities. The Bank also has a very stringent Guidelines for Business Conduct to which all staff must attest on an annual basis. Performance-related compensation is eligible for claw-back where there is a material breach of compliance rules or Guidelines for Business Conduct, or if there is a material misstatement of results in the fiscal year of the grant.

#### Risk appetite framework

Effective risk management requires clear articulation of the Bank's risk appetite and how the Bank's risk profile will be managed in relation to that appetite.

The Bank's Risk Appetite Framework consists of a risk capacity, risk appetite statement and key risk appetite measures. Together, application of the risk appetite statement and monitoring of the key risk appetite measures help to ensure the Bank stays within appropriate risk boundaries. The Bank's Credit Risk Appetite further defines the Bank's risk appetite with respect to lending, counterparty credit risk, and other credit risks (such as investments).



- The Bank's Risk Appetite Framework combines qualitative and quantitative terms of reference to guide the Bank in determining the amount and types of risk it wishes to prudently undertake in pursuing the Bank's strategic and financial objectives.

Risk appetite is supported by the following Core Deliverables:

1. Maintain appropriate financial strength and liquidity
  - Diversity, quality and stability of earnings
  - Focus on core businesses, with disciplined and selective strategic investments
  - Maintain capital adequacy
2. Measure, monitor and manage all aspects of the Bank's risk appetite and risk profile.
  - Dedicated attention to credit, market, liquidity, and operational risks
  - Careful consideration of reputational, environmental, and other risks
  - No tolerance for reputational risks that could affect our brand
3. Meet the needs and expectations of our customers, employees, shareholders and other key stakeholders.
4. Ensure a deep, diverse and engaged pool of talented Scotiabankers.
5. Operate in an efficient, secure and compliant manner.

#### Risk management tools

Effective risk management includes tools that are guided by the Bank's Risk Appetite Framework and integrated with the Bank's strategies and business planning processes.



- Risk management techniques are regularly reviewed and updated to ensure consistency with risk-taking activities, and relevance to the business and financial strategies of the Bank.

#### Policies and Limits

##### Policies

Apply to specific types of risk or to the activities that are used to measure and control risk exposure. They are based on recommendations from risk management, internal audit, business lines, and senior executive management. Industry best practices and regulatory requirements are also factored into the policies. Policies are guided by the Bank's risk appetite, and set the limits and controls within which the Bank and its subsidiaries can operate.

- Key risk policies are approved by the Board of Directors, either directly or through the Board's Executive and Risk Committee or Audit and Conduct Review Committee (the Board).
- Management level risk policies associated with processes such as model development and stress testing are approved by executive management and/or key risk committees.

##### Limits

Control risk-taking activities within the tolerances established by the Board and senior executive management. Limits also establish accountability for key tasks in the risk-taking process and establish the level or conditions under which transactions may be approved or executed.

## Recommendation 6: Bank's risk culture, and how procedures and strategies are applied to support the culture

### Risk culture

In the current social and economic environment risk culture is a critical factor in the success or failure of a bank's risk management. Issues relating to risk culture are consequently of interest to all stakeholders of ING Bank. ING Bank considers the good reputation and integrity of its organisation as key requirements to operate successfully in the financial world.

The risk management framework based on the three lines of defence governance model is effective when a strong risk culture is present on all levels. ING Bank promotes awareness of collectively shared values, ideas and goals but also of potential threats and it ensures alignment of individual performance objectives with the short- and long-term strategy. By making ING's risk responsibilities more transparent within the different levels of the organisation and holding every employee accountable for his acts, the risk culture and awareness are embedded in the organisation, which leads to effective risk management.

As explained in the risk governance, the risk function is at all levels independent from the commercial departments which allow its criteria and opinions to be heard and taken into account. At the Bank level, it is represented by the CRO in the MBB, which ensures sufficient countervailing power in the decision-making processes to prevent excessive risks.

### Definition

Risk culture and risk awareness are not only issues for senior management during their strategy decisions, but something that every employee has to be aware of and consider in his daily business. It is promoting and being aware of collectively shared values, ideas and goals towards the organisational objectives and mitigating opportunities for unfavourable events to occur that can impact the ability of the organisation to achieve its objectives. Risk awareness is to be alert on potential threats that can occur in day-to-day business, which can be specific to the sector, the region or the clients ING Bank is doing business with.

Commonly seen as norms and traditions of behaviour of individuals and of groups within an organisation, risk culture determines the way in which employees identify, understand, discuss, and act on the risks the organisation confronts and the risks it takes. This is a long-term commitment and journey that cannot be reached overnight. Therefore, ING Bank initiated different programmes and manuals have been issued within the organisation as statement of what the organisation objectives are.

### Accountability

In 2009, ING Bank introduced the Promoting Integrity Programme (PIP) a long-term, global, educational and behavioural change programme for the ING Bank employees. The role of the Executive Board in the oversight of corporate culture and successful implementation of the risk culture change is essential in this process.

With the programme, ING Bank gains a sound risk culture and ensures that every employee in every part of the organisation understands how his actions and behaviour can help earn and retain customer and stakeholder trust. This programme is divided into several mandatory modules among others business principles, customer trust, fraud awareness, Financial Economic Crime and IT security. To enhance risk awareness, these topics are discussed between managers and employees through dialogue sessions that managers organise within their teams to create clear and consistent understanding. The endorsement from the executive level and the emphasis in the communication strengthen the culture.

### Compensation

Due to economic and financial turmoil, concerns were raised in different countries following the bailout of different financial and industrial companies. The link between risk taken and compensation policies was one of the major topics in the public and political spheres. Several public institutions and initiatives advocated aligning risk and reward in risk-based compensation policies. For further information with regards to ING's compensation policies please refer to the remuneration report in the corporate governance section of the Annual Report and Pillar III remuneration details as published on the corporate website [ing.com](http://ing.com).

### Risk cycle process

ING uses a stepwise risk management approach to know, mitigate and manage its financial and non-financial risks. The approach consists of a cycle of five recurrent activities: risk identification, risk assessment, risk control, risk monitoring and risk reporting. In short, this implies: determine what your risks are, assess which of those risks can really do harm, take mitigating measures to control these risks, monitor if the measures are effective and monitor the development of the risk and report the findings to management at all relevant levels to enable them to take action when needed.

The recurrence is twofold. One: identification, assessment and review and update of mitigating measures are done periodically. Two: if, during the period, monitoring findings indicate new risks are arising, known risks are changing, assessed risk levels are changing, or control measures are not effective enough, analyses of these findings may result in renewed and more frequent risk identification, and/or assessment, and/or in a change of the mitigating measure.



### Risk identification

Risk identification is a joint effort of the commercial business and the risk management functions. Its goal is to detect potential new risks and determine changes in known risks. Regular risk identification is essential for both the effectiveness and efficiency of risk management. Potential risks that are not identified, will not be controlled and monitored and may lead to surprises later. Known risks may have changed over time and as a consequence the existing mitigating measures and monitoring may be inadequate or obsolete.

Risk identification is performed periodically. In case of material internal or external change, an additional ad-hoc risk identification can be performed.

### Risk assessment and control

Each identified risk is assessed to determine the importance, or risk level, of the risk for the ING Bank entity in scope. This enables the entity to decide which of the identified risks need control measures and how strict or tolerant these measures must be. Known risks are re-assessed to either confirm the risk level or detect change.

The importance of a risk is assessed based on the likelihood that the risk materialises and the financial or reputational impact should the risk occur. A risk that is not very likely to happen but has a huge financial impact when it does needs to be controlled. For a risk that is likely to happen at a higher frequency, but that has a modest financial impact, business management may decide to not mitigate and accept the consequences when it happens.

Risks can be controlled by mitigating measures that either lower the likelihood the risk occurs, or measures that lower the impact if they occur. The ultimate measure to lower risk is to stop the activity or service that causes the risk (risk avoidance). Risk controlling/mitigating measures are defined and maintained at both Bank wide and local level.

### Monitoring and reporting

With the monitoring of the risk control measures, ING Bank continuously checks if they are executed, complied with, have the expected mitigating effects and follow the development of the risks and their risk levels. Adequate risk reporting provides senior and local management with the information they need to manage risk.

ING uses iRisk, an application supporting operational risk functions for incident reporting, action tracking, risk assessments, business impacts assessments and key control testing.

The Executive Board and the Supervisory Board of ING Group have approved the ING Whistleblower Procedure. The ING Whistleblower Procedure provides the opportunity for every employee to make his or her complaint, including anonymous complaints, to an independent Reporting Officer in order for the responsible management to take appropriate and adequate action in case of alleged breaches of internal or external regulation or other irregularities.

### Risk appetite framework

ING Bank uses an integrated risk management approach for its banking activities. The Management Board Banking uses the bank risk appetite framework both to set boundaries for the Medium Term Plan (MTP) budget process and to monitor and manage the actual risk profile in relation to the risk appetite.

### Process

The ING Bank risk appetite framework consists of specific risk appetite statements, which are approved by the SB on an annual basis or more frequently if this is felt necessary, and reviewed quarterly in the MBB and the SB. The bank risk appetite process is focused on setting the appetite at the consolidated Bank level and across the different risk categories. It is therefore essentially a top-down process, which bases itself on the ambition of the Bank in terms of its risk profile and is a function of the capital and liquidity levels and ambitions, the regulatory environment and the economic context. The process is set up according to the following steps:



## Recommendation 7a: Describe key risks that arise from the bank's business model and activities

### Top and emerging risks

We monitor and review top and emerging risks that may affect our future results, and take action to mitigate potential risks if required. We perform an in-depth analysis, which can include stress testing our exposures relative to the risks, and provide updates and related developments to the Board on a regular basis. This section describes the main top and emerging risks that we consider with potential negative implications, as well as regulatory and accounting developments that are material for CIBC.

### Technology, information and cyber security risk

Financial institutions like CIBC are evolving their business processes to leverage innovative technologies and the internet to improve client experience and streamline operations. At the same time, the sophistication of cyber threats and the associated financial, reputational and business interruption risks have also increased.

These risks continue to be actively managed by us through enterprise-wide technology and information security programs, with the goal of maintaining overall cyber resilience that prevents, detects and responds to threats such as data breaches, unauthorized access and denial of service attacks.

Given the importance of electronic financial systems, including secure online and mobile banking provided by CIBC to its clients, CIBC continues to develop controls and processes to protect our systems and client information from damage and unauthorized disclosure. CIBC monitors the changing environment globally, including cyber threats and mitigation strategies. In addition, we benchmark against best practices and provide regular updates to the Board.

Despite our commitment to information and cyber security, CIBC and its related third parties may not be able to fully mitigate all risks associated with the increased complexity and high rate of change in the threat landscape. However, CIBC has developed and continues to refine approaches to minimize the impact of any incidents that may occur.

### Canadian consumer debt and the housing market

As a consequence of historically low interest rates, especially in the aftermath of the 2008 global financial crisis, Canadians have increased debt levels at a pace that has exceeded growth in their income. Most of the increase in household debt levels is driven by higher levels of mortgage debt, which is tied to the Canadian housing market. In spite of the fact that an interest rate increase, forecast to occur within the second half of 2015, is expected to be gradual, concerns have been raised by both the International Monetary Fund and the Bank of Canada regarding the indebtedness of Canadian consumers. The fear is that when interest rates start to rise, the ability of Canadians to repay their loans may be adversely affected, potentially triggering a correction in the housing market, which in turn could result in credit losses to banks.

Currently, we qualify all variable rate mortgage borrowers using the Bank of Canada 5-year fixed benchmark rate, which is typically higher than the variable rate by approximately 2 percentage points. If there were an interest rate increase, our variable rate borrowers should be able to withstand some increase in the interest rate. We believe the risk of a severe housing crash that generates significant losses for mortgage portfolios is unlikely, but the risk associated with high levels of consumer debt would be a concern should the economy falter and unemployment rates increase. For additional details on our credit risk mitigation strategies and real estate secured lending, see the "Real estate secured personal lending" section in Credit risk.

### Geo-political risk

The level of geo-political risk escalates at certain points in time, with the focus changing from one region to another and within a region from country to country. While the specific impact on the global economy would depend on the nature of the event (e.g., a Middle Eastern conflict could lead to disruption in global oil supplies resulting in high prices), in general, any major event could result in instability and volatility, leading to widening spreads, declining equity valuations, flight to safe-haven currencies and increased purchases of gold. In the short run, market shocks could hurt the net income of our trading and non-trading market risk positions. Although Canada is unlikely to be directly affected, the indirect impact of reduced economic growth, as well as potential impacts on commodity prices, have serious negative implications for general economic and banking activities. While it is impossible to predict where new geo-political disruption will occur, we do pay particular attention to markets and regions with existing or recent historical instability to assess the impact of these environments on the markets and businesses in which we operate.

### Declining oil prices

Oil prices have declined in the second half of 2014 as markets have become increasingly concerned due to oversupply, primarily due to increased production in the U.S. and selected Middle Eastern countries, at a time when global growth is muted (specifically in Europe, China and Japan). Declines in world oil prices have reduced corporate margins. This has also served to reduce Canadian tax revenues, particularly in Alberta, and there is concern that its effect could extend beyond the oil and gas industry. Our oil and gas portfolio is stable, however a prolonged weakness in oil prices could become a more pressing concern. Clients are currently being assessed on the basis of our enhanced risk metrics and our portfolio is being monitored in a prudent manner.

### China economic policy risk

Even though fears of a hard landing in China have receded substantially, the issues of easy credit and deteriorating credit quality have not been addressed, causing stress in the banking sector as well as in the shadow banking system. Economic growth is expected to be modest by historical standards, with a medium-term growth rate trend at 7%, notably lower than the double-digit growth of the recent past. Credit booms of this nature have at times led to sharp corrections, but we note that China's government still has the ability to absorb and address economic disruptions.

We continue to monitor economic policy both within the country and the region for signs of stress or directional change and have taken a prudent stance in addressing our tolerance for exposure to the country. We currently have little direct exposure to China, but any negative impact from the Chinese economic slowdown may affect our clients that export to China, commodities in particular, and may raise the credit risk associated with our exposure to trading counterparties.

### Slow growth in the global economy

The global recovery remains uncertain. High public and private debt have acted as impediments to the normalization of economic activity. Though these restraints are subsiding, they are doing so at different rates across the countries and markets in which we operate. In addition, monetary policy normalization in the U.S., and more generally, shifts in financial market sentiment and the pace of new regulation, have increased uncertainty with respect to business performance. Sustained growth has remained challenging. Lower private investment has led to higher private savings, dampening demand, despite an extended very low interest rate environment.

We continue to monitor our exposures to the regions at the centre of the slowdown and industries in North America that are particularly levered to global growth.

### U.S. fiscal deficit risk

There is tacit agreement in the U.S. Congress that another costly government shutdown must be avoided. Moreover, Moody's revised the U.S. credit rating outlook to Aaa-stable from Aaa-negative based on the latest status of the U.S. economy. However, given high debt levels, an unexpected shock to the U.S. economy could lead to a Canadian economic slowdown or recession, which would affect credit demand in Canada and likely increase credit losses.

While we continue to see progress on the U.S. economic front, the political divide in the U.S. continues to foster an environment of uncertainty. We actively monitor the political climate in the U.S. and assess both our direct exposure to U.S. counterparties and our indirect exposure to the effects of changes in the economic environment. We ensure that our exposures adhere to the parameters outlined in our risk appetite statement.

### European sovereign debt crisis

While the European Central Bank's new outright monetary transactions programme has eased pressure on peripheral bond yields and has led to a normalization of financial conditions, thus ensuring the safety of the Euro, risks to the global financial markets from Europe's sovereign debt crisis have not completely dissipated. Unfavourable economic or political events could bring the debt crisis into sharper focus again, denting financial market confidence and mitigating any recovery in Eurozone growth, or even lead to a new recession.

We actively monitor and assess both the business and geopolitical environment in Europe for adverse developments. Key to this is maintaining an active presence in the region to ensure that we are able to respond to both qualitative and quantitative data in a robust and timely manner. We have no peripheral sovereign exposure and very little peripheral non-sovereign direct exposure. For additional details on our European exposure, see the "Exposure to certain countries and regions" section in Credit risk.

### Regulatory developments

See the "Capital resources", "Liquidity risk" and "Accounting and control matters" sections for additional information on regulatory developments.

### Accounting developments

See Note 32 to the consolidated financial statements for additional information on accounting developments.

### Risks arising from business activities

The chart below shows our business activities and related risk measures based upon regulatory RWAs:

	CIBC				Corporate and Other
SBU	Retail and Business Banking	Wealth Management	Wholesale Banking		
Business activities	<ul style="list-style-type: none"> <li>Deposits</li> <li>Residential mortgages</li> <li>Personal loans</li> <li>Credit cards</li> <li>Business lending</li> <li>Insurance</li> </ul>	<ul style="list-style-type: none"> <li>Retail brokerage</li> <li>Asset management</li> <li>Private wealth management</li> </ul>	<ul style="list-style-type: none"> <li>Credit products</li> <li>Capital markets</li> <li>Investment banking</li> <li>Investment portfolios</li> </ul>	<ul style="list-style-type: none"> <li>International banking</li> <li>Investment portfolios</li> <li>Joint ventures</li> <li>Functional groups (see page 28)</li> </ul>	
Balance sheet	(\$ millions) Average assets 229,947 Average deposits 162,348	(\$ millions) Average assets 4,354 Average deposits 8,501	(\$ millions) Average assets 122,469 Average deposits 12,547	(\$ millions) Average assets 54,711 Average deposits 139,110	
CET1 RWA (All-in basis)	(\$ millions) Credit risk 62,848 Market risk – Operational risk 8,346	(\$ millions) Credit risk 409 Market risk – Operational risk 2,316	(\$ millions) Credit risk <sup>(1)</sup> 40,437 Market risk 3,910 Operational risk 4,830	(\$ millions) Credit risk <sup>(2)</sup> 16,190 Market risk 136 Operational risk 1,828	
Economic capital <sup>(3)</sup>	(%) Proportion of total CIBC 36 Comprising: Credit risk <sup>(4)</sup> 70 Market risk 12 Operational/Strategic risks 18	(%) Proportion of total CIBC 19 Comprising: Credit risk <sup>(4)</sup> 4 Market risk 1 Operational/Strategic risks 95	(%) Proportion of total CIBC 22 Comprising: Credit risk <sup>(4)</sup> 78 Market risk 7 Operational/Strategic risks 15	(%) Proportion of total CIBC 23 Comprising: Credit risk <sup>(4)</sup> 25 Market risk 8 Operational/Strategic risks 67	
Risk profile	We are exposed to credit, market, liquidity, operational, and other risks, which primarily include strategic, insurance, technology, information and cyber security, reputation, legal, regulatory and environmental risks.				

(1) Includes counterparty credit risk of \$4,616 million.

(2) Includes counterparty credit risk of \$452 million.

(3) For additional information, see the "Non-GAAP measures" section.

(4) Includes investment risk.

## Recommendation 7b: Describe the bank's risk appetite in the context of its business models and how the bank manages such risks

### ► PRINCIPAL RISKS

#### Credit risk

Any adverse changes in the economic and market environment we operate in, or the credit quality and/or behaviour of our borrowers and counterparties would reduce the value of our assets and potentially increase our write-downs and allowances for impairment losses, adversely impacting profitability.

#### Conduct risk

We face significant potential conduct risk, including selling products to customers which do not meet their needs; failing to deal with customers' complaints effectively; not meeting customers' expectations; and exhibiting behaviours which do not meet market or regulatory standards.

#### Market risk

Key market risks include interest rate risk across the Banking and Insurance businesses. However, our most significant market risk is from the Defined Benefit Pension Schemes (DBPS) where asset and liability movements impact on our capital position.

#### Operational risk

We face significant operational risks which may result in financial loss, disruption or damage to the reputation of the Group. These include the availability, resilience and security of our core IT systems and the potential for failings in our customer processes.

#### Funding and liquidity risk

Our funding and liquidity position is supported by a significant and stable customer deposit base. A deterioration in either our or the UK's credit rating, or a sudden and significant withdrawal of customer deposits would adversely impact our funding and liquidity position.

#### Capital risk

Our future capital position is potentially at risk from a worsening macroeconomic environment. This could lead to adverse financial performance for the Group, which could deplete capital resources and/or increase capital requirements due to a deterioration in customers' creditworthiness.

#### Regulatory risk

We are subject to industry wide investigations and reviews into a perceived lack of competition in UK banking and financial services. The outcomes of the UK General Election in May 2015 and the investigations by the CMA and FCA are presently unclear and their impact therefore remains uncertain. Other initiatives under review include the ring-fencing proposals in the Banking Reform Act 2013, the new FCA Consumer Credit regime and CRD IV.

#### People risk

Key people risks include the risk that the Group fails to lead responsibly in an increasing competitive marketplace, particularly with the introduction of the Senior Managers' Regime and Certification Regime which will come into force in 2015. This may dissuade capable individuals from taking up senior positions within our Group.

### ► KEY MITIGATING ACTIONS

- Credit policy incorporating prudent lending criteria aligned with the Board approved risk appetite to effectively manage credit risk.
- Clearly defined levels of authority ensure we lend appropriately and responsibly with separation of origination and sanctioning activities.
- Robust credit processes and controls including well-established governance to ensure distressed and impaired loans are identified, considered and controlled with independent credit risk assurance.

- Customer focused conduct strategy implemented to ensure customers are at the heart of everything we do.
- Product approval, review processes and outcome testing supported by conduct management information.
- Clear customer accountabilities for colleagues, with rewards driven off customer-centric metrics.
- Learning from past mistakes, including root cause analysis.

- A structural hedge programme has been implemented to manage liability margins and margin compression.
- Board approved pensions risk appetite covering interest rate, credit spreads and equity risks. Credit assets are being purchased and equity holdings reduced in the pension schemes.
- Stress and scenario testing of risk exposures.

- Continually review IT system architecture to ensure that our systems are resilient and that the confidentiality, integrity and availability of our critical systems and information assets are protected against cyber attacks.
- Continue to implement the actions from the 2013 independent IT Resilience Review to enhance the resilience of systems supporting the processes most critical to our customers.

- At 31 December 2014 the Group had £109.3 billion of unencumbered primary liquid assets and the Group maintains a further large pool of secondary assets that can be used to access Central Bank liquidity facilities.
- Daily monitoring against a number of market and Group specific early warning indicators and regular stress tests.
- Contingency funding plan to identify liquidity concerns earlier.

- Close monitoring of capital and leverage ratios to ensure we meet our current and future regulatory requirements.
- Comprehensive stress testing analysis to evidence sufficient levels of capital adequacy for the Group under various adverse scenarios.
- In addition to accumulating retained profits we can raise additional capital in a variety of ways.

- The Legal, Regulatory and Mandatory Change Committee ensures we develop plans for regulatory changes and tracks their progress.
- Continued investment in our people, processes and IT systems is enabling us to meet our regulatory commitments.
- Continued engagement with government and regulatory authorities on forthcoming regulatory changes and market investigations and reviews.

- Work collaboratively with regulators to implement the new Individual Accountability Regime in 2015, ensuring burden of proof and attestation requirements are effectively implemented.
- Maintain competitive working practices to attract, retain and engage high quality people.
- Create a work environment which listens and acts on colleague feedback, making the Group the best bank for colleagues.

### ► KEY RISK INDICATORS

IMPAIRMENT CHARGE		ASSET QUALITY RATIO <sup>1</sup>	
2014	£1.2bn	2014	0.24%
2013	£3bn	2013	0.57%

<sup>1</sup>This key risk indicator is also a key performance indicator (KPI).

#### BANKING COMPLAINTS PER 1,000 ACCOUNTS<sup>1</sup> (EXCL. PPI)

2014	1.5
2013	1.0

<sup>1</sup>This key risk indicator is also a key performance indicator (KPI).

#### PENSION (DEFICIT)/SURPLUS

2014	SURPLUS	£890m
£787m	DEFICIT	2013

#### AVAILABILITY OF CORE SYSTEMS

2014	99.96%
2013	99.94%

#### PRIMARY LIQUIDITY/<sup><1yr</sup> WHOLESALE FUNDING

2014	2.7
2013	2.0

<sup>1</sup>This key risk indicator is also a key performance indicator (KPI).

#### CET1 RATIO<sup>1</sup>

2014	12.8%
2013	10.3%

<sup>1</sup>This key risk indicator is also a key performance indicator (KPI).

#### LEGAL, REGULATORY AND MANDATORY INVESTMENT SPEND

2014	£406m
2013	£402m

#### BEST BANK FOR CUSTOMERS<sup>2</sup>

2014	72%	Favourable
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<sup>2</sup>New measure for 2014. No comparison data available for 2013.

### Commentary

The material reduction reflects lower levels of new impairment as a result of effective risk management, improving economic conditions and the continued low interest rate environment, together with Run-off asset reductions.

FCA reportable banking complaints increased during the year due to legacy and historic issues, with the increase largely driven by increased activity from claims management companies.

The DBPS are in a surplus of £890 million at 2014 which is an improvement from a £787 million deficit in 2013. Volatility has been reduced due to interest rate and inflation hedging and equity sales.

IT service availability improved on 2013 with 99.96 per cent availability across our key IT systems. We continue to invest in improving the resilience of our systems to avoid outages and minimise any customer impact.

Primary and secondary liquidity assets provide a substantial buffer in the event of an extended market dislocation.

Further progress has been made in improving our capital position through a strongly capital generative strategy, including Run-off and disposal of assets, and the issuance of new additional tier 1 and tier 2 securities in April and November 2014 respectively.

We continue to build constructive relationships with our regulators in order to effectively manage the regulatory change agenda.

As part of our Colleague Engagement Survey, the Best Bank for Customers index is designed to help the Group understand the colleague views on progress we are making towards becoming the best bank for customers.

### ► FUTURE FOCUS

- Continue to support the UK economy through appropriate lending to Retail and Commercial customers including first-time buyers and SMEs, without compromising on risk appetite.

Read more on page 116

- Continued reduction in complaint levels through root-cause analysis and improvements in complaints handling.

Read more on page 136

- Continue to effectively manage the DBPS to secure pensions provision to members and minimise Group impact.

Read more on page 138

- Ongoing investment in IT resilience.
- Risk appetite monitoring for critical business processes.

Read more on page 144

- Continue to meet all current regulatory ratios and ensure we meet all future regulatory ratios.

Read more on page 146

- Continue to meet current and future regulatory requirements, whilst optimising value for shareholders.
- We expect to generate between 1.5 per cent and 2.0 per cent of CET1 per annum (pre-dividend).

Read more on page 153

- Ongoing constructive engagement with regulators.
- Continued compliance with the regulatory change agenda.

Read more on page 166

- Continued action to further strengthen performance to become the best bank for customers.

Read more on page 168

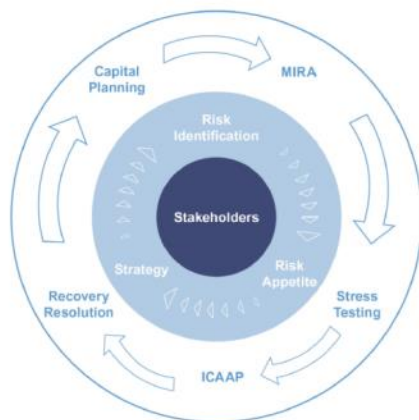
*Lloyds separately presents its Group risk appetite and the relationship of its appetite for other risk types to the Group risk appetite (credit, market, operational)*



## Recommendation 8: Describe use of stress testing within the bank's risk governance and capital frameworks. Stress testing disclosures should provide a narrative overview of the bank's internal stress testing process and governance

### Capital and stress testing management framework

This section covers a number of tools and processes which taken together contributed to an integrated view of capital management and is best presented by the diagram below.



MIRA: material integrated risk assessment

ICAAP: internal capital adequacy assessment process

### Risk identification and material integrated risk assessment (MIRA)

- MIRAs are annual 'top down' processes to:
  - help identify material risks;
  - understand the nature and magnitude of these risks clearly; and
  - appraise associated risk management frameworks robustly.
- MIRAs provide a process to assess the size and nature of exposure to all risk types in the risk taxonomy, which is an exhaustive, structured list of the types of risk that RBS can and could face.
- MIRAs consider whether capital should be set aside against each risk type and, if so, under which pillar, how much and of what type. If capital is not appropriate, MIRAs outline how risk types are otherwise managed. In so doing, MIRAs form a key input to the ICAAP.
- To focus risk management on areas of greatest benefit, MIRAs consider in depth risks whose potential impact is 'material', that is exceeding appropriately chosen financial or non-financial thresholds. The key framework elements used to manage material risks (owners, governing committees, limit or tolerance frameworks including risk appetites, control policies and key reports) are specified clearly and assessed for appropriateness and effectiveness.

### Stress testing

Stress testing is used to evaluate the capital position under severe but plausible stress scenarios. Stress testing also refers to the broader framework under which these tests are developed, evaluated and used within the bank's decision-making process in the context of the wider economic environment.

RBS stress testing framework is designed to embed stress testing as a key risk management technique into mainstream risk reporting, capital planning and business processes at business, legal entity and RBS-wide levels.

### Stress test process and techniques

Stress testing is part of the financial and capital planning process and results are presented to senior management (and BRC/Board) at least semi-annually. It is now an integral part of enterprise risk management and used to assess the impact of business decisions on the bank's capital position. The stress testing process has four key stages:

- Define stress scenario:
  - RBS-specific vulnerabilities are identified and linked to development of relevant stresses;
  - Scenario is defined, severity calibrated and full parameterisation completed; and
  - Governance is put in place for stress theme approval and scenario validation.
- Stress test execution and governance:
  - Impacts of stress scenario is translated via relevant risk drivers such as RWAs, impairments;
  - Profit and loss impacts of stress scenario are also assessed; and
  - Review of stress output by the business as well as risk treasury and finance teams.
- Consolidation and capital planning:
  - Segmental results are consolidated to provide the total view of stress impact;
  - Stressed profit and loss and RWA assessment contribute towards arriving at a stressed capital plan;
  - Additional capital impacts under stress are considered such as pension deficit, foreign exchange reserves; and
  - Final stressed CET1 ratios are produced for each year of the scenario.
- Management actions and governance:
  - Internal subject matter experts determine a 'menu' of possible management actions under stress conditions such as capital raising, de-risking and sale of assets, cost reduction;
  - Review by senior risk management and executives; and
  - ERF and Board review and approval.

Risk-type specific stress testing is also conducted. For example, within the market risk management framework, a comprehensive programme of stress tests covers a variety of historical and hypothetical scenarios.

Portfolio-specific stress tests assess the reaction of key portfolios to systemic shocks and identify potential vulnerabilities, including risks that have not yet matured or are not yet visible. They assess the potential for outsized losses and the impact of rebalancing portfolios.

### Stress testing use

In addition to informing the ICAAP, stress testing within RBS has matured into business as usual process embedded across our risk management framework. It has become a key risk management tool and is used to support strategic financial planning, risk appetite, risk identification and risk mitigation as illustrated below.



### Stress test usage across RBS

1	Strategic financial & capital planning <ul style="list-style-type: none"> <li>Assess impact of plausible downside scenarios on financial position.</li> <li>Assessment of strategic plans against market concerns and headwinds.</li> </ul>
2	Risk appetite <ul style="list-style-type: none"> <li>Better understanding of underlying risks to inform the setting of risk appetite (e.g. sector reviews, earnings volatility, reverse stress test).</li> <li>Assess impact of current business strategies on risk appetite.</li> <li>Identify drivers of risk appetite triggers.</li> </ul>
3	Risk identification <ul style="list-style-type: none"> <li>Manage business through improved understanding of the underlying risk. Examples:               <ul style="list-style-type: none"> <li>Tail risk assessment: identification of risky portfolios that breach series of pre-determined triggers.</li> <li>Business vulnerabilities analysis: assessment of business model weaknesses through cross-functional discussions.</li> </ul> </li> <li>Identify high-risk portfolios to be investigated further.</li> </ul>
4	Risk mitigation <ul style="list-style-type: none"> <li>Inform mitigating actions within RBS and segmental strategic plans.</li> <li>Inform macro-hedge strategies.</li> <li>Determine a schedule of potential management actions to be executed in the event of stress.</li> </ul>

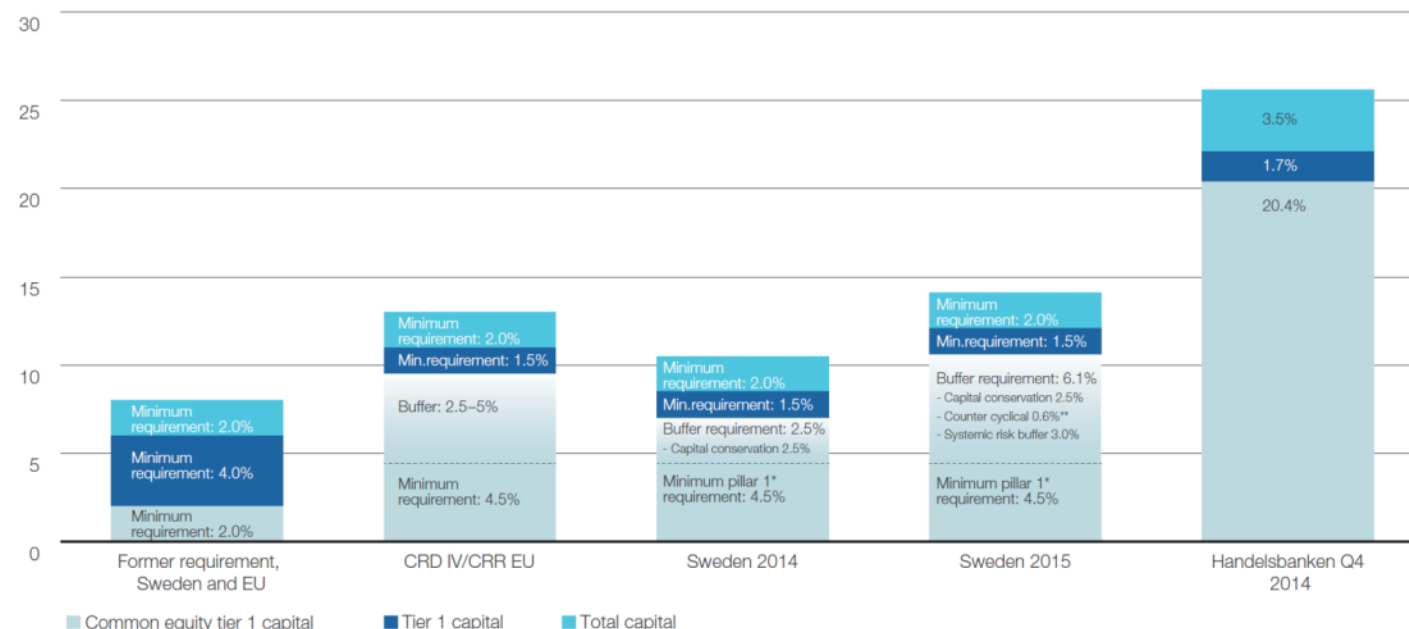


## Section 3

# Capital adequacy and risk-weighted assets

## Recommendation 9: Provide minimum Pillar 1 capital requirements

New capital requirements for Swedish banks



\* Pillar 2 includes risk weight floors on mortgage lending in Sweden and Norway, add-ons for systemic risks of 2.0 percent as well as institution specific add-ons for, inter alia, concentration risk, interest rate risk in the banking book and pension risks.

\*\* Based on the 1 per cent buffer requirement in Sweden and Norway.

### SUPERVISORY REQUIREMENTS WITHIN THE FRAMEWORK OF PILLAR 2

In addition to the above-mentioned requirements, the Bank must hold capital for requirements under Pillar 2 of the regulations. These requirements are specific to each institution and are decided by the supervisory authority. Various factors are assessed within Pillar 2, such as concentration risks, pension risk, interest rate risk in other operations, additional systemic risk needs, etc.

In addition to the regulatory minimum capital and buffer requirements, the Bank must perform an internal capital adequacy assessment, in which all risks and capital requirements are assessed in an unbiased manner.

On 8 September 2014, the Swedish Financial Supervisory Authority resolved on application of the new capital requirement regulations for Swedish banks. The memorandum published by the Financial Supervisory Authority describes how implementation of the agreement (announced in November 2011) between the Swedish Government, the Financial Supervisory Authority and the Riksbank is to take place. In addition to the above requirements, a buffer requirement is being introduced for systemic risk amounting to 2 per cent within the framework of Pillar 2, as well as an increase of the previously decided risk weight floor for Swedish mortgage loans to 25 per cent. The mortgage floor will

also be applied to exposures to Norwegian mortgage loans. For Handelsbanken in 2014, this means a capital requirement in Pillar 2 of approximately SEK 23.1 billion, based on the Bank's mortgage loan volume at year-end.

The decision means that banks must have a buffer capital in Pillar 2 for Swedish and Norwegian mortgage loans corresponding to the difference between the actual risk weight in Pillar 1 and the risk weight floor in Pillar 2. The risk weights in Pillar 1 will not be changed, which means that the risk weight floor will not affect the minimum requirements in Pillar 1.

The internal models reflect the banks' historical losses on mortgage loans and imply

a correct calculation of the capital requirement under Pillar 1. The extra capital surcharge which the Swedish Financial Supervisory Authority has now implemented is intended partly to address risks which may have arisen in the Swedish housing and mortgage loan market in recent years and which are therefore not fully reflected in the history on which the banks' internal models are based, but primarily the potential impact that household debt could have on consumption in the event of an increase in interest rates. The floor is therefore not a reflection of the credit risk in mortgage loans for a bank. The Swedish Financial Supervisory Authority's mortgage floor is accordingly not a criticism of the banks' existing internal models.

Since the introduction of Basel II in 2007, in its internal capital adequacy assessment process (ICAAP), Handelsbanken has kept considerably more capital for mortgage loans than is formally required under Pillar 1. This is because the Bank's capital assessment is based on calculations of economic capital and conservative stress tests which result in the capital requirement being considerably greater than indicated by the historical loan losses.

The Financial Supervisory Authority also calculates the need to hold a capital planning buffer. A future requirement is only considered to exist if the calculation exceeds the capital conservation buffer.

## Recommendation 9: Provide minimum Pillar 1 capital requirements

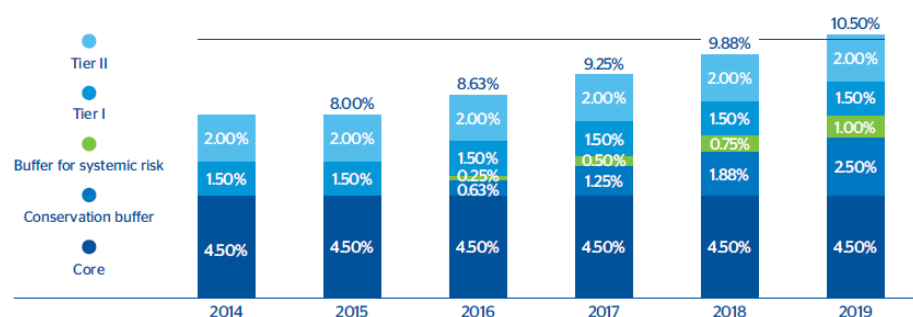
Eligible capital resources	Eligible Capital	
	2014	2013 <sup>(1)</sup>
Grandfathering adjustments Tier I instruments	-1,470	-
50% Tier II deductions <sup>(2)</sup>	-	-726
Surplus on generic provisions	2,793	2,589
<b>Tier II</b>	<b>10,986</b>	<b>3,729</b>
<b>TOTAL</b>	<b>52,818</b>	<b>41,672</b>
<b>CET1 (phased-in)</b>	<b>11.9%</b>	<b>11.1%</b>
<b>CET1 (fully-loaded)</b>	<b>10.4%</b>	<b>11.1%</b>
<b>TIER I (phased-in)</b>	<b>11.9%</b>	<b>11.7%</b>
<b>TIER II (phased-in)</b>	<b>3.1%</b>	<b>1.2%</b>
<b>RWAs (phased-in)</b>	<b>350,802</b>	<b>323,774</b>
<b>RWAs (fully-loaded)</b>	<b>350,608</b>	<b>323,774</b>

(1) Under BIS II (Bank of Spain criterion).

(2) The 50% Tier II deductions are net of the capital gains of the available-for-sale portfolio.

(3) Includes valuation adjustments of portfolio and treasury stock.

Chart 1. Schedule for gradual adaptation to CRD IV



As of December 31, 2014, according to the new CRD-IV requirements that took effect in 2014, BBVA Group's fully-loaded CET1 ratio stood at 10.4%, well over the minimum CET1 that will be required in 2019 (7%), demonstrating the Group's comfortable capital position. The phased-in CET1 ratio according to the new CRD-IV rules stood at 11.9% as of December 31, 2014.

These requirements may be increased by the counter-cyclical capital buffer requirement, the systemic bank capital buffer requirement and the systemic risk buffer requirement, should they apply and be in force (mainly starting in 2016).

BBVA Group is currently considered a global systemic entity according to the list prepared by the Financial Stability Board (FSB). Of the 5 possible tranches, with requirements ranging from 1% to 3.5%, BBVA Group is in the first of these tranches, with an additional requirement of 1% as a global systemic entity, applicable in fourths from 2016 to 2019.

(Million euros)

Eligible capital resources	Eligible Capital	
	2014	2013 <sup>(1)</sup>
Capital	3,024	2,835
Share Premium	23,992	22,111
Reserves	17,211	15,880
Minority interests	1,526	2,069
Deductions	-11,478	-8,535
Goodwill and intangible assets	-8,738	-8,034
Treasury stock	-350	-66
Fin. treasury stock	-124	-171
DTAs for loss carryforwards	-1,196	-
Securitizations tranches at 1250%	-158	-
Expected losses in equity	-44	-
Financial investments < 10%	-67	-
OCI Pensions	-395	-264
Other deductions	-408	-
Other <sup>(3)</sup>	155	-
Net attrib. profit and interim and final Group dividends	1,871	1,464
Other temporary adjustments CET1	5,171	-
Other temporary adjustments CET1 (minority interests)	360	-
<b>Common Equity Tier I</b>	<b>41,832</b>	<b>35,824</b>
Eligible capital resources AT1	2,735	1,088
Preferred securities eligible as Tier I	1,469	1,817
Other temporary adjustments Tier I	-4,205	-
50% Tier I deductions	-	-786
<b>Additional Tier I</b>	<b>41,832</b>	<b>37,944</b>
Subordinated debt eligible as T2	2,224	1,866
Eligible subordinated debt issued by subsidiaries	3,700	-
Grandfathering T1 instruments eligible as T2	1,917	-
Temporary adjustments eligible subordinated debt	1,823	-

## Recommendation 10a: Summarise information contained in the composition of capital templates adopted by the Basel Committee

Table 1: Equity structure<sup>1</sup>

Line	A: Amount on the day of disclosure	C: Residual amount <sup>2</sup>
<b>Common Equity Tier 1 capital: instruments and reserves</b>		
1 Capital instruments and the related share premium accounts	17,066	0
1a thereof subscribed capital	15,928	
2 Retained earnings	10,071	
3 Accumulated other comprehensive income (and other reserves)	-1,388	s. line 26a
5 Minority interests (amount allowed in consolidated CET1)	744	-356
5a Independently reviewed interim profits net of any foreseeable charge or dividend	264	
<b>6 Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	<b>26,759</b>	
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>		
7 Additional value adjustments (negative amount)	-469	
8 Intangible assets (net of related tax liability) (negative amount)	-2,236	-822
10 Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-128	-511
11 Fair value reserves related to gains or losses on cash flow hedges	246	
12 Negative amounts resulting from the calculation of expected loss amounts	-385	-442
14 Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-20	-151
15 Defined benefit pension fund assets (negative amount)	-57	-227
16 Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	-16	-52
20a Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-360	
20c thereof: securitisation positions (negative amount)	-360	
21 Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-89	-355
26 Regulatory adjustments applied to CET1 in respect of amounts subject to pre-CRR treatment	1,928	
26a Regulatory adjustments applied to Common Equity Tier 1 in respect of unrealised profits/losses according to Article 467, 468	1,928	
26a.1 thereof: possible filter for unrealised losses	706	
27 Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	0	
27a CET1 capital elements or deductions - other	-49	
<b>28 Total regulatory adjustments to Common Equity Tier 1 (CET1) capital</b>	<b>-1,635</b>	
<b>29 Common Equity Tier 1 (CET1) capital</b>	<b>25,123</b>	
<b>Additional Tier 1 (AT1) capital: instruments</b>		
33 Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1	935	
<b>36 Additional Tier 1 (AT1) capital before regulatory adjustments</b>	<b>935</b>	
<b>Additional Tier 1 (AT1) capital: regulatory adjustments</b>		
41 Regulatory adjustments applied to additional Tier 1 in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in regulation (EU) No.575/2013 (i.e. CRR residual amounts)	-935	
41a Residual amounts deducted from additional Tier 1 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to Article 472 of regulation (EU) No.575/2013	-935	
41a.2 thereof: intangibles	-822	
41a.3 thereof: shortfall of provisions to expected losses	-111	
41a.4 thereof: direct holdings of own CET1 instruments	-1	
<b>43 Total regulatory adjustments to Additional Tier 1 (AT1) capital</b>	<b>-935</b>	
<b>44 Additional Tier 1 (AT1) capital</b>	<b>0</b>	
<b>45 Tier 1 capital (T1 = CET1 + AT1)</b>	<b>25,123</b>	

Line	A: Amount on the day of disclosure	C: Residual amount <sup>2</sup>
<b>Tier 2 (T2) capital: instruments and provisions</b>		
46 Capital instruments and the related share premium accounts	6,345	
47 Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from Tier 2	246	
48 Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	126	-11
49 thereof: instruments issued by subsidiaries subject to phase out	11	
<b>51 Tier 2 (T2) capital before regulatory adjustments</b>	<b>6,717</b>	
<b>Tier 2 (T2) capital: regulatory adjustments</b>		
52 Direct and indirect holdings by an institution of own Tier 2 instruments and subordinated loans (negative amount)	-34	0
56 Regulatory adjustments applied to Tier 2 in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in regulation (EU) No.575/2013 (i.e. CRR residual amounts)	-331	
56a Residual amounts deducted from Tier 2 capital with regard to deduction from Common Equity Tier 1 capital during the transitional period pursuant to Article 472 of regulation (EU) No.575/2013	-331	
56a.1 thereof: shortfall of provisions to expected losses	-331	
<b>57 Total regulatory adjustments to Tier 2 (T2) capital</b>	<b>-364</b>	
<b>58 Tier 2 (T2) capital</b>	<b>6,353</b>	
<b>59 Total capital (TC = T1 + T2)</b>	<b>31,476</b>	
59a RWA in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in regulation (EU) No.575/2013 (i.e. CRR residual amounts)	917	
59a.1 thereof: items not deducted from CET1 (Regulation (EU) No.575/2013 residual amounts)	562	
59a.1.1 thereof: deferred tax assets that rely on future profitability net of related tax liability	511	
59a.1.2 thereof: indirect holdings of own CET1 instruments	51	
59a.1.3 thereof: items not deducted from T2 items (Regulation (EU) No.575/2013 residual amounts)	0	
59a.3.1 thereof: indirect holdings of own T2 instruments	0	
<b>60 Total risk-weighted assets</b>	<b>215,178</b>	
<b>Capital ratios and buffers</b>		
61 Common Equity Tier 1 (as a percentage of total risk exposure amount)	11.7	
62 Tier 1 (as a percentage of total risk exposure amount)	11.7	
63 Total capital (as a percentage of total risk exposure amount)	14.6	
64 Institution specific buffer requirement (CET1 requirement in accordance with Article 92 (1) a) plus capital conservation and countercyclical buffer requirements plus systemic risk buffer, plus the systemically important institution (G-SII or O-SII) buffer, expressed as a percentage of risk exposure amount)	4.5	
68 Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	7.3	
<b>Amounts below the thresholds for deduction (before risk weighting)</b>		
72 Direct and indirect holdings of the capital of relevant entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	725	
73 Direct and indirect holdings by the institution of the CET1 instruments of relevant entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	296	
75 Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	2,521	
77 Cap on inclusion of credit risk adjustments in T2 under standardised approach	405	
79 Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach	818	
<b>Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2013 and 1 Jan 2022)</b>		
82 Current cap on AT1 instruments subject to phase out arrangements	1,807	
84 Current cap on T2 instruments subject to phase out arrangements	608	

<sup>1</sup> Lines 1b-c, 3a, 4, 4a, 9, 13, 17-19, 20, 20b, 20d, 22-25, 26a.2-b, 30-32, 33a, 34, 35, 37-40, 41a.1, 41a.5-a.7, 41b-c, 42, 47a, 50, 53-55, 56a.2-a.3, 56b-d, 59a.1.3-a.1.4, 59a.2, 59a.3.2-a.3.3, 65-67, 69-71, 74, 76, 78, 80, 81, 83 and 85 are not applicable or not existing for Commerzbank Group and therefore not shown due to clarity.

<sup>2</sup> Amounts underlying regulations prior to (EU) No. 575/2013 or mandatory residual amounts according to regulation (EU) No. 575/2013.



## Recommendation 10a: Summarise information contained in the composition of capital templates adopted by the Basel Committee

TABLE 6a: REGULATORY OWN FUNDS AND CRR/CRD4 SOLVENCY RATIOS (DETAILS OF TABLE 6)

(In EUR m)	2013	2014		Cross ref. Table 2, p. 163-164	Cross Ref. Table 6b p. 176	Cross Ref. notes
	Fully Loaded <sup>(1)</sup>	Fully Loaded	Phased-In			
<b>Common Equity Tier 1 capital (CET1): Instruments and reserves</b>	<b>46,190</b>	<b>47,282</b>	<b>48,115</b>			
of which capital instruments and the related share premium accounts	19,787	19,974	19,974	7	1	
of which retained earnings	5,233	5,578	5,578	9	2	
of which accumulated other comprehensive income (and other reserve, to include unrealised gains and losses under the applicable accounting standards)	18,313	18,855	18,855	10	3	1
of which minority interests (amounts allowed in consolidated CET1)	1,592	1,304	2,137	12	5	2
of which independently reviewed interim profits net of any foreseeable charge or dividend	1,264	1,572	1,572	11	5a	
<b>Common Equity Tier 1 capital (CET1): Regulatory adjustments</b>	<b>(11,930)</b>	<b>(11,491)</b>	<b>(9,522)</b>			
of which additional value adjustments (negative amount)	0	(557)	(554)		7	
of which intangible assets (net of related tax liabilities)	(7,381)	(6,550)	(6,550)	5	8	3
of which deferred tax assets that rely on future profitability excluding those arising from temporary differences	(2,665)	(2,641)	(10)	2	10	
of which fair value reserves related to gains or losses on cash flow hedges	(7)	(23)	(23)		11	4
of which negative amounts resulting from the calculation of expected loss amounts	(803)	(830)	(830)		12	
of which gains or losses on liabilities valued at fair value resulting from changes in own credit standing	814	880	880		14	5
of which defined-benefit pension fund assets (negative amount)	(36)	(11)	(2)	4	15	
of which direct and indirect holdings by an institution of own CET1 instruments (negative amount)	(1,495)	(1,475)	(1,445)		16	
of which exposure amount of the items which qualify for a risk weight of 1250% where the institution opts for the deduction alternative	(152)	(122)	(122)		20a	
of which deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the condition in 38, paragraph 3 are met) (negative amount)	(205)	(162)	0	3	21	
of which regulatory adjustments relating to unrealised gains and losses pursuant to Articles 467 and 468	0	0	(865)		26a	
<b>Common Equity Tier 1 capital (CET1)</b>	<b>34,260</b>	<b>35,792</b>	<b>38,594</b>		<b>29</b>	
<b>Additional Tier 1 (AT1) capital: Instruments</b>	<b>6,799</b>	<b>8,885</b>	<b>8,845</b>			
of which capital instruments and the related share premium accounts	2,175	4,706	4,706	8	30	6
of which amounts of qualifying amounts referred to in Article 484, paragraph 4 and the related share premium accounts subject to phase out from AT1	4,585	4,129	4,129	8	33	6
of which qualifying Tier 1 capital included in consolidated AT1 (including minority interests not included in row 5) issued by subsidiaries and held by third parties	38	50	10	12	34	7
<b>Additional Tier 1 (AT1) capital: Regulatory adjustments</b>	<b>(796)</b>	<b>(27)</b>	<b>(57)</b>			
of which direct and indirect holdings by an institution of own AT1 instruments (negative amount)	(3)	(7)	(37)		37	
of which direct and indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)	(792)	(20)	(20)	1	39	8
<b>Additional Tier 1 (AT1) capital</b>	<b>6,003</b>	<b>8,858</b>	<b>8,788</b>		<b>44</b>	
<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>40,263</b>	<b>44,650</b>	<b>47,382</b>		<b>45</b>	
<b>Tier 2 capital (T2): Instruments and provisions</b>	<b>5,697</b>	<b>5,864</b>	<b>5,787</b>			
of which capital instruments and the related share premium accounts	6,238	6,425	6,425	6	46	9
of which amounts of qualifying amounts referred to in Article 484, paragraph 5) and the related share premium accounts subject to phase out from T2	414	335	335	8	47	

Source: Societe Generale 2014 Annual Report, pg 174

## Recommendation 10b: Reconciliation of the accounting balance sheet to the regulatory balance sheet

In millions of euros	Accounting scope	Insurance	IFRS II adjustments	Prudential scope
<b>Assets</b>				
Cash and amounts due from central banks	117,473	(7)	197	117,663
Financial instruments at fair value through profit or loss				
Trading securities	156,546	0	5	156,551
Loans and repurchase agreements	165,776	5,682	0	171,458
Instruments designated at fair value through profit or loss	78,827	(75,858)	0	2,969
Derivative financial instruments	412,498	5	(18)	412,485
Derivatives used for hedging purposes	19,766	(85)	14	19,695
Available-for-sale financial assets	252,292	(106,282)	4,512	150,522
of which equity investments in credit or financial institutions more than 10%-owned	718	0	0	718
of which equity investments in credit or financial institutions less than 10%-owned	1,150	0	0	1,150
Loans and receivables due from credit institutions	43,348	(1,206)	(4,122)	38,020
of which subordinated loans to credit or financial institutions more than 10%-owned	582	0	(81)	501
of which subordinated loans to credit or financial institutions less than 10%-owned	45	0	0	45
Loans and receivables due from customers	657,403	1,395	5,971	664,769
of which equity investments in credit or financial institutions more than 10%-owned	0	1,948	0	1,948
Remeasurement adjustment on interest-rate risk hedged portfolios	5,603	0	0	5,603
Held-to-maturity financial assets	8,965	(8,436)	0	529
Current and deferred tax assets	8,629	(99)	124	8,654
Accrued income and other assets	110,088	(4,705)	325	105,708
Equity-method investments	7,371	5,091	(660)	11,802
of which investments in credit or financial institutions	2,790	0	(644)	2,146
of which goodwill	406	219	0	625
Investment property	1,614	(1,251)	0	363
Property, plant and equipment	18,032	(397)	252	17,887
Intangible assets	2,951	(141)	10	2,820
of which intangible assets excluding leasehold rights	2,907	(140)	10	2,777
Goodwill	10,577	(219)	0	10,358
<b>TOTAL ASSETS</b>	<b>2,077,759</b>	<b>(186,513)</b>	<b>6,610</b>	<b>1,897,856</b>

In millions of euros	31 December 2014			
	Accounting scope	Insurance	IFRS II adjustments	Prudential scope
<b>Liabilities</b>				
Due to central banks	1,680	0	0	1,680
Financial instruments at fair value through profit or loss				
Trading securities	78,912	0	(16)	78,896
Borrowings and repurchase agreements	196,733	0	0	196,733
Instruments designated as at fair value through profit or loss	57,632	(4,119)	0	53,513
of which liabilities qualifying for Tier 1 capital	241	0	0	241
of which liabilities qualifying for Tier 2 capital	736	0	0	736
Derivative financial instruments	410,250	(7)	(21)	410,222
Derivatives used for hedging purposes	22,993	0	32	23,025
Due to credit institutions	90,352	(1,393)	766	89,725
Due to customers	641,549	(3,617)	4,413	642,345
Debt securities	187,074	1,737	1,126	189,937
Remeasurement adjustment on interest-rate risk hedged portfolios	4,765	0	0	4,765
Current and deferred tax liabilities	2,893	(552)	173	2,514
Accrued expenses and other liabilities	87,798	(2,138)	93	85,753
Technical reserves of insurance companies	175,214	(175,214)	0	0
Provisions for contingencies and charges	12,337	(251)	40	12,126
Subordinated debt	13,936	(822)	4	13,118
of which liabilities qualifying for Tier 1 capital	83	0	0	83
of which liabilities qualifying for Tier 2 capital	11,835	0	0	11,835
<b>TOTAL LIABILITIES</b>	<b>1,984,118</b>	<b>(186,376)</b>	<b>6,610</b>	<b>1,804,352</b>
<b>TOTAL CONSOLIDATED EQUITY</b>	<b>93,641</b>	<b>(137)</b>	<b>0</b>	<b>93,504</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>2,077,759</b>	<b>(186,513)</b>	<b>6,610</b>	<b>1,897,856</b>

## Recommendation 10b: Reconciliation of the accounting balance sheet to the regulatory balance sheet

REGULATORY CAPITAL BALANCE SHEET (Millions of Canadian dollars)		Cross Reference to Basel III Regulatory Capital Components Page 21	Q4/14	
			Balance sheet as in Report to Shareholders	Under regulatory scope of consolidation
<b>Assets</b>				
Cash and due from banks			17,421	17,421
Interest-bearing deposits with banks			8,399	8,399
Securities			199,148	190,602
<i>Non-significant investments in capital of other financial institutions reflected in regulatory capital</i>				-
<i>Other securities</i>				190,602
Assets purchased under reverse repurchase agreements and securities borrowed			135,580	135,580
Loans				
Retail				
Wholesale				
Allowance for loan losses				
<i>Collective allowance reflected in Tier 2 regulatory capital</i>				
<i>Shortfall of allowances to expected loss</i>				
<i>Allowances not reflected in regulatory capital</i>				
Segregated fund net assets				
Other				
i Customers' liability under acceptances				
ii				
Premises and equipment, net				
Goodwill				
<i>Goodwill related to insurance and joint ventures</i>				
Other intangibles				
<i>Other intangibles related to insurance and joint ventures</i>				
Investments in joint ventures and associates				
Significant investments in other financial institutions and insurance subsid				
<i>Significant investments exceeding regulatory thresholds</i>				
<i>Significant investments not exceeding regulatory thresholds</i>				
Defined-benefit pension fund net assets				
Other				
Significant investments in other financial institutions included in O				
<i>Deferred tax assets</i>				
<i>Deferred tax assets excluding those arising from temporary diffe</i>				
<i>Deferred tax assets arising from temporary differences exceedin</i>				
<i>Deferred tax liabilities related to permitted tax netting</i>				
<i>Deferred tax assets - other temporary differences</i>				
Other assets				
<b>Total assets</b>				
<b>REGULATORY CAPITAL BALANCE SHEET continued</b> (Millions of Canadian dollars)				
<b>Liabilities</b>				
Deposits				
Personal			209,217	209,217
Business and government			386,600	386,801
Bank			18,223	18,223
Segregated fund liabilities				
Other				
Acceptances			11,462	11,462
Obligations related to securities sold short			50,345	50,345
Obligations related to assets sold under repurchase agreements and securities loaned			64,331	64,331
Derivatives			88,982	88,982
Insurance claims and policy benefit liabilities			8,564	-
Employee benefit liabilities			2,420	2,378
Other liabilities			37,309	36,640
Gains and losses due to changes in own credit risk on fair value liabilities		j		35
Deferred tax liabilities				203
related to goodwill		t		-
related to intangibles		v		622
related to pensions		u		-
relates to permitted tax netting		w		39
Other deferred tax liabilities				(458)
Other liabilities				36,402
Subordinated debentures		q	7,859	7,859
Regulatory capital amortization of maturing debentures				-
Subordinated debentures not allowed for regulatory capital		q'		225
Subordinated debentures used for regulatory capital				7,634
of which: are qualifying		q''		2,010
of which: are subject to phase out directly issued capital		q'''		5,595
of which: are subject to phase out issued by subsidiaries and held by 3rd party		q''''		28
<b>Total liabilities</b>				
<b>Equity attributable to shareholders</b>				
Common shares				
Retained earnings				
of which relates to contributed surplus				
of which relates to retained earnings for capital purposes				
of which relates to insurance and joint ventures				
Other components of equity				
Gains and losses on derivatives designated as cash flow hedges				
Unrealized foreign currency translation gains and losses, net of hedging activities				
Other reserves allowed for regulatory capital				
of which relates to Insurance				
Preferred shares				
of which: are qualifying				
of which: are subject to phase out				
of which portion are not allowed for regulatory capital				
Treasury shares - preferred - phase-out				
Treasury shares - Common				
Non-controlling interests				
of which: are qualifying				
portion allowed for inclusion into CET1				
portion allowed for inclusion into Tier 1 capital				
portion allowed for inclusion into Tier 2 capital				
of which: are subject to phase out				
of which: portion not allowed for regulatory capital				
<b>Total equity</b>				
<b>Total liabilities and equity</b>				
<b>Insurance subsidiaries 1</b>	<b>Principal activities</b>		<b>Equity</b>	<b>Assets</b>
RBC Reinsurance (Ireland) Limited	Incorporated in Ireland to provide reinsurance to international clients		2	-
Assured Assistance Inc.	Service provider for Insurance claims		5	-
RBC General Insurance Company	Property and casualty insurance company	318		1,575
RBC Insurance Services Inc.	Service provider for insurance companies listed and the bank (creditor)	5		16
RBC Life Insurance Company	Life and health insurance company	1,527		10,003
RBC Insurance Company of Canada	Property and casualty insurance company	141		351
RBC Insurance Holdings Inc.	Holding company	1		-
Royal Bank of Canada Insurance Company Limited	Life, annuity, trade credit, title and property reinsurance company provides coverage to international clients	863		734
		2,862		12,679

<sup>1</sup> The list of legal entities that are included within the accounting scope of consolidation but excluded from the regulatory scope of consolidation.

## Recommendation 11: Present a flow statement of movements since the prior reporting date in regulatory capital

### Citigroup Capital Rollforward Under Current Regulatory Standards (Basel III Advanced Approaches with Transition Arrangements)

<i>In millions of dollars</i>	Three Months Ended December 31, 2014	Twelve Months Ended December 31, 2014
<b>Common Equity Tier 1 Capital</b>		
<b>Balance, beginning of period <sup>(1)</sup></b>	<b>\$166,425</b>	<b>\$157,473</b>
Net income	350	7,313
Dividends declared	(190)	(633)
Net increase in treasury stock	(380)	(1,232)
Net increase in additional paid-in capital <sup>(2)</sup>	229	778
Net increase in foreign currency translation adjustment net of hedges, net of tax	(2,716)	(4,946)
Net decrease in unrealized losses on securities AFS, net of tax <sup>(3)</sup>	94	339
Net increase in defined benefit plans liability adjustment, net of tax <sup>(3)</sup>	(213)	(234)
Net increase in cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax	(17)	(21)
Net decrease in goodwill, net of related deferred tax liabilities (DTLs)	873	1,713
Net change in other intangible assets other than mortgage servicing rights (MSRs), net of related DTLs	(14)	115
Net decrease in defined benefit pension plan net assets	49	38
Net decrease in deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards	205	562
Net change in excess over 10%/15% limitations for other DTAs, certain common stock investments and MSRs	(88)	340
Net decrease in regulatory capital deduction applied to Common Equity Tier 1 Capital due to insufficient Additional Tier 1 Capital to cover deductions	2,402	5,084
Other	(25)	295
<b>Net increase in Common Equity Tier 1 Capital</b>	<b>\$ 559</b>	<b>\$ 9,511</b>
<b>Common Equity Tier 1 Capital Balance, end of period</b>	<b>\$166,984</b>	<b>\$166,984</b>
<b>Additional Tier 1 Capital</b>		
<b>Balance, beginning of period <sup>(1)</sup></b>	<b>\$ —</b>	<b>\$ —</b>
Net increase in qualifying perpetual preferred stock <sup>(4)</sup>	1,493	3,699
Net decrease in qualifying trust preferred securities	(7)	(897)
Net increase in cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax	(69)	(81)
Net decrease in defined benefit pension plan net assets	194	151
Net decrease in DTAs arising from net operating loss, foreign tax credit and general business credit carry-forwards	822	2,249
Net decrease in regulatory capital deduction applied to Common Equity Tier 1 Capital due to insufficient Additional Tier 1 Capital to cover deductions	(2,402)	(5,084)
Other	(31)	(37)
<b>Net change in Additional Tier 1 Capital</b>	<b>\$ —</b>	<b>\$ —</b>
<b>Tier 1 Capital Balance, end of period</b>	<b>\$166,984</b>	<b>\$166,984</b>
<b>Tier 2 Capital</b>		
<b>Balance, beginning of period <sup>(1)</sup></b>	<b>\$ 18,382</b>	<b>\$ 19,275</b>
Net increase in qualifying subordinated debt	401	792
Net decrease in qualifying trust preferred securities	—	(1,242)
Net decrease in excess of eligible credit reserves over expected credit losses	(456)	(492)
Other	(31)	(37)
<b>Net decrease in Tier 2 Capital</b>	<b>\$ (86)</b>	<b>\$ (979)</b>
<b>Tier 2 Capital Balance, end of period</b>	<b>\$ 18,296</b>	<b>\$ 18,296</b>
<b>Total Capital (Tier 1 Capital + Tier 2 Capital)</b>	<b>\$185,280</b>	<b>\$185,280</b>

(1) Pro forma presentation based on application of the Final Basel III Rules consistent with current period presentation.

(2) Primarily represents an increase in additional paid-in capital related to employee benefit plans.

(3) Presented net of impact of transition arrangements related to unrealized losses on securities AFS and defined benefit plans liability adjustment under the Final Basel III Rules.

(4) Citi issued approximately \$3.7 billion and approximately \$1.5 billion of qualifying perpetual preferred stock during the twelve months and three months ended December 31, 2014, respectively, which were partially offset by the netting of issuance costs of \$31 million and \$7 million during those periods.

### Citigroup Capital Rollforward Under Basel III (Advanced Approaches with Full Implementation)

<i>In millions of dollars</i>	Three Months Ended December 31, 2014	Twelve Months Ended December 31, 2014
<b>Common Equity Tier 1 Capital</b>		
<b>Balance, beginning of period</b>	<b>\$138,762</b>	<b>\$125,597</b>
Net income	350	7,313
Dividends declared	(190)	(633)
Net increase in treasury stock	(380)	(1,232)
Net increase in additional paid-in capital <sup>(1)</sup>	229	778
Net increase in foreign currency translation adjustment net of hedges, net of tax	(2,716)	(4,946)
Net decrease in unrealized losses on securities AFS, net of tax	470	1,697
Net increase in defined benefit plans liability adjustment, net of tax	(1,064)	(1,170)
Net increase in cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax	(86)	(102)
Net decrease in goodwill, net of related deferred tax liabilities (DTLs)	873	1,713
Net change in other intangible assets other than mortgage servicing rights (MSRs), net of related DTLs	(66)	577
Net decrease in defined benefit pension plan net assets	243	189
Net decrease in deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards	1,027	2,811
Net change in excess over 10%/15% limitations for other DTAs, certain common stock investments and MSRs	(639)	3,878
Other	(7)	336
<b>Net change in Common Equity Tier 1 Capital</b>	<b>\$ (1,956)</b>	<b>\$ 11,209</b>
<b>Common Equity Tier 1 Capital Balance, end of period</b>	<b>\$136,806</b>	<b>\$136,806</b>
<b>Additional Tier 1 Capital</b>		
<b>Balance, beginning of period</b>	<b>\$ 10,010</b>	<b>\$ 7,815</b>
Net increase in qualifying perpetual preferred stock <sup>(2)</sup>	1,493	3,699
Net decrease in qualifying trust preferred securities	(1)	(5)
Other	(33)	(40)
<b>Net increase in Additional Tier 1 Capital</b>	<b>\$ 1,459</b>	<b>\$ 3,654</b>
<b>Tier 1 Capital Balance, end of period</b>	<b>\$148,275</b>	<b>\$148,275</b>
<b>Tier 2 Capital</b>		
<b>Balance, beginning of period</b>	<b>\$ 17,482</b>	<b>\$ 16,637</b>
Net increase in qualifying subordinated debt	401	1,680
Net decrease in excess of eligible credit reserves over expected credit losses	(456)	(492)
Other	(39)	(437)
<b>Net change in Tier 2 Capital</b>	<b>\$ (94)</b>	<b>\$ 751</b>
<b>Tier 2 Capital Balance, end of period</b>	<b>\$ 17,388</b>	<b>\$ 17,388</b>
<b>Total Capital (Tier 1 Capital + Tier 2 Capital)</b>	<b>\$165,663</b>	<b>\$165,663</b>

(1) Primarily represents an increase in additional paid-in capital related to employee benefit plans.

(2) Citi issued approximately \$3.7 billion and approximately \$1.5 billion of qualifying perpetual preferred stock during the twelve months and three months ended December 31, 2014, respectively, which were partially offset by the netting of issuance costs of \$31 million and \$7 million for those periods.

### Citigroup Risk-Weighted Assets Under Basel III (Full Implementation) at December 31, 2014 <sup>(1)</sup>

<i>In millions of dollars</i>	Advanced Approaches			Standardized Approach		
	Citigroup	Citi Holdings	Total	Citigroup	Citi Holdings	Total
Credit Risk	\$ 760,690	\$119,207	\$ 879,897	\$1,033,064	\$ 95,203	\$1,128,267
Market Risk	95,835	4,646	100,481	95,835	4,646	100,481
Operational Risk <sup>(2)</sup>	258,693	53,807	312,500	—	—	—
<b>Total Risk-Weighted Assets</b>	<b>\$1,115,218</b>	<b>\$177,660</b>	<b>\$1,292,878</b>	<b>\$1,128,899</b>	<b>\$ 99,849</b>	<b>\$1,228,748</b>

Citigroup provides flow statements by quarter and full year (YTD) for capital under current regulatory standards (Basel III Transition Arrangements) and Basel III (Full Implementation). Citigroup also reports credit, market and operational risk RWAs by primary business segments (Citicorp and Citi Holdings) under fully implemented Basel III rules, presenting both the Advanced Approach and the Standardized Approach.



## Recommendation 11: Present a flow statement of movements since the prior reporting date in regulatory capital

### EDTF | Pillar 3 | Swiss SRB Basel III capital movement

CHF billion	Phase-in	Fully applied
<b>Common equity tier 1 capital as of 31.12.13</b>	<b>42.2</b>	<b>28.9</b>
<i>Movements during 2014:</i>		
Operating profit / (loss) before tax	2.3	2.3
Own credit related to financial liabilities designated at fair value and replacement values, net of tax	(0.2)	(0.2)
Foreign currency translation effects	1.2	0.9
Goodwill, net of tax, less hybrid capital and high-trigger loss-absorbing capital	0.6	
Defined benefit pension plans, 20% phase-in effect as of 1.1.14	(0.7)	
Defined benefit plans	0.1	(0.5)
Deferred tax assets recognized for tax loss carry-forwards, 20% phase-in effect as of 1.1.14	(1.3)	
Deferred tax assets recognized for tax loss carry-forwards	0.7	
Deferred tax assets on temporary differences	0.8	0.1
Current tax effect	(0.5)	(0.5)
Compensation and own shares-related capital components (including share premium)	(0.5)	(0.5)
Proposed capital returns to shareholders	(1.9)	(1.9)
Other	0.1	0.1
<i>Total movement</i>	<i>0.7</i>	<i>0.0</i>
<b>Common equity tier 1 capital as of 31.12.14</b>	<b>42.9</b>	<b>28.9</b>
Additional tier 1 capital as of 31.12.13	0.0	0.0
<i>Movements during 2014:</i>		
Issuance of high-trigger loss-absorbing capital	0.5	0.5
Goodwill, net of tax, offset against hybrid capital and high-trigger loss-absorbing capital	(0.5)	
<i>Total movement</i>	<i>0.0</i>	<i>0.5</i>
<b>Additional tier 1 capital as of 31.12.14</b>	<b>0.0</b>	<b>0.5</b>
Tier 2 capital as of 31.12.13	8.6	5.7
<i>Movements during 2014:</i>		
Issuance of loss-absorbing capital	4.6	4.6
Phase-out capital	(1.2)	
Foreign currency translation effects and other	1.5	1.2
<i>Total movement</i>	<i>4.8</i>	<i>5.7</i>
<b>Tier 2 capital as of 31.12.14</b>	<b>13.4</b>	<b>11.4</b>
<b>Total capital as of 31.12.14</b>	<b>56.3</b>	<b>40.8</b>
<b>Total capital as of 31.12.13</b>	<b>50.8</b>	<b>34.6</b>



## Recommendation 12: Qualitatively and quantitatively discuss capital planning within a more general discussion of management's strategic planning

### Overview

#### Organisation and structure

Capital management is integral to the Group's approach to financial stability and sustainability management and is therefore embedded in the way businesses and legal entities operate. Capital demand and supply is actively managed on a centralised basis, at a business level, at a local entity level and on a regional basis taking into account the regulatory, economic and commercial environment in which Barclays operates.

#### Roles and responsibilities

The Group's capital management strategy is driven by the strategic aims of the Group and the risk appetite set by the Board. The Group's objectives are achieved through well embedded capital management practices:

#### Capital planning

Capital forecasts are managed on a top-down and bottom-up analysis through both short term (one year) and medium-term (three years) financial planning cycles. Barclays' capital plans are developed with the objective of maintaining capital that is adequate in quantity and quality to support the Group's risk profile, regulatory and business needs, including Transform financial commitments. As a result, the Group holds a diversified capital base that provides strong loss absorbing capacity and optimised returns.

Barclays' capital plans are continually monitored against relevant internal target capital ratios to ensure they remain appropriate, and consider risks to the plan including possible future regulatory changes.

Local management ensures compliance with an entity's minimum regulatory capital requirements by reporting to local Asset and Liability Committees with oversight by the Group's Treasury Committee, as required.



#### Regulatory requirements

Capital planning is set in consideration of minimum regulatory requirements in all jurisdictions in which the Group operates. Barclays' regulatory capital requirements are determined by the PRA under the Basel III and CRD IV requirements.

Under these regulatory frameworks, capital requirements are set in consideration of the level of risk that the firm is exposed to which is measured through both risk-weighted assets (RWAs) and leverage.

Capital held to support the level of risk identified is set in consideration of minimum ratio requirements and internal buffers. Capital requirements are set to support the firm's level of risk both on a going concern basis and in resolution.

#### Governance

The Group and legal entity capital plans are underpinned by the Capital Risk Framework, which includes capital management policies and practices approved by the Treasury Committee. These plans are implemented consistently in order to deliver on the Group objectives.

The Board approves the Group capital plan, stress tests and recovery plan. The Treasury Committee manages compliance with the Group's capital management objectives. The Committee reviews actual and forecast capital demand and resources on a monthly basis. The Board Risk Committee annually reviews risk appetite and then analyses the impacts of stress scenarios on the Group capital forecast in order to understand and manage the Group's projected capital adequacy.

#### Monitoring and managing capital

Capital is monitored and managed on an ongoing basis through:

**Stress testing:** internal stress testing is undertaken to quantify and understand the impact of sensitivities on the capital plan and capital ratios, arising from 1 in 7 year and 1 in 25 year stresses. Actual recent economic, market and peer institution stresses are used to inform the assumptions of the stress tests and assess the effectiveness of mitigations strategies.

The Group also undertakes stress tests prescribed by the PRA and ECB. Legal entities undertake stress tests prescribed by their local regulators. These stress tests inform decisions on the size and quality of capital buffer required and the results are incorporated into the Group capital plan to ensure adequacy of capital under normal and severe, but plausible, stressed conditions.

**Risk mitigation:** as part of the stress testing process actions are identified that should be taken to mitigate the risks that could arise in the event of material adverse changes in the current economic and business outlook.

As an additional layer of protection, the Barclays Recovery Plan defines the actions and implementation strategies available for the Group to increase or preserve capital resources in the event that stress events are more extreme than anticipated. In addition, the strong regulatory focus on resolvability has continued in 2014, from both UK and international regulators. The Group continues to work with the authorities on recovery and resolution planning (RRP), and the detailed practicalities of the resolution process, including the provision of information that would be required in the event of a resolution, so as to enhance Barclays' resolvability.

**Senior management awareness and transparency:** Treasury works closely with Central Risk, businesses and legal entities to support a proactive approach to identifying sources of capital ratio volatilities which are considered in the Group's capital plan. Capital risks against firm-specific and macroeconomic early warning indicators are monitored and reported to the Treasury Committee, associated with clear escalation channels to senior management.

Capital management information is readily available at all times to support the Executive Managements strategic and day-to-day business decision making, as may be required.

The Group submits its Board approved ICAAP document to the PRA on an annual basis, which forms the basis of the Individual Capital Guidance (ICG) set by the PRA.

**Capital allocation:** capital allocations are approved by the Group Executive Committee and monitored by the Treasury Committee, taking into consideration the risk appetite, growth and strategic aims of the Group. Barclays Bank PLC (BBPLC) is the primary source of capital to its legal entities. Regulated legal entities are, at a minimum, allocated adequate capital to meet their current and forecast regulatory and business requirements.

**Transferability of capital:** the Group's policy is for surplus capital held in Group entities to be repatriated to BBPLC in the form of dividends and/or capital repatriation, subject to local regulatory requirements, exchange controls and tax implications. This approach provides optimal flexibility on the re-deployment of capital across legal entities. The Group is not aware of any material impediments to the prompt transfer of capital resources, in line with the above policy, or repayment of intra-Group liabilities when due.



## Recommendation 13: Provide granular information to explain how risk-weighted assets (RWAs) relate to business activities and related risks

### Business review Capital and risk management

The table below analyses RWA movements by segment during the year.

	UK Personal & Business Banking £bn	Ulster Bank £bn	Commercial Banking £bn	Private Banking £bn	Corporate & Institutional Banking £bn	Central items £bn	Citizens Financial Group £bn	RCR £bn	Non-Core £bn	Total £bn
<b>Total RWAs</b>										
At 31 December 2013 (Basel 2.5 basis)	51.2	30.7	65.8	12.0	120.4	20.1	56.1	—	29.2	385.5
Impact of dissolution of Non-Core and creation of RCR	—	(1.9)	(2.7)	—	(10.0)	0.1	2.0	41.7	(29.2)	—
CRR impact	(1.5)	(0.6)	(1.6)	—	36.7	3.1	2.5	5.0	—	43.6
At 1 January 2014 (CRR basis)	49.7	28.2	61.5	12.0	147.1	23.3	60.6	46.7	—	429.1
Foreign exchange movement	—	(1.1)	—	—	(1.0)	—	3.6	—	—	1.5
Business movements	(0.3)	0.3	—	—	(36.8)	(6.1)	4.2	(20.0)	—	(58.7)
Risk parameter changes (1)	(5.0)	(3.6)	—	—	—	—	—	(3.3)	—	(11.7)
Methodology changes (2)	—	—	1.7	(0.2)	(2.0)	—	—	(0.3)	—	(0.8)
Model updates (3)	(1.6)	—	0.6	—	(0.2)	(0.4)	—	(1.1)	—	(2.7)
Other changes	—	—	—	(0.3)	—	(0.5)	—	—	—	(0.8)
At 31 December 2014 (CRR basis)	42.8	23.8	64.0	11.5	107.1	16.3	68.4	22.0	—	355.9

Notes:

(1) Risk parameter changes relate to changes in credit quality metrics of customers and counterparties such as probability of default (PD) and loss given default (LGD). They comprise:

- UK PBB and Ulster Bank: primarily reflects recalibration of PD and LGD models reflecting improvements to the UK economy.

- RCR: decrease in defaulted assets (£1.0 billion) and internal rating upgrades for certain counterparties (£0.8 billion).

(2) Methodology changes included:

- Commercial Banking: revisions to both currency netting and maturity dates for securitisation liquidity facilities.

- CIB: £2.0 billion primarily represents inclusion of hedges in the credit valuation adjustments calculation. In addition there were offsetting movements of £11.4 billion reflecting transition of trading book securitisations from credit risk to market risk; and £7.5 billion reflecting reclassification of new CRR related charges, primarily asset value correlation and certain exchange traded derivatives from non-counterparty credit risk to counterparty credit risk.

(3) The following models were updated during the year:

- UK PBB: revised retail LGD model.

- Commercial Banking and RCR: new large corporate PD model.

- CIB: reduction due to the impact of exposure at default model £2.6 billion was offset by the new large corporate PD model.

#### Key points

- RBS RWAs increased from £385 billion on a Basel 2.5 basis to £429 billion on a CRR basis principally reflecting:
    - 1,250% risk weighting of securitisation positions; previously capital deductions;
    - Impact of credit valuation adjustment and asset valuation correlation relating to banks and central counterparty;
    - Implementation of CRR model suite; and
    - Reduction in risk weighting for small and medium sized enterprises (SME).
  - UK PBB RWAs reduced due to improvements in credit quality, recovery in the UK economy and lower balances.
  - In Commercial Banking, credit risk RWAs increased by £5 billion due to growth in loans (£2 billion) and methodology changes (£2 billion) and model changes (£1 billion), offset by a £2 billion decrease in operational risk RWAs.
  - CIB managed down RWAs by £40 billion, through both balance sheet and risk reductions. The reduction included £15 billion of market risk RWAs due to the wind down of the US asset-backed products business, £6 billion credit risk RWAs in GTS and Portfolio and £10 billion in Rates reflecting counterparty reviews as well as exits, novations and mitigation. Operational risk RWAs decreased by £3 billion.
  - The RCR disposal strategy and run-off resulted in a £25 billion reduction in RWAs, £9 billion each in real estate finance and corporate, and a further £5 billion and £2 billion in Markets and Ulster Bank respectively.
- In relation to RWA density:
- The increase in RWA density of exposures reflected the impact of credit valuation adjustments and asset valuation correlation and those on structured entities related to revised RWA treatments, both relating to the implementations of CRD IV.
  - Non-modelled standardised credit risk RWAs principally comprised CFG (£63 billion), and Private Banking (£10 billion); repo transactions undertaken by RBSSI, the broker-dealer and certain securitisation exposures.
  - Total shipping portfolio exposure at default (EAD) was £10.9 billion and RWAs of £8.4 billion of which £2.3 billion and £1.7 billion were in RCR.
  - Oil and gas RWAs were £8.5 billion at a density of 49%. Mining and metals RWAs were £3.3 billion with a density of 74%.

### Business review Capital and risk management

#### Capital management\* continued

##### EAD and RWA density

The tables below analyse exposure at default (EAD) after credit risk mitigation (CRM), RWAs and related RWA density (RWAs as a percentage of EAD) by sector cluster. RWAs at 31 December 2014 are under current rules and 31 December 2013 are on a Basel 2.5 basis. Refer to page 215 for a bridge between balance sheet and EAD.

	EAD post CRM (1)			RWAs			RWA density		
	AIRB £m	STD £m	Total £m	AIRB £m	STD £m	Total £m	AIRB %	STD %	Total %
<b>2014</b>									
<b>Sector cluster</b>									
<b>Sovereign</b>									
Central banks	44,007	50,539	94,546	1,632	78	1,710	4	—	2
Central government	16,373	9,944	26,317	1,775	61	1,836	11	1	7
Other sovereign	4,936	6,548	11,484	1,250	386	1,636	25	6	14
<b>Total sovereign</b>	<b>65,316</b>	<b>67,031</b>	<b>132,347</b>	<b>4,657</b>	<b>525</b>	<b>5,182</b>	<b>7</b>	<b>1</b>	<b>4</b>
<b>Financial institutions (FI)</b>									
Banks	32,777	2,081	34,858	15,089	488	15,577	46	23	45
Other FI (2)	41,420	22,535	63,955	15,585	9,960	25,545	38	44	40
SSPEs (3)	17,504	2,634	20,138	6,216	4,410	10,626	36	167	53
<b>Total FI</b>	<b>91,701</b>	<b>27,250</b>	<b>118,951</b>	<b>36,890</b>	<b>14,858</b>	<b>51,748</b>	<b>40</b>	<b>55</b>	<b>44</b>
<b>Corporates</b>									
<b>Property</b>									
- UK	48,081	3,463	51,544	23,736	3,390	27,126	49	98	53
- Ireland	7,541	31	7,572	1,283	33	1,316	17	106	17
- Other Western Europe	4,625	431	5,056	2,321	445	2,766	50	103	55
- US	1,334	7,481	8,815	722	7,551	8,273	54	101	94
- RoW	2,048	284	2,332	1,296	249	1,545	63	88	66
<b>Total property</b>	<b>63,629</b>	<b>11,690</b>	<b>75,319</b>	<b>29,358</b>	<b>11,668</b>	<b>41,026</b>	<b>46</b>	<b>100</b>	<b>54</b>
<b>Natural resources</b>									
- Oil and gas	15,704	1,876	17,580	6,864	1,665	8,529	44	89	49
- Mining and metals	3,744	635	4,379	2,602	660	3,262	69	104	74
- Other	16,173	1,070	17,243	6,367	861	7,228	39	80	42
<b>Transport</b>									
- Shipping	8,332	2,571	10,903	5,790	2,575	8,365	69	100	77
- Other	21,268	3,297	24,565	9,176	2,865	12,041	43	87	49
<b>Manufacturing</b>	<b>29,450</b>	<b>8,430</b>	<b>37,880</b>	<b>12,673</b>	<b>8,257</b>	<b>20,930</b>	<b>43</b>	<b>98</b>	<b>55</b>
<b>Retail and leisure</b>	<b>24,564</b>	<b>8,262</b>	<b>32,826</b>	<b>14,940</b>	<b>8,027</b>	<b>22,967</b>	<b>61</b>	<b>97</b>	<b>70</b>
<b>Services</b>	<b>23,489</b>	<b>8,426</b>	<b>31,915</b>	<b>13,327</b>	<b>8,350</b>	<b>21,677</b>	<b>57</b>	<b>99</b>	<b>68</b>
<b>TMT (4)</b>	<b>13,555</b>	<b>2,790</b>	<b>16,345</b>	<b>7,079</b>	<b>2,806</b>	<b>9,885</b>	<b>52</b>	<b>101</b>	<b>60</b>
<b>Total corporates</b>	<b>219,908</b>	<b>49,047</b>	<b>268,955</b>	<b>108,176</b>	<b>47,734</b>	<b>155,910</b>	<b>49</b>	<b>97</b>	<b>58</b>
<b>Personal</b>									
<b>Mortgages</b>									
- UK	113,884	7,794	121,678	10,651	3,121	13,772	9	40	11
- Ireland	15,544	37	15,581	13,137	18	13,155	85	49	84
- Other Western Europe	193	311	504	16	124	140	8	40	28
- US	131	21,088	21,219	10	10,352	10,362	8	49	49
- RoW	407	589	996	39	232	271	10	39	27
<b>Total mortgages</b>	<b>130,159</b>	<b>29,819</b>	<b>159,978</b>	<b>23,853</b>	<b>13,847</b>	<b>37,700</b>	<b>18</b>	<b>46</b>	<b>24</b>
<b>Other personal</b>	<b>31,628</b>	<b>15,971</b>	<b>47,599</b>	<b>13,233</b>	<b>11,805</b>	<b>25,038</b>	<b>42</b>	<b>74</b>	<b>53</b>
<b>Total personal</b>	<b>161,787</b>	<b>45,790</b>	<b>207,577</b>	<b>37,086</b>	<b>25,652</b>	<b>62,738</b>	<b>23</b>	<b>56</b>	<b>30</b>
<b>Other items</b>	<b>4,465</b>	<b>18,363</b>	<b>22,828</b>	<b>3,012</b>	<b>16,580</b>	<b>19,592</b>	<b>67</b>	<b>90</b>	<b>86</b>
<b>Total</b>	<b>543,177</b>	<b>207,481</b>	<b>750,658</b>	<b>189,821</b>	<b>105,349</b>	<b>295,170</b>	<b>35</b>	<b>51</b>	<b>39</b>

#### Pillar 3

Additional analysis of exposure at default and credit risk measures such as credit risk mitigation, counterparty credit risk and provisions and their associated RWAs under the approaches according to the PRA permissions in force provided in RBS's Pillar 3 Report 2014.

\*unaudited

## Recommendation 13: Provide granular information to explain how risk-weighted assets (RWAs) relate to business activities and related risks

Table 7. Capital requirements  
Thousands of euros

	31 Dec 2014		31 Dec 2013	
	Capital	RWAs	Capital	RWAs
<b>Credit risk - IRB approach</b>				
Central governments and central banks	41,908	523,846	34,440	430,496
Institutions	1,090,183	13,627,288	955,865	11,948,316
Corporates	8,945,712	111,821,402	8,049,820	100,622,746
Retail exposures	5,525,134	69,064,171	4,750,025	59,375,318
Residential mortgages	3,574,594	44,682,425	3,621,216	45,265,199
Qualifying revolving retail exposures	330,911	4,136,393	258,743	3,234,293
Other retail	1,619,628	20,245,353	870,066	10,875,826
Equities	832,368	10,404,606	767,334	9,591,675
Simple method	-	-	-	-
PD/LGD method	472,973	5,912,160	363,701	4,546,263
Internal models	359,396	4,492,446	403,633	5,045,413
Listed instruments	108,563	1,357,035	159,915	1,998,941
Unlisted: Sufficiently diversified portfolios	723,806	9,047,572	607,419	7,592,740
Other exposures	-	-	-	-
Securitisation positions or exposures	92,668	1,158,348	76,348	954,350
<b>TOTAL</b>	<b>16,527,973</b>	<b>206,599,661</b>	<b>14,633,832</b>	<b>182,922,901</b>
<b>Credit risk - Standardised approach</b>				
Central governments and central banks	334,645	4,183,065	191,078	2,388,476
Regional governments and local authorities	63,758	796,977	106,127	1,326,592
Public sector entities and other non-profit public institutions	20,720	258,997	20,680	258,506
Multilateral development banks	292	3,648	-	-
International organizations	5,546	69,327	-	-
Institutions	697,748	8,721,855	487,723	6,096,532
Corporates	5,348,763	66,859,535	4,962,692	62,033,649
Retail	6,690,813	83,635,168	7,107,412	88,842,644
Exposures secured by real estate property	3,016,299	37,703,741	2,749,196	34,364,944
Defaulted exposures	1,098,274	13,728,426	1,045,118	13,063,974
High-risk exposures	13,072	163,397	139,349	1,741,860
Covered bonds	24,465	305,817	-	-
Securitisation positions	104,926	1,311,569	72,334	904,175
Exposures to institutions and corporates with short-term credit ratings	15,053	188,165	13,866	173,324
Exposures to collective investment schemes (CIS)	872	10,894	8,850	110,628
Other exposures	4,390,541	54,881,764	1,741,529	21,769,110
<b>TOTAL</b>	<b>21,825,788</b>	<b>272,822,345</b>	<b>18,645,953</b>	<b>233,074,414</b>
Risk due to contributions to CCPs' default fund	69,231	865,389	-	2,078,007
Risk due to credit valuation adjustment	22,056	275,700	-	8,768,647
Settlement risk - Trading book	134	1,679	63	788
Position risk - Trading book - Standardised approach	1,101,325	13,766,559	916,015	11,450,188
Position and exchange rate risk - Trading book - Internal models	816,002	10,200,029	860,674	10,758,425
Specific risk in securitisation positions (trading book)	74,175	927,186	108,096	1,351,200
Specific risk in correlation trading portfolio positions	3,496	43,699	58,758	734,475
Exchange rate risk - Standardised approach	813,268	10,165,851	616,959	7,711,988
<b>Operational risk - Standardised approach</b>	<b>5,596,184</b>	<b>69,952,306</b>	<b>5,275,444</b>	<b>65,943,050</b>
Other additional capital requirements	16,661	208,264	-599,373	-7,492,163
<b>TOTAL</b>	<b>46,866,293</b>	<b>585,828,663</b>	<b>40,516,422</b>	<b>506,455,275</b>

Table 8. Capital requirements by geography  
Thousands of euros

	TOTAL	Spain	United Kingdom	Brazil	Cont. Europe	Rest of Latam	United States	Rest of world
<b>Credit risk - IRB approach</b>								
Central governments and central banks	41,908	41,908	-	-	-	-	-	-
Institutions	1,090,183	722,082	202,286	-	57,810	108,005	-	-
Corporates	8,945,712	4,963,000	1,279,927	1,034,731	499,353	735,560	433,141	-
Retail exposures	5,525,134	1,403,422	2,966,374	-	1,155,337	-	-	-
Mortgages	3,574,594	808,417	2,507,143	-	259,034	-	-	-
Cards	330,911	112,051	209,752	-	9,109	-	-	-
Other retail	1,619,628	482,955	249,480	-	887,194	-	-	-
Equities	832,368	832,368	-	-	-	-	-	-
Simple method	-	-	-	-	-	-	-	-
PD/LGD method	472,973	472,973	-	-	-	-	-	-
Internal models	359,396	359,396	-	-	-	-	-	-
Securitisation positions	92,668	50,504	40,009	-	2,155	-	-	-
<b>TOTAL</b>	<b>16,527,973</b>	<b>8,013,284</b>	<b>4,488,596</b>	<b>1,034,731</b>	<b>1,714,656</b>	<b>843,565</b>	<b>433,141</b>	<b>-</b>
<b>Credit risk - Standardised approach</b>								
Central governments and central banks	334,645	15,789	1,344	10,783	2,294	298,337	6,076	22
Regional governments and local authorities	63,758	41	-	869	9,595	6,702	46,551	-
Public sector entities and other non-profit public institutions	20,720	-	-	-	3,356	12,168	5,196	-
Multilateral development banks	292	-	-	-	-	292	-	-
International organizations	5,546	-	5,546	-	-	-	-	-
Institutions	697,748	55,081	21,014	176,089	53,130	110,043	281,728	663
Corporates	5,348,763	181,785	1,377,765	1,236,945	720,647	930,349	884,127	17,143
Retail	6,690,813	140,882	561,985	1,854,048	1,583,512	1,130,003	1,420,384	-
Exposures secured by real estate property	3,016,299	220,173	66,322	337,431	568,247	780,810	1,043,316	-
Defaulted exposures	1,098,274	475,598	24,647	130,641	165,729	193,924	107,674	61
High-risk exposures	13,072	140	8,853	-	-	1,313	2,766	-
Covered bonds	24,465	-	24,465	-	-	-	-	-
Exposures to institutions and corporates with short-term credit ratings	15,053	5	44	-	9,052	5,952	-	-
Exposures to collective investment schemes (CIS)	872	-	-	868	-	3	-	-
Other exposures	4,390,541	1,620,632	208,176	1,093,216	365,670	408,369	693,510	970
Securitisation positions	104,926	1,130	-	59,374	-	-	44,421	-
<b>TOTAL</b>	<b>21,825,788</b>	<b>2,711,256</b>	<b>2,300,162</b>	<b>4,900,264</b>	<b>3,481,232</b>	<b>3,878,265</b>	<b>4,535,749</b>	<b>18,859</b>
Risk due to contributions to CCPs' default fund	69,231	38,959	30,183	81	-	8	-	-
Risk due to credit valuation adjustment	22,056	9,494	8,231	674	145	3,309	202	-
Settlement risk - Trading book*	134	134	-	-	-	-	-	-
Position risk - Trading book - Standardised approach	1,101,325	106,046	674,338	210,911	32,778	36,261	40,991	-
Position and exchange rate risk - Trading book - Internal models	816,002	583,643	-	-	192	232,167	-	-
Specific risk in securitisation positions (trading book)*	74,175	72,088	-	2,087	-	-	-	-
Specific risk in correlation trading portfolio positions*	3,496	3,496	-	-	-	-	-	-
Exchange rate risk - Standardised approach*	813,268	813,268	-	-	-	-	-	-
<b>Operational risk - Standardised approach**</b>	<b>5,596,184</b>	<b>1,029,600</b>	<b>688,804</b>	<b>1,631,822</b>	<b>667,961</b>	<b>891,866</b>	<b>686,132</b>	<b>-</b>
Other additional capital requirements	16,661	16,661	-	-	-	-	-	-
<b>TOTAL</b>	<b>46,866,293</b>	<b>13,397,929</b>	<b>8,190,314</b>	<b>7,780,571</b>	<b>5,896,963</b>	<b>5,885,443</b>	<b>5,696,215</b>	<b>18,859</b>

\* Risks that are calculated at corporate level. All the risk has been assigned to Spain.

\*\* The operational risk consumption of corporate activities has been assigned to Continental Europe.

## Recommendation 14: Present a table showing the capital requirements for each method used to calculate the measurement in credit, market and operational risk

For the current reporting date the amounts presented are based on the CRR/CRD 4 framework according to the transitional rules. The amounts for the comparative period are presented on the then applicable Basel 2.5 framework.

In line with our decision to scale down and discontinue parts of our commodities business, certain portfolios containing discontinued activities were aggregated under the Special Commodities Group (SCG), which has been subsequently transferred from CB&S to NCOU in the first quarter of 2014. The amounts for credit, market and operational risk RWA for the comparative period have been restated including related effects from reallocations between the segments, accordingly.


Within credit risk, the line item "Other" in Advanced IRBA reflects RWA from securitization positions in the banking book, specific equity positions and other non-credit obligation assets. Within the Standardized Approach, the majority of the line item "Other" includes RWAs from our pension fund assets with the remainder being RWAs from banking book securitizations as well as exposures assigned to the further exposure classes apart from central governments or central banks, institutions, corporates and retail.

Risk-weighted Assets by Model Approach and Business Division

	Dec 31, 2014						
	CRR/CRD 4						
in € m.	Corporate Banking & Securities	Private & Business Clients	Global Transaction Banking	Deutsche Asset & Wealth Management	Non-Core Operations Unit	Consolidation & Adjustments and Other	Total
Credit Risk	83,548	69,584	41,740	7,310	19,280	22,666	244,128
Segment reallocation	(2,200)	520	3,327	330	94	(2,071)	0
Advanced IRBA	77,263	58,786	31,763	3,910	13,062	14,638	199,422
Central Governments and Central Banks	3,948	124	1,020	0	74	218	5,385
Institutions	8,359	1,538	3,103	73	623	171	13,869
Corporates	55,678	9,938	26,916	2,740	5,062	1,199	101,533
Retail	121	37,852	30	91	773	0	38,867
Other	9,157	9,334	694	1,006	6,529	13,049	39,769
Foundation IRBA	2,079	3,303	107	0	1	0	5,491
Central Governments and Central Banks	0	0	0	0	0	0	0
Institutions	0	0	0	0	0	0	0
Corporates	2,079	3,303	107	0	1	0	5,490
Standardized Approach	4,804	6,884	6,542	3,070	6,122	10,099	37,522
Central Governments or Central Banks	21	63	27	3	0	0	114
Institutions	593	124	51	4	3	35	810
Corporates	2,841	1,401	4,747	1,111	1,075	584	11,759
Retail	7	4,064	422	45	1,141	18	5,697
Other	1,341	1,232	1,296	1,908	3,903	9,462	19,142
Risk exposure amount for default funds contributions	1,601	90	1	0	1	0	1,693
Settlement Risk	25	0	0	0	0	1	27
Credit Valuation Adjustment (CVA)	16,024	445	7	445	4,019	262	21,203
Internal Model Approach	15,953	417	7	443	3,953	1	20,774
Standardized Approach	71	28	0	2	66	261	428
Market Risk	44,469	92	199	2,483	16,967	0	64,209
Internal Model Approach	31,439	0	199	1,339	8,625	0	41,602
Standardized Approach	13,029	92	0	1,144	8,342	0	22,607
Operational Risk	31,512	9,605	1,321	6,368	18,275	0	67,082
Advanced measurement approach	31,512	9,605	1,321	6,368	18,275	0	67,082
Total	175,578	79,725	43,268	16,607	58,541	22,929	396,648



## Recommendation 14: Present a table showing the capital requirements for each method used to calculate the measurement in credit, market and operational risk

EXPOSURE AT DEFAULT AND RISK-WEIGHTED ASSETS FOR CREDIT RISK PORTFOLIOS													
(SMM)		Basel III - IFRS											
		Q2 2015						Q1 2015		Q4 2014		Q3 2014	
		AIRB		Standardized		Total		Total		Total		Total	
Exposure Type	Sub-type	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>	EAD <sup>(1)</sup>	RWA <sup>(2)</sup>
Non-Retail													
Corporate <sup>(3)</sup>	Drawn	102,167	58,069	43,908	42,540	146,075	100,609	145,012	101,339	130,621	90,240	128,408	90,365
	Undrawn	46,847	20,086	4,514	4,503	51,361	24,589	53,974	24,963	47,082	22,314	44,855	21,274
	Other <sup>(4)</sup>	34,413	11,041	3,230	3,213	37,643	14,254	35,068	12,327	31,678	11,496	31,704	11,246
	Total	183,427	89,196	51,652	50,256	235,079	139,452	234,054	138,629	209,381	124,050	204,967	122,885
Bank <sup>(3)</sup>	Drawn	23,762	5,332	1,938	1,347	25,700	6,679	32,358	8,435	25,883	7,500	26,237	7,882
	Undrawn	11,328	3,615	78	57	11,406	3,672	12,222	3,914	10,954	3,356	11,552	3,559
	Other <sup>(4)</sup>	10,095	1,752	95	78	10,190	1,830	9,535	1,753	8,195	1,486	7,929	1,394
	Total	45,185	10,699	2,111	1,482	47,296	12,181	54,115	14,102	45,032	12,342	45,718	12,835
Sovereign	Drawn	75,022	4,933	5,303	594	80,325	5,527	82,035	5,544	76,107	4,858	68,768	4,664
	Undrawn	1,543	161	-	-	1,543	161	1,465	139	1,352	140	1,353	177
	Other <sup>(4)</sup>	544	15	-	-	544	15	1,137	63	805	33	775	26
	Total	77,109	5,109	5,303	594	82,412	5,703	84,637	5,746	78,264	5,031	70,896	4,867
Total Non-Retail		200,951	68,334	51,149	44,481	252,100	112,815	259,405	115,318	232,611	102,598	223,413	102,911
	Undrawn	59,718	23,862	4,592	4,560	64,310	28,422	67,661	29,016	59,388	25,810	57,760	25,010
	Other <sup>(4)</sup>	45,052	12,808	3,325	3,291	48,377	16,099	45,740	14,143	40,678	13,015	40,408	12,666
	Total	305,721	105,004	59,066	52,332	364,787	157,336	372,806	158,477	332,677	141,423	321,581	140,587
Retail													
Residential Mortgages	Drawn	186,434	10,780	25,371	11,416	211,805	22,196	213,185	21,893	211,341	19,766	210,743	19,360
	Undrawn	-	-	-	-	-	-	-	-	-	-	-	-
	Total	186,434	10,780	25,371	11,416	211,805	22,196	213,185	21,893	211,341	19,766	210,743	19,360
Secured Lines Of Credit	Drawn	19,047	4,293	-	-	19,047	4,293	18,952	4,435	19,115	4,487	18,590	4,409
	Undrawn	12,354	1,158	-	-	12,354	1,158	12,312	1,243	12,209	1,282	17,724	1,857
	Total	31,401	5,451	-	-	31,401	5,451	31,264	5,678	31,324	5,769	36,314	6,266
Qualifying Revolving Retail Exposures (QRRE)	Drawn	16,426	9,556	-	-	16,426	9,556	16,257	9,564	16,011	9,356	15,953	7,622
	Undrawn	16,734	2,058	-	-	16,734	2,058	16,716	2,151	16,196	2,105	18,311	2,360
	Total	33,160	11,614	-	-	33,160	11,614	32,973	11,715	32,207	11,461	34,264	9,982
Other Retail	Drawn	25,252	12,744	23,063	16,811	48,315	29,555	48,656	29,929	47,080	28,848	45,380	27,624
	Undrawn	660	156	-	-	660	156	667	165	659	161	999	126
	Total	25,912	12,900	23,063	16,811	48,975	29,711	49,323	30,094	47,739	29,009	46,379	27,750
Total Retail		247,159	37,373	48,434	28,227	295,593	65,600	297,050	65,821	293,547	62,457	290,666	59,015
	Undrawn	29,748	3,372	-	-	29,748	3,372	29,695	3,559	29,064	3,548	37,034	4,343
	Total	276,907	40,745	48,434	28,227	325,341	68,972	326,745	69,380	322,611	66,005	327,700	63,358
Securizations		20,024	3,652	59	59	20,083	3,711	21,166	4,086	19,982	4,621	18,163	4,947
Trading Derivatives <sup>(3)</sup>		28,854	7,971	-	-	28,854	7,971	36,673	10,178	25,249	8,041	22,886	7,559
Derivatives - credit valuation adjustment <sup>(5)</sup>		-	-	-	6,732	-	6,732	-	8,154	-	5,632	-	5,039
Total Credit Risk (Excluding Equities & Other Assets)		631,506	157,372	107,559	87,350	739,065	244,722	757,390	250,275	700,519	225,722	690,330	221,490
Equities		3,636	3,636	-	-	3,636	3,636	4,132	4,132	4,269	4,269	4,451	4,451
Other Assets <sup>(6)</sup>		-	-	54,146	23,056	54,146	23,056	59,475	24,208	52,288	23,065	52,377	23,550
Total Credit Risk (Before Scaling Factor)		635,142	161,008	161,705	110,406	796,847	271,414	820,997	278,615	757,076	253,056	747,158	249,491
Add-on for 6% Scaling Factor <sup>(7)</sup>			9,593				9,593		9,801		8,831		8,672
Total Credit Risk		635,142	170,601	161,705	110,406	796,847	281,007	820,997	288,416	757,076	261,887	747,158	258,163

<sup>(1)</sup> Exposure at default, before credit risk mitigation for AIRB exposures, after related allowances for credit losses for Standardized exposures.

<sup>(2)</sup> CET1 Risk-weighted Assets.

<sup>(3)</sup> Effective Q1 2013, under Basel III, risk-weight computations include a multiplier of 1.25 to the correlation parameter of all credit exposures to certain large or unregulated financial institutions meeting specific criteria.

<sup>(4)</sup> Includes lending instruments such as letters of credit and letters of guarantee, banking book derivatives and repo-style exposures, net of related collateral.

<sup>(5)</sup> As per OSFI guideline, effective the first two quarters of 2014, Credit Valuation Adjustment RWA on derivatives was phased-in at 57%. For the third and fourth quarters of 2014, CVA risk-weighted assets were calculated using the scalars of 0.57, 0.65 and 0.77 to compute CET1 capital ratio, Tier 1 capital ratio and Total capital ratio respectively. In 2015, these scalars are 0.64, 0.71 and 0.77, respectively.

## Recommendation 15a: Tabulate credit risk in the banking book showing average probability of default (PD) and LGD as well as exposure at default (EAD), total RWAs and RWA density for Basel asset classes and major portfolios within the Basel asset classes at a suitable level of granularity based on internal ratings grades

Table 30c: Wholesale IRB exposure – by obligor grade<sup>1</sup> – Corporates<sup>5</sup> (continued)

	CRR	PD range %	Exposure value <sup>2</sup> US\$bn	Average PD <sup>3</sup> %	Average LGD <sup>3</sup> %	RWA density <sup>3</sup> %	RWAs US\$bn	Mapped external rating
Default risk								
Minimal	0.1 <sup>6</sup>	0.000 to 0.010	–	–	–	–	–	AAA to AA
	1.1	0.011 to 0.028	11.5	0.03	43.6	16	1.8	AA-
	1.2	0.029 to 0.053	43.0	0.04	30.4	13	5.6	A+
Low	2.1	0.054 to 0.095	70.7	0.07	32.8	18	12.5	A-
	2.2	0.096 to 0.169	91.3	0.13	32.8	25	22.9	BBB+
Satisfactory	3.1	0.170 to 0.285	82.9	0.22	37.0	38	31.5	BBB
	3.2	0.286 to 0.483	71.9	0.37	39.7	53	38.2	BBB-
	3.3	0.484 to 0.740	71.1	0.63	35.0	60	42.7	BB+
Fair	4.1	0.741 to 1.022	47.4	0.87	36.1	70	33.1	BB
	4.2	1.023 to 1.407	33.0	1.20	37.9	81	26.7	BB-
	4.3	1.408 to 1.927	32.6	1.65	40.3	101	32.8	BB+
Moderate	5.1	1.928 to 2.620	22.6	2.24	38.0	100	22.6	B+
	5.2	2.621 to 3.579	12.8	3.07	40.8	116	14.9	B
	5.3	3.580 to 4.914	11.6	4.16	38.7	121	14.0	B-
Significant	6.1	4.915 to 6.718	4.7	5.74	36.9	123	5.8	CCC+
	6.2	6.719 to 8.860	3.6	7.85	39.7	158	5.7	CCC
High	7.1	8.861 to 11.402	1.7	10.03	32.9	139	2.5	CCC-
	7.2	11.403 to 15.000	0.9	13.00	38.0	178	1.6	CCC+
Special management	8.1	15.001 to 22.000	0.7	19.01	34.5	175	1.4	CCC
	8.2	22.001 to 50.000	0.3	36.00	31.2	167	0.5	CCC- to CC
	8.3	50.001 to 99.999	0.3	75.00	45.1	133	0.4	C
Default <sup>4</sup>	9/10	100.000	6.3	100.00	40.8	81	5.1	Default
At 31 December 2014			620.9	1.85	36.0	52	322.3	

Table 30b: Wholesale IRB exposure – by obligor grade<sup>1</sup> – Institutions (continued)

	CRR	PD range %	Exposure value <sup>2</sup> US\$bn	Average PD <sup>3</sup> %	Average LGD <sup>3</sup> %	RWA density <sup>3</sup> %	RWAs US\$bn	Mapped external rating
Default risk								
Minimal	0.1	0.000 to 0.010	1.8	0.02	50.2	22	0.4	AAA
	1.1	0.011 to 0.028	15.3	0.03	41.0	12	1.8	AA+ to AA
	1.2	0.029 to 0.053	27.4	0.04	31.7	11	3.0	AA-
Low	2.1	0.054 to 0.095	44.0	0.07	45.2	20	8.5	A+ to A
	2.2	0.096 to 0.169	14.3	0.13	45.4	34	4.8	A-
Satisfactory	3.1	0.170 to 0.285	9.3	0.22	44.7	42	3.9	BBB+
	3.2	0.286 to 0.483	6.1	0.37	45.1	56	3.4	BBB
	3.3	0.484 to 0.740	4.2	0.63	46.7	74	3.1	BBB-
Fair	4.1	0.741 to 1.022	1.9	0.87	48.3	100	1.8	BB+
	4.2	1.023 to 1.407	2.3	1.20	31.3	65	1.5	BB
	4.3	1.408 to 1.927	0.9	1.65	45.8	133	1.2	BB-
Moderate	5.1	1.928 to 2.620	0.3	2.25	54.3	167	0.5	BB+
	5.2	2.621 to 3.579	0.3	3.05	47.6	167	0.5	B+
	5.3	3.580 to 4.914	0.6	4.20	55.7	180	0.9	B
Significant	6.1	4.915 to 6.718	0.3	5.75	76.0	267	0.8	B-
	6.2	6.719 to 8.860	0.4	7.85	28.8	100	0.4	CCC+
High	7.1	8.861 to 11.402	0.6	10.00	57.4	250	1.5	CCC
	7.2	11.403 to 15.000	0.3	13.00	51.2	233	0.7	CCC-
Special management	8.1	15.001 to 22.000	–	–	–	–	–	CCC
	8.2	22.001 to 50.000	–	–	–	–	–	CCC- to CC
	8.3	50.001 to 99.999	–	–	–	–	–	C
Default <sup>4</sup>	9/10	100.000	0.1	100.00	64.7	–	–	Default
At 31 December 2014			130.4	0.36	42.0	30	38.7	

Table 33: Retail IRB exposure – by internal PD band

	PD range %	Exposure value <sup>1</sup> US\$bn	Average PD <sup>2</sup> %	Average LGD <sup>2</sup> %	RWA density <sup>2</sup> %	RWAs US\$bn
At 31 December 2014						
Secured by mortgages on immovable property						
SME						
Band 1	0.000 to 0.483	0.5	0.10	11.9	0	0.0
Band 2	0.484 to 1.022	0.6	0.80	16.8	17	0.1
Band 3	1.023 to 4.914	1.5	2.45	18.3	20	0.3
Band 4	4.915 to 8.860	0.2	6.94	23.0	50	0.1
Band 5	8.861 to 15.000	0.1	11.25	26.4	0	0.0
Band 6	15.001 to 50.000	0.1	25.01	18.8	100	0.1
Band 7	50.001 to 100.000	0.1	100.00	16.8	0	0.0
		3.1	7.06	17.5	21	0.6
Secured by mortgages on immovable property						
Non-SME						
Band 1	0.000 to 0.483	219.7	0.12	15.2	6	12.1
Band 2	0.484 to 1.022	27.2	0.69	27.5	31	8.5
Band 3	1.023 to 4.914	24.1	2.01	36.2	82	19.8
Band 4	4.915 to 8.860	5.8	5.89	52.0	221	12.8
Band 5	8.861 to 15.000	2.2	12.31	36.7	200	4.4
Band 6	15.001 to 50.000	3.2	23.72	57.7	378	12.1
Band 7	50.001 to 100.000	6.7	97.17	59.4	28	1.9
		288.9	3.06	20.5	25	71.6
Qualifying revolving retail exposures						
Band 1	0.000 to 0.483	47.8	0.12	91.9	6	3.1
Band 2	0.484 to 1.022	6.6	0.71	91.3	29	1.9
Band 3	1.023 to 4.914	9.1	2.26	89.8	65	5.9
Band 4	4.915 to 8.860	1.4	6.64	87.8	136	1.9
Band 5	8.861 to 15.000	0.5	11.06	89.1	200	1.0
Band 6	15.001 to 50.000	0.5	24.44	90.3	260	1.3
Band 7	50.001 to 100.000	0.3	89.52	64.5	67	0.2
		66.2	1.30	91.3	23	15.3
Other SME						
Band 1	0.000 to 0.483	1.8	0.29	57.1	17	0.3
Band 2	0.484 to 1.022	2.3	0.74	46.0	30	0.7
Band 3	1.023 to 4.914	6.3	2.56	49.4	52	3.3
Band 4	4.915 to 8.860	1.5	6.68	45.7	60	0.9
Band 5	8.861 to 15.000	0.6	11.00	52.7	67	0.4
Band 6	15.001 to 50.000	0.5	24.99	54.1	100	0.5
Band 7	50.001 to 100.000	0.9	99.27	37.9	11	0.1
		13.9	9.73	49.0	45	6.2
Other non-SME						
Band 1	0.000 to 0.483	27.0	0.19	25.7	11	3.0
Band 2	0.484 to 1.022	6.3	0.71	33.3	30	1.9
Band 3	1.023 to 4.914	11.3	1.98	30.1	42	4.7
Band 4	4.915 to 8.860	0.9	7.24	60.6	100	0.9
Band 5	8.861 to 15.000	0.5	12.25	71.2	160	0.8
Band 6	15.001 to 50.000	0.6	28.20	63.4	150	0.9
Band 7	50.001 to 100.000	0.7	95.81	66.5	29	0.2
		47.3	2.68	30.0	26	12.4
Total retail						
Band 1	0.000 to 0.483	296.8	0.13	28.8	6	18.5
Band 2	0.484 to 1.022	43.0	0.70	39.0	30	13.1
Band 3	1.023 to 4.914	52.3	2.13	45.2	65	34.0
Band 4	4.915 to 8.860	9.8	6.27	56.2	169	16.6
Band 5	8.861 to 15.000	3.9	11.91	51.0	169	6.6
Band 6	15.001 to 50.000	4.9	24.47	60.7	304	14.9
Band 7	50.001 to 100.000	8.7	97.05	57.3	28	2.4
		419.4	2.99	33.7	25	106.1

**Recommendation 15a:** Tabulate credit risk in the banking book showing average probability of default (PD) and LGD as well as exposure at default (EAD), total RWAs and RWA density for Basel asset classes and major portfolios within the Basel asset classes at a suitable level of granularity based on internal ratings grades

### CREDIT QUALITY OF AIRB EXPOSURE - BUSINESS AND GOVERNMENT PORTFOLIOS (RISK RATING METHOD) <sup>1</sup>

(\$ millions)				Q4/14							Q3/14							
CIBC rating	Corporate	PD bands	Standard & Poor's equivalent	Moody's Investors Service equivalent	EAD	Notional of undrawn commitments	Exposure weighted-average EAD %	Exposure weighted-average PD %	Exposure weighted-average LGD %	Exposure weighted-average risk weight %	RWA	EAD	Notional of undrawn commitments	Exposure weighted-average EAD %	Exposure weighted-average PD %	Exposure weighted-average LGD %	Exposure weighted-average risk weight %	RWA
Investment grade																		
10		0.03%-0.03%	AAA	Aaa	779	227	49	0.02	14	3	24	778	-	-	0.03	18	4	34
21		0.03%-0.03%	AA+	Aa1	5,009	12	80	0.04	8	1	75	6,790	15	80	0.04	9	2	130
24		0.04%-0.05%	AA	Aa2	1,235	926	78	0.04	20	8	96	1,034	750	80	0.04	25	11	118
27		0.05%-0.06%	AA-	Aa3	1,617	1,413	80	0.05	33	16	266	1,370	973	80	0.05	37	16	225
31		0.07%-0.09%	A+	A1	1,402	759	77	0.08	39	22	310	1,529	940	78	0.08	41	24	363
34		0.09%-0.12%	A	A2	4,697	2,679	73	0.11	42	30	1,386	4,393	2,439	76	0.11	44	32	1,405
37		0.13%-0.16%	A-	A3	7,933	5,510	77	0.14	43	36	2,846	7,271	5,203	78	0.14	45	38	2,740
41		0.17%-0.22%	BBB+	Baa1	11,667	6,884	75	0.18	41	40	4,624	11,869	7,305	77	0.18	40	39	4,854
44		0.23%-0.30%	BBB	Baa2	12,530	7,813	74	0.26	42	48	6,000	12,372	7,640	76	0.26	41	40	6,030
47		0.31%-0.42%	BBB-	Baa3	9,883	5,976	74	0.37	40	56	5,516	9,793	5,516	72	0.37	41	55	5,434
					56,752	32,199	75	0.20	37	37	21,143	57,199	30,781	76	0.19	37	37	21,133
Non-investment grade																		
51		0.43%-0.61%	BB+	Ba1	10,726	5,630	56	0.50	33	50	5,358	10,783	5,622	57	0.50	33	51	5,505
54		0.62%-1.09%	BB	Ba2	9,850	5,131	53	0.72	32	56	5,482	9,347	4,579	54	0.72	32	56	5,218
57		1.10%-1.92%	BB-	Ba3	8,039	4,165	56	1.46	29	64	5,122	7,737	3,590	56	1.46	28	61	4,709
61		1.93%-3.99%	B+	B1	5,447	2,026	51	2.40	26	63	3,406	4,949	1,763	52	2.40	25	61	3,004
64		4.00%-7.27%	B	B2	2,994	835	55	5.59	30	81	2,440	2,818	786	55	5.59	28	82	2,321
67		7.28%-12.11%	B-	B3	629	230	48	9.10	30	116	728	588	227	49	9.10	31	116	681
					37,685	18,017	54	1.58	31	60	22,536	36,222	16,567	55	1.56	30	59	21,438
Watch list																		
70		12.12%-20.67%	CCC+	Caa1	308	141	55	15.53	30	143	439	332	99	50	15.53	22	105	348
75		12.12%-20.67%	CCC to CCC-	Caa2 to Caa3	69	1	41	15.53	50	232	160	99	9	61	15.53	48	217	214
80		20.68%-99.99%	CC to C	Ca	76	15	58	30.08	45	235	179	110	19	56	30.08	45	235	258
					453	157	55	17.98	36	172	778	541	127	52	18.49	31	152	820
Default																		
90		100.00%	D	C	448	15	52	100.00	40	241	1,079	454	19	46	100.00	41	248	1,125
					448	15	52	100.00	40	241	1,079	454	19	46	100.00	41	248	1,125
					95,338	50,388	68	1.30	35	48	45,536	94,416	47,494	69	1.30	34	47	44,516
Sovereign																		
Investment grade																		
00		0.01%-0.015%	AAA	Aaa	14,863	187	80	0.01	5	1	78	18,486	200	80	0.01	5	1	102
10		0.016%-0.025%	AAA	Aaa	5,832	935	80	0.02	7	2	97	6,151	946	80	0.02	8	2	107
21		0.016%-0.025%	AA+	Aa1	2,749	1,631	80	0.02	10	2	47	2,545	1,606	80	0.02	11	2	47
24		0.016%-0.025%	AA	Aa2	405	294	79	0.02	20	4	15	500	283	78	0.02	25	4	22
27		0.026%-0.035%	AA-	Aa3	1,626	1,445	79	0.03	21	6	98	1,616	1,419	79	0.03	21	6	98
31		0.036%-0.05%	A+	A1	756	555	77	0.04	20	7	51	757	522	76	0.04	23	7	54
34		0.06%-0.065%	A	A2	633	505	77	0.06	15	8	49	709	663	78	0.06	20	9	63
37		0.066%-0.08%	A-	A3	393	284	78	0.10	18	15	59	363	275	79	0.10	18	15	55
41		0.09%-0.16%	BBB+	Baa1	504	361	80	0.16	23	19	97	493	348	80	0.16	23	19	92
44		0.16%-0.26%	BBB	Baa2	183	64	77	0.26	41	41	75	168	87	75	0.26	40	42	70
47		0.27%-0.42%	BBB-	Baa3	54	27	74	0.37	46	58	31	75	32	71	0.37	26	33	25
					27,998	6,288	79	0.02	8	2	697	31,863	6,381	79	0.02	8	2	735
Non-investment grade																		
51		0.43%-0.61%	BB+	Ba1	57	15	68	0.50	48	64	36	56	14	65	0.50	47	62	35
54		0.62%-1.09%	BB	Ba2	461	160	22	0.72	5	7	33	682	442	54	0.72	6	8	57
57		1.10%-1.92%	BB-	Ba3	16	5	50	1.46	24	62	10	16	6	44	1.46	16	34	5
61		1.93%-3.99%	B+	B1	3	1	69	2.40	16	41	1	6	1	69	2.40	14	37	2
64		4.00%-7.27%	B	B2	36	2	62	5.59	32	95	35	43	12	47	5.59	40	133	57
67		7.28%-12.11%	B-	B3	-	-	-	-	-	-	-	1	-	-	9.10	61	250	2
					573	183	27	1.04	12	20	115	804	475	54	1.00	11	20	158
Watch list																		
70		12.12%-20.67%	CCC+	Caa1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75		12.12%-20.67%	CCC to CCC-	Caa2 to Caa3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80		20.68%-99.99%	CC to C	Ca	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Default																		
90		100.00%	D	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-
					-	-	-	-	-	-	-	-	-	-	-	-	-	-
					28,571	6,471	78	0.04	9	3	812	32,667	6,856	77	0.05	8	3	893

For footnotes, see next page.



**Recommendation 15b:** For non-retail banking book credit portfolios, internal ratings grades and PD bands should be mapped against external credit ratings and the number of PD bands presented should match the number of notch-specific ratings used by credit rating agencies

**EAD net for Advanced IRBA credit exposures by PD grade with corporates (excluding derivatives and SFTs)**

in € m.  
(unless  
stated  
otherwise)

Internal rating	Dec 31, 2014						Dec 31, 2013					
	EAD net	Average PD in % <sup>1</sup>	Average LGD in %	RWA	Average RW in %	EL/EAD in %	EAD net	Average PD in %	Average LGD in %	RWA	Average RW in %	EL/EAD in %
iAAA	4,893	0.03	21.82	325	6.64	0.01	3,084	0.03	24.81	196	6.35	0.01
iAA+	5,700	0.03	20.58	326	5.72	0.01	5,448	0.03	19.67	286	5.25	0.01
iAA	11,377	0.03	16.32	534	4.69	0.00	7,555	0.03	18.29	420	5.56	0.01
iAA–	12,583	0.04	33.75	1,405	11.17	0.01	11,213	0.04	31.29	922	8.22	0.01
iA+	13,744	0.05	29.51	1,849	13.45	0.01	11,167	0.05	28.56	1,293	11.58	0.01
iA	20,367	0.07	31.06	3,363	16.51	0.02	14,927	0.07	31.28	2,349	15.73	0.02
iA–	20,146	0.09	35.14	4,756	23.61	0.03	17,690	0.09	35.62	3,705	20.95	0.03
iBBB+	19,495	0.14	34.90	5,734	29.41	0.05	18,121	0.14	31.90	4,512	24.90	0.04
iBBB	21,891	0.23	30.95	7,238	33.06	0.07	18,145	0.23	32.54	5,984	32.98	0.07
iBBB–	20,057	0.39	31.70	8,730	43.53	0.12	16,884	0.39	31.05	6,885	40.78	0.11
iBB+	13,892	0.64	29.84	6,752	48.60	0.18	9,958	0.64	32.21	5,436	54.60	0.20
iBB	13,993	1.08	26.46	7,647	54.65	0.27	11,819	1.07	28.10	6,835	57.83	0.30
iBB–	13,013	1.77	25.07	7,838	60.23	0.41	9,062	1.76	24.59	5,625	62.07	0.43
iB+	8,157	2.92	19.93	4,942	60.59	0.56	6,452	2.92	19.94	3,969	61.51	0.84
iB	8,096	4.80	20.92	6,215	76.76	1.00	5,167	4.79	21.45	3,948	76.42	1.02
iB–	4,339	7.93	17.21	3,210	73.99	1.35	3,935	7.94	15.90	2,664	67.71	1.26
iCCC+	1,382	12.99	20.65	1,420	102.72	2.69	1,140	13.00	14.58	809	70.94	1.89
iCCC	643	21.56	16.75	655	101.80	3.81	738	21.95	23.77	1,035	140.38	5.19
iCCC–	535	31.00	14.78	458	85.59	4.59	802	31.00	12.15	569	70.92	3.77
Total excluding default	<b>214,302</b>	<b>0.99</b>	<b>28.65</b>	<b>73,397</b>	<b>34.25</b>	<b>0.21</b>	173,309	1.06	28.87	57,442	33.14	0.23
Default	7,531	100.00	26.72	1,963	26.07	N/M	9,975	100.00	25.77	2,405	24.11	N/M
Total including default	<b>221,832</b>	<b>4.36</b>	<b>28.58</b>	<b>75,360</b>	<b>33.97</b>	<b>0.21</b>	183,284	6.44	28.70	59,847	32.65	0.23

N/M – Not meaningful

<sup>1</sup> Higher average PD in % than defined for the internal rating scales iAAA and iAA+ results for Institutions and Corporates exposure subject to a PD floor of 3 basis points.

**Recommendation 15b:** For non-retail banking book credit portfolios, internal ratings grades and PD bands should be mapped against external credit ratings and the number of PD bands presented should match the number of notch-specific ratings used by credit rating agencies

**Asset quality analysis of non-counterparty credit risk exposures**

Under the IRB approach, RBS utilises a master grading scale comprising 27 grades to express the default risk of its exposures. These grades are mapped to ten AQ bands for both internal and external reporting purposes. The relationship between the AQ bands and PDs is detailed in the following table.

Tables 23 to 29 analyse the asset quality of non-counterparty credit risk exposures using the IRB approach. For these exposures, the asset quality is disclosed according to RBS's internal AQ bands, as defined in Table 22. Table 32 shows the asset quality of non-counterparty credit risk exposures under the STD approach. For these exposures, asset quality is disclosed according to CQS, as defined in Table 31.

Table 22: IRB exposures, AQ band mapping to PD range and S&P ratings

Master grading scale	AQ band	PD range		S&P ratings
		Low	High	
1	AQ1	0%	0.006%	AAA
2		0.006%	0.012%	AA+
3		0.012%	0.017%	AA+
4		0.017%	0.024%	AA
5		0.024%	0.034%	AA
6	AQ2	0.034%	0.048%	AA-
7	AQ3	0.048%	0.067%	A+
8		0.067%	0.095%	A
9	AQ4	0.095%	0.135%	A-
10		0.135%	0.190%	BBB+
11		0.190%	0.269%	BBB
12		0.269%	0.381%	BBB-
13	AQ5	0.381%	0.538%	BB+
14		0.538%	0.761%	BB+
15		0.761%	1.076%	BB
16	AQ6	1.076%	1.522%	BB-
17		1.522%	2.153%	B+
18	AQ7	2.153%	3.044%	B+
19		3.044%	4.305%	B
20		4.305%	6.089%	B
21	AQ8	6.089%	8.611%	B-
22		8.611%	12.177%	B-
23		12.177%	17.222%	CCC+
24	AQ9	17.222%	24.355%	CCC+
25		24.355%	34.443%	CCC
26		34.443%	100%	CCC- to C
27	AQ10	100%	100%	D

## Recommendation 16: RWA flow statement for each risk type (1 of 2)

Credit risk RWAs are calculated using three approaches, as permitted by the PRA. For consolidated Group reporting, we have adopted the advanced internal ratings-based ('IRB') approach for the majority of our business, with a small proportion being on the foundation IRB approach and the remaining portfolios on the standardised approach.

### Standardised approach

For portfolios treated under the standardised approach, credit risk RWAs increased by US\$27.4bn, which reflected a reduction of US\$13.6bn due to foreign exchange movements.

Corporate growth in Asia, Europe, North America and Latin America, including term and trade-related lending, increased RWAs by US\$25.0bn, of which growth in our associate, BoCom, accounted for US\$6.4bn.

The move to a CRD IV basis increased RWAs on 1 January 2014 by US\$7.1bn. This movement mainly comprised material holdings and deferred tax asset amounts in aggregate below the capital threshold risk-weighted at 250% US\$28.3bn, partially offset by the reclassification of non-credit obligation assets to the IRB approach for reporting purposes US\$16.3bn and the netting of collective impairments against exposure at default under the standardised approach US\$3.5bn.

During the year, several individually immaterial portfolios moved from the IRB approach to the standardised approach, increasing standardised RWAs by US\$6.0bn and reducing IRB RWAs by US\$4.8bn.

The disposal of our operations in Jordan, Pakistan, Colombia and Kazakhstan reduced RWAs by US\$1.0bn.

In Asia, movement in the fair value of our material holdings, mainly in Industrial Bank, resulted in an increase in RWAs of US\$5.9bn. This was partially offset by the reclassification of Vietnam Technological and Commercial Joint Stock Bank from an associate to an investment, which reduced RWAs by US\$1.1bn.

### Internal ratings-based approach

Credit risk RWA movements by key driver for portfolios treated under the IRB approach are set out in the tables on page 242 and 243. For basis of preparation on Credit risk, Counterparty credit risk and Market risk RWA flow, see Annual Reports and Accounts Appendix to Capital on page 257. For portfolios treated under the IRB approach, credit risk RWAs increased by US\$63.6bn which reflected a reduction of US\$20.1bn due to foreign exchange movements driven by the strengthening of the US dollar against other currencies.

### Acquisitions and disposals

In GB&M, the sale of ABSs in North America reduced RWAs by US\$4.2bn. Additionally, GB&M continued to manage down the securitisation positions held through the sale of certain structured investment conduit positions, lowering RWAs by US\$3.0bn in Europe. The disposal of our businesses in Kazakhstan, Colombia, Pakistan and Jordan resulted in a reduction in RWAs of

US\$1.2bn in Europe, Latin America, the Middle East and North Africa.

### Book size

Book size movement reflected higher corporate lending, including term and trade-related lending, increasing RWAs by US\$40.3bn in Asia, Europe and North America for CMB and GB&M. Sovereign book growth in GB&M increased RWAs by US\$3.3bn, mainly in Asia, Latin America, the Middle East and North Africa.

In North America, in RBWM, continued run-off of the US CML retail mortgage portfolios resulted in a RWA reduction of US\$6.9bn.

### Book quality

RWAs reduced by US\$8.5bn in the US run-off portfolio, primarily due to continued run-off which resulted in an improvement in the book quality of the residual portfolio.

Book quality improvements in the Principal RBWM business of US\$5.9bn related to model recalibrations reflecting improving property prices in the US and favourable changes in portfolio mix reducing RWAs in Europe.

A ratings upgrade for securitisation portfolio resulted in a decrease in RWAs of US\$3.2bn.

This was partially offset by adverse movements in average customer credit quality in corporate, sovereign and institutional portfolios in Europe, North America, Middle East, North Africa, Asia and Latin America increased RWAs by US\$7.6bn.

### Model updates

In Europe, a loss given default ('LGD') floor applied to UK corporate portfolios resulted in an increase in RWAs of US\$19.0bn in CMB and GB&M.

This was partially offset by model updates in North America, primarily the implementation of new risk models for the US mortgage run-off portfolio, resulting in a decrease in RWAs of US\$6.2bn.

### Methodology and policy changes

Methodology and policy updates increased RWAs by US\$52.2bn.

### CRD IV impact

The rise related to the implementation of CRD IV rules at 1 January 2014, which increased RWAs by US\$48.2bn. The main CRD IV movements arose from securitisation positions that were previously deducted from capital and are now included as a part of credit risk RWAs and risk-weighted at 1250%, resulting in a US\$40.2bn increase in GB&M, primarily Europe. CRD IV also introduced an asset valuation correlation multiplier for financial counterparties, producing a US\$9.2bn increase in RWAs primarily in GB&M in Asia and Europe.

### Internal updates

A decrease in RWAs of US\$9.2bn arose from the set-off of negative AFS reserves against EAD for GB&M legacy credit portfolios.

In Asia, internal methodology changes associated with trade finance products accounted for a reduction in RWAs of US\$4.9bn.

Additionally, the transfer of individually immaterial portfolios moving to the standardised approach reduced IRB RWAs by US\$4.8bn in Principal RBWM and CMB in most regions and increased RWAs in the standardised approach by US\$6.0bn.

The reclassification of part of the mortgage portfolio led to a decrease in RWAs of US\$4.5bn in North America, of which US\$4.1bn was in the run-off portfolio.

### RWA movement by geographical regions by key driver – credit risk – IRB only (Unaudited)

	Europe US\$bn	Asia US\$bn	MENA US\$bn	North America US\$bn	Latin America US\$bn	Total US\$bn
RWAs at 1 January 2014 on Basel 2.5 basis	166.9	182.9	15.0	161.5	8.5	534.8
Foreign exchange movement	(11.6)	(4.0)	(0.2)	(2.4)	(1.9)	(20.1)
Acquisitions and disposals	(3.5)	–	(0.7)	(4.2)	(0.1)	(8.5)
Book size	11.4	19.5	1.8	2.9	2.0	37.6
Book quality	(1.5)	–	(0.8)	(10.3)	1.4	(11.2)
Model updates	19.4	0.3	–	(6.1)	–	13.6
New/updated models	19.4	0.3	–	(6.1)	–	13.6
Methodology and policy	35.0	14.4	0.5	0.6	1.7	52.2
Internal updates	(11.7)	(5.2)	(0.2)	(6.4)	(0.1)	(23.6)
External updates	2.2	8.5	(0.2)	0.7	0.1	11.3
CRD IV impact	37.0	5.7	0.4	4.9	0.2	48.2
NCOA moving from STD to IRB	7.5	5.4	0.5	1.4	1.5	16.3
Total RWA movement	49.2	30.2	0.6	(19.5)	3.1	63.6
RWAs at 31 December 2014 on CRD IV basis	216.1	213.1	15.6	142.0	11.6	598.4
RWAs at 1 January 2013 on Basel 2.5 basis	150.7	162.3	12.6	187.1	11.2	523.9
Foreign exchange movement	3.3	(4.5)	(0.5)	(1.9)	(1.0)	(4.6)
Acquisitions and disposals	(1.5)	–	–	(8.6)	(1.7)	(11.8)
Book size	2.1	21.2	1.4	(10.6)	0.2	14.3
Book quality	(1.5)	5.3	1.3	(10.8)	(0.3)	(6.0)
Model updates	11.6	–	0.1	(0.2)	–	11.5
Portfolios moving onto IRB approach	13.4	–	–	–	–	13.4
New/updated models	(1.8)	–	0.1	(0.2)	–	(1.9)
Methodology and policy	2.2	(1.4)	0.1	6.5	0.1	7.5
Internal updates	(0.2)	(7.8)	0.1	(0.6)	0.1	(8.4)
External updates	2.4	6.4	–	7.1	–	15.9
Total RWA movement	16.2	20.6	2.4	(25.6)	(2.7)	10.9
RWAs at 31 December 2013 on Basel 2.5 basis	166.9	182.9	15.0	161.5	8.5	534.8

For footnote, see page 256.

### External updates

Selected portfolios with a low default history, mainly in Europe, Asia and North America, were subjected to external updates with the introduction of LGD floors applied to corporates and institutions, increasing RWAs by US\$9.8bn. A further RWA floor was introduced on retail mortgages in Asia, resulting in an increase of US\$1.7bn.

### Non-credit obligation assets

The reclassification of non-credit obligation assets from the standardised to the IRB approach for reporting purposes increased RWAs under the latter approach by US\$16.3bn and reduced the STD RWAs by the same amount.

HSBC provides an RWA flow statement by region for IRB credit risk and commentary on key drivers for each of the main categories of RWA movement



## Recommendation 16: RWA flow statement for each risk type (2 of 2)

### RWA movement by global businesses by key driver – credit risk – IRB only

(Unaudited)

	Principal RBWM US\$bn	RBWM (US run-off) US\$bn	Total RBWM US\$bn	CMB US\$bn	GB&M US\$bn	GPB US\$bn	Other US\$bn	Total US\$bn
RWAs at 1 January 2014 on Basel 2.5 basis	58.4	72.6	131.0	189.5	198.5	10.6	5.2	534.8
Foreign exchange movement	(2.6)	–	(2.6)	(8.7)	(8.1)	(0.2)	(0.5)	(20.1)
Acquisitions and disposals	–	–	–	–	(8.2)	–	(0.3)	(8.5)
Book size	1.8	(6.9)	(5.1)	23.2	21.1	(0.5)	(1.1)	37.6
Book quality	(5.7)	(8.6)	(14.3)	2.8	(0.2)	(0.3)	0.8	(11.2)
Model updates	0.6	(6.2)	(5.6)	12.2	7.0	–	–	13.6
New/updated models	0.6	(6.2)	(5.6)	12.2	7.0	–	–	13.6
Methodology and policy	3.4	(3.6)	(0.2)	(1.6)	45.5	0.6	7.9	52.2
Internal updates	(3.0)	(3.9)	(6.9)	(5.0)	(11.2)	(0.5)	–	(23.6)
External updates	1.8	–	1.8	2.5	6.3	0.5	0.2	11.3
CRD IV impact	–	–	–	(0.7)	48.6	0.2	0.1	48.2
NCOA moving from STD to IRB	4.6	0.3	4.9	1.6	1.8	0.4	7.6	16.3
Total RWA movement	(2.5)	(25.3)	(27.8)	27.9	57.1	(0.4)	6.8	63.6
RWAs at 31 December 2014 on CRD IV basis	55.9	47.3	103.2	217.4	255.6	10.2	12.0	598.4

### Counterparty credit risk and market risk RWAs

(Unaudited)

#### Counterparty credit risk RWAs

(Unaudited)

	CRD IV basis 2014 US\$bn	Basel 2.5 basis 2013 US\$bn
Advanced approach	65.5	42.2
CCR IRB approach	62.0	42.2
CVA	3.5	–
Standardised approach	25.2	3.5
CCR standardised approach	4.4	3.5
CVA	18.0	–
CCP	2.8	–
RWAs at 31 December	90.7	45.7

### RWA movement by key driver – counterparty credit risk – advanced approach

(Unaudited)

	CRD IV basis 2014 US\$bn	Basel 2.5 basis 2013 US\$bn
RWAs at 1 January	42.2	45.7
Book size	1.6	(0.9)
Book quality	(0.6)	(2.7)
Model updates	0.1	–
Methodology and policy	22.2	0.1
Internal updates	(3.8)	0.1
External regulatory updates	9.0	–
CRD IV impact	17.0	–
Total RWA movement	23.3	(3.5)
RWAs at 31 December	65.5	42.2

### Market risk RWAs

(Unaudited)

	CRD IV basis 2014 US\$bn	Basel 2.5 basis 2013 US\$bn
Internal model based		
VaR	7.3	4.9
Stressed VaR	10.4	9.4
Incremental risk charge	20.1	23.1
Comprehensive risk measure	–	2.6
Other VaR and stressed VaR	6.8	12.2
Internal model based	44.6	52.2
Standardised approach	11.4	11.2
At 31 December	56.0	63.4

### RWA movement by key driver – market risk – internal model based

(Unaudited)

	CRD IV basis 2014 US\$bn	Basel 2.5 basis 2013 US\$bn
RWAs at 1 January	52.2	44.5
Acquisitions and disposals	(2.2)	–
Movement in risk levels	(4.2)	(14.5)
Model updates	–	17.6
Methodology and policy	(1.2)	4.6
Internal updates	(3.8)	4.6
External updates	2.6	–
Total RWA movement	(7.6)	7.7
RWAs at 31 December	44.6	52.2

### Counterparty credit risk RWAs

Counterparty credit risk RWAs increased by US\$45.0bn, in 2014. The RWA increase of US\$21.7bn for the standardised approach mainly relates to the implementation of CRD IV on 1 January 2014, which introduced CVA and CCP RWAs.

#### Advanced approach

##### Book size

The increase in book size was mainly driven by business movements and the impact of the strengthening of the US dollar against other currencies on the mark to market of derivatives contracts.

##### Model updates

In Europe, an LGD floor applied to UK corporate portfolios resulted in an increase in RWAs of US\$2.2bn. This was offset by a decrease in RWAs of US\$2.0bn due to model updates to the Internal Model Method ('IMM') used for selected portfolios in London.

##### Methodology and policy changes

The CVA and AVC multiplier for financial counterparties introduced by the implementation of CRD IV increased RWAs by US\$6.8bn and US\$10.2bn, respectively, on 1 January 2014.

Within external regulatory and policy updates, selected portfolios were subject to PRA LGD floors, which increased RWAs by US\$7.5bn, mainly in Europe and Asia. Additionally, guidance received in the fourth quarter of 2014 led to the application of a 'potential future

exposure' charge on sold options, contributing to a US\$1.5bn increase in RWAs.

Decreases in RWAs from internal methodology updates were mainly driven by additional CVA exemptions following internal due diligence and review alongside a more efficient allocation of collateral in Europe, which decreased RWAs by US\$3.8bn.

### Market risk RWAs

Total market risk RWAs decreased by US\$7.4bn in 2014.

#### Standardised approach

The market risk RWA movements for portfolios not within the scope of modelled approaches resulted in an increase of US\$0.2bn. The increase in RWAs of US\$2.6bn related to CRD IV treatment of trading book securitisation positions that were previously deducted from capital. This was offset by reductions in RWAs of US\$2.5bn for interest rate position risk, primarily in Latin America due to the introduction of the scenario matrix method for options and a general reduction in positions in Latin America and the US.

#### Internal model based

##### Acquisitions and disposals

The sale of our correlation trading portfolio, reduced comprehensive risk measure RWAs by US\$2.0bn. The disposal of our business in Kazakhstan resulted in a reduction of US\$0.2bn in RWAs.

##### Movement in risk levels

Movement in risk levels reflected a decrease mainly in VaR and Stressed VaR as a result of reduced FX and Equity trading positions.

##### Methodology and policy changes

The increase in RWAs from external updates related mainly to the introduction, for collateralised transactions, of the basis between the currency of trade and the currency of collateral into the VaR calculation and the removal of the diversification benefit from Risks not in VaR ('RNIV') calculations, driving an increase of US\$6.7bn.

This was partially offset by decreases in RWAs of US\$4.3bn from Internal updates, mainly due to refinements in the RNIV calculation for the Equities and Rates desks.

Further decreases in RWAs following regulatory approval for a change in the basis of consolidation for modelled market risk charges delivered a reduction in RWAs of US\$4.1bn.

### Operational risk RWAs

The reduction in operational risk RWAs of US\$1.4bn was due to the full amortisation of operational risk RWAs for the US CRS portfolio disposed of in May 2012, combined with a lower three-year average operating income.

## Recommendation 16: RWA flow statement for each risk type

### *Citigroup Risk-Weighted Assets Rollforward (Basel III Advanced Approaches with Full Implementation)*

<i>In millions of dollars</i>	Three Months Ended December 31, 2014 <sup>(1)</sup>	Twelve Months Ended December 31, 2014 <sup>(1)</sup>
<b>Total Risk-Weighted Assets, beginning of period</b>	<b>\$1,301,958</b>	<b>\$1,185,766</b>
<b>Changes in Credit Risk-Weighted Assets</b>		
Net change in retail exposures <sup>(2)</sup>	5,222	(29,820)
Net change in wholesale exposures <sup>(3)</sup>	(9,316)	31,698
Net change in repo-style transactions	(444)	4,483
Net change in securitization exposures	(166)	2,470
Net decrease in equity exposures	(770)	(1,681)
Net change in over-the-counter (OTC) derivatives <sup>(4)</sup>	(10,158)	9,148
Net increase in derivatives CVA	1,834	4,544
Net change in other <sup>(5)</sup>	(6,170)	12,638
Net change in supervisory 6% multiplier <sup>(6)</sup>	(1,308)	4,305
<b>Net change in Credit Risk-Weighted Assets</b>	<b>\$ (21,276)</b>	<b>\$ 37,785</b>
<b>Changes in Market Risk-Weighted Assets</b>		
Net change in risk levels <sup>(7)</sup>	\$ 650	\$ (17,803)
Net change due to model and methodology updates	(954)	6,130
<b>Net decrease in Market Risk-Weighted Assets</b>	<b>\$ (304)</b>	<b>\$ (11,673)</b>
<b>Net increase in Operational Risk-Weighted Assets <sup>(8)</sup></b>	<b>\$ 12,500</b>	<b>\$ 81,000</b>
<b>Total Risk-Weighted Assets, end of period</b>	<b>\$1,292,878</b>	<b>\$1,292,878</b>

(1) Calculated based on the Final Basel III Rules.

(2) Retail exposures decreased from year-end 2013, driven by reduction in loans and commitments, the sales of consumer businesses in Spain and Greece and the impact of FX translation, offset by enhancements to credit risk models.

(3) Wholesale exposures decreased from September 30, 2014, driven by model parameter updates and reductions in loan and commitments. The increase from year-end 2013 was driven by enhancements to credit risk models.

(4) OTC derivatives decreased from September 30, 2014, driven by model parameter updates. The increase from year-end 2013 was largely due to enhancements to credit risk models, partially offset by model parameter updates.

(5) Other includes cleared transactions, unsettled transactions, assets other than those reportable in specific exposure categories and non-material portfolios of exposures.

(6) Supervisory 6% multiplier does not apply to derivatives CVA.

(7) Market risk-weighted assets risk levels decreased from year-end 2013 driven by movement in securitization positions from trading book to banking book, as well as reductions in inventory positions.

(8) During the first quarter of 2014, Citi increased operational risk-weighted assets by approximately \$56 billion in conjunction with the granting of permission by the Federal Reserve Board to exit the parallel run period and commence applying the Basel III Advanced Approaches framework, effective with the second quarter of 2014. Citi's operational risk-weighted assets were further increased by \$12.5 billion during each of the third and fourth quarters of 2014, reflecting an evaluation of ongoing events in the banking industry.

*Citigroup provides RWA flow statements by risk type under both the Basel III Advanced Transitional and Fully Loaded Approaches with footnotes describing specific change. Users find it particularly helpful that Citi provides quarterly changes in RWAs in addition to annual changes*

## Recommendation 17: Put Basel Pillar 3 back-testing requirements into context, including assessment of model performance and validation against default and loss

### Disclosures of model outcomes

The table next, shows the PD, LGD, READ, RWA and RWA density per exposure class. This should be read in conjunction with the table in the following paragraph 'changes in risk parameters since last reporting date'.

#### Model approaches per exposure class for the AIRB portfolio

	Sovereigns	Institutions	Corporate	Residential mortgages	Other retail	Total	Total
						2014	2013
Average PD	0.08%	0.87%	5.40%	2.89%	8.38%	3.26%	3.62%
Average LGD	30.40%	27.77%	25.71%	18.82%	45.49%	25.17%	26.59%
READ	100,763	111,288	226,843	275,492	39,738	754,125	706,520
RWA	6,166	31,015	101,738	49,233	16,839	204,990	194,131
RWA density (RWA/READ)	6.12%	27.87%	44.85%	17.87%	42.38%	27.18%	27.48%

Includes the AIRB portfolio only and non-performing loans; excludes securitisations, equities and ONCOA.

The relatively low RWA density for Sovereigns and central banks is because of sovereign entities, which are rated between 1-4 and whose exposures receive a regulatory risk weight of 0%.

### Changes in risk parameters since last reporting date

The table below shows the changes in risk parameters since last reporting date in percentages. This should be read in conjunction with the table in the paragraph 'Disclosure of model outcomes', above.

#### Changes in AIRB risk parameters 2014 compared to 2013 in %

	Sovereigns	Institutions	Corporate	Residential mortgages	Other retail	Total	Total
						2014	2013
Average PD	-33%	-20%	-21%	9%	3%	-10%	10%
Average LGD	-31%	-1%	2%	-1%	-4%	-5%	22%
READ	14%	13%	10%	-1%	13%	7%	-6%
RWA	-9%	65%	1%	-4%	1%	6%	12%
RWA density	-20%	46%	-8%	-3%	-10%	-1%	19%

Includes the AIRB portfolio only; excludes securitisations, equities and ONCOA.

Over the course of 2014, average PD and average LGD decreased with 10% and 5% respectively.

The PD decrease observed in the Sovereigns, Institutions and Corporates exposure classes and was mainly caused by the redevelopment of the Masterscale. Furthermore, a refinement was made to the classification of German government guaranteed entities to better reflect their risk weight, which caused a shift of several entities from Institutions to Sovereigns. This improved the average Sovereign PD. Additionally, the sale and write-offs of large defaulted real estate clients resulted in an average PD decrease for Corporates. The PD increase in Residential Mortgages is explained by a shift of forborne assets from performing to non-performing and the 1-year probation period put in place as a result of the implementation of the updated forbearance policy in 2014.

The average LGD decrease was driven by Sovereigns and was the result of a redevelopment of the Sovereign LGD model. The impact of the introduction of CRR/CRD IV was mainly seen in the RWA increase for exposure class Institutions.

The CRR/CRD IV implementation impacted READ and RWA density. This is visible in Institutions, where an opposite movement is seen for RWA density, compared with PD and LGD. The addition of a factor in the risk weight calculation for qualified CCPs for Default Fund Contribution increased RWA density significantly.

### Disclosure of estimated and actual loss parameters

ING has dedicated AIRB credit risk models per business unit, segment and country. An independent Model Validation department periodically reviews all AIRB models for compliance including back testing when possible. If a model is considered not to be robust or the back-testing indicates insufficient performance, then the model is either re-calibrated or re-developed. All model recommendations from Model Validation department are tracked via iRisk, the same internal database that management uses to track issues detected by the Internal Audit department, incidents and non-financial risk issues. All significant model changes are submitted to the Home Regulator (DNB) and implemented after regulatory approval. On average, 91% of the AIRB credit risk models in the validation cycle have had 'No to Remote' (51%) and 'Minor' (40%) model deficiencies.

The table below provides a back-testing of the PD models per exposure class. In order to better quantify the back-testing, ING has analysed the 31 December 2014 portfolio. The average PD of 31 December 2013 per portfolio is split per exposure class. The 31 December 2013 portfolio is followed through 2014 to determine the observed default rate. The models are based on long series of historical data. In the back-test the model based PD values are compared against the defaults observed in 2014. This back-test is only representative of the year end 2013 portfolio and can be influenced by small sample sizes or incidents. Nonetheless, the back-test gives a comparison of the predicted PD versus the observed default rate. In the table, the default rate is based on the weighted average READ of the defaulted portfolio whereas the models are developed on an obligor basis.

#### Average estimated PD under the Advanced AIRB approach versus the actual default rate per exposure class

	Sovereigns	Institutions	Corporate	Residential mortgages	Other retail	Total
						2014
Average PD 2013*	0.09%	0.30%	2.25%	1.19%	3.13%	1.32%
Observed Default Rate 2014	0.00%	0.00%	1.72%	1.35%	3.07%	1.17%

Includes the AIRB portfolio only; excludes securitisations, equities and ONCOA.

\* Average PD 2013 includes performing loans only.

The table below gives insight in the Expected Loss rate and the Observed Loss rate per exposure class. The expected loss as of 31 December 2013 for the performing portfolio is split per exposure class. The 31 December 2013 portfolio is followed through 2014 to determine the defaulted exposures. The models are based on long series of historical data. In the comparison, the expected loss rate is calculated by dividing the expected loss of the performing portfolio as of 31 December 2013 by the READ of the performing portfolio of the same period. The Observed Loss rate is a result of multiplying the observed defaulted exposures by its LGD. This back-test is only representative of the year end 2013 portfolio and can be influenced by small sample sizes or incidents. Nonetheless, the back-test gives a comparison of the Expected Loss rate PD versus the observed Loss rate.

#### Expected loss rate under the Advanced IRB approach versus the observed loss rate per exposure class

	Sovereigns	Institutions	Corporate	Residential mortgages	Other retail	Total
						2014
Expected loss rate 2013*	0.0248%	0.0680%	0.5651%	0.2267%	1.2681%	0.3247%
Observed Loss Rate 2014	0.0000%	0.0011%	0.4650%	0.2622%	1.1537%	0.2922%

Includes the AIRB portfolio only; excludes securitisations, equities and ONCOA.

\* Expected loss rate 2013 includes performing loans only.

Both of the back-tests show that the expectations are quite in line with the observed default rate and the observed loss rate. For the Residential mortgages portfolio, the default rates and the loss rates exceed the predicted values as a result of shift of forborne assets from performing to non-performing, and the 1-year probation period put in place as a result of the implementation of the updated forbearance policy in 2014.



## Recommendation 17: Put Basel Pillar 3 back-testing requirements into context, including assessment of model performance and validation against default and loss

### Credit risks measurement of retail clients

#### PROBABILITY OF DEFAULT MODELS

The modelling of the probability of default of retail client counterparties is carried out specifically by each of the Group's business line recording its assets using the IREBA method. The models incorporate data on the payment behaviour of counterparties. They are segmented by type of client and distinguish between retail clients, professional clients, very small businesses and real estate investment companies (SCI, Sociétés Civiles Immobilières).

The counterparties of each segment are classified automatically using statistical models in homogenous risk pools, each of which is assigned probabilities of default.

Once counterparties are classified in statistically distinct homogenous risk pools, the probability of default parameters are estimated by observing the average long-term default rates for each product. These estimates are adjusted by a safety margin to estimate as best as possible a complete default cycle using a Through the Cycle (TTC) approach.

TABLE 19: RETAIL CLIENTS - MODELS AND PRINCIPAL CHARACTERISTICS OF MODELS

Modelled parameter	Portfolio/Category of Basel assets	Number of models	Model and methodology Number of years default/loss
<b>RETAIL CLIENTS</b>			
Probability of default (PD)	Residential real estate	12 models according to the entity, the type of guarantee (security, mortgage), the type of counterparty individual/professional / VSB, Real estate investment company (SCI)	Statistical-type model (regression), behavioral score. Defaults observed over a period from 5 to 8 years.
	Other retail credits	> 20 models according to the entity, the nature and the object of the loan: personal loan, consumer loan, automobile, ...	Statistical-type model (regression), behavioral score. Defaults observed over a period from 5 to 8 years.
	Renewable exposures	13 models according to the entity, the nature of the loan: overdraft on current account, revolving credit or consumer loan	Statistical-type model (regression), behavioral score. Defaults observed over a period from 5 to 8 years
	Professionals and very small businesses	11 models according to the entity, the nature of the loan: medium and long-term investment credits, short-term credit, automobile, the type of counterparty (individual or Real estate investment company (SCI))	Statistical-type model (regression or segmentation), behavioral score. Defaults observed over a period from 5 to 8 years
	Residential real estate	12 models according to the entity, the type of guarantee (security, mortgage), the type of counterparty individual/professional / VSB, Real estate investment company (SCI)	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years.
Loss given default (LGD)	Other retail credits	> 20 models according to the entity, the nature and the object of the loan: personal loan, consumer loan, automobile, ...	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years.
	Renewable exposures	13 models according to the entity, the nature of the loan: overdraft on current account, revolving credit or consumer loan	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years.
	Professionals and very small businesses	11 models according to the entity, the nature of the loan: medium and long-term investment credits, short-term credit, automobile, the type of counterparty (individual or Real estate investment company (SCI))	Statistical model of expected recoverable flows based on the current flows. Model adjusted by expert opinions if necessary. Losses and recoverable flows observed over a period of more than 10 years.
Credit Conversion Factor [CCF]	Renewable exposures	10 calibrations by entities for revolving products and personal overdrafts	Models calibrated by segments over a period of observation of defaults from 5 to 8 years.
Expected Loss [EL]	Exposures of the private banking	PD and LGD derived from losses observations	Model being restructured into a PD/LGD based approach

#### LGD MODELS

The models for estimating the loss given default (LGD) of retail clients are specifically applied to portfolio of business lines. LGD values are estimated by product, according to the existence or not of collateral.

Consistent with operational recovery processes, estimate methods are generally based on a two-step modelling process that initially estimates the proportion of defaulted loans in loan termination, followed by the loss incurred in case of loan termination.

The expected losses are estimated with internal historical recovery data for exposures that have defaulted over a long period. These estimates are adjusted with safety margins.

#### CCF MODEL

For its off-balance sheet exposures, Societe Generale applies its estimates for revolving loans and overdrafts on current account held by retail and professional clients.

#### BACKTESTS

The performance level of the whole retail client credit system is measured by regular backtests, which check the performance of PD, LGD and CCF models and compare estimated with actual figures.

Each year, the average long-term default rates observed by homogenous risk pools over a long period are compared with the probabilities of default. If necessary, the calibrations of probabilities of default are adjusted to preserve a satisfactory safety margin. The discrimination level of the models and changes in the portfolio's composition are also measured.

Regarding the LGD, the backtest consists in comparing the last estimation of the LGD obtained by computing the average level of payments observed and the value used to calculate regulatory capital.

The difference should in this case reflect a sufficient safety margin to take into account a potential economic slowdown, uncertainties about estimation and changes in the performance of recovery

processes. The appropriateness of this safety margin is assessed by a Committee of experts.

Likewise for the CCF, the level of conservatism of estimates is assessed annually by comparing estimated drawdowns and observed drawdowns on the undrawn part.

The results presented below cover all the portfolios of the Group entities with the exception of private banking, the models for which are currently being revised as well as the GEFA retail clients exposure. These figures principally aggregate French, Czech and Italian exposures. For all the Basel portfolios of retail clients, the actual default rate over a long period is lower than the estimated probability of default, which means that the rating system is conservatively adjusted.

TABLE 20: COMPARISON OF ESTIMATED PD VALUES AND ACTUAL VALUES – RETAIL CLIENTS

<b>31 DEC. 2014</b>				
Basel Portfolio	EAD (In EUR M)	RWA (In EUR M)	Estimated probability of default (%)	Actual default rate (long-term average) (%)
Real-estate Loans	76,595	10,664	1.3%	1.1%
of which guaranteed exposures	52,792	3,998	0.9%	0.8%
Renewable exposures	4,852	2,135	6.2%	5.4%
Other retail credits	21,726	6,712	3.9%	3.2%
VSB and professionals	11,160	3,943	5.3%	5.2%
<b>Total Group Retail Clients*</b>	<b>114,333</b>	<b>23,454</b>	<b>2.4%</b>	<b>2.1%</b>

TABLE 21: COMPARISON OF ESTIMATED LGD VALUES AND ACTUAL VALUES – RETAIL CLIENTS

<b>31 DEC. 2014</b>				
Basel Portfolio	EAD (In EUR M)	RWA (In EUR M)	Estimated LGD (%)	Actual LGD excluding safety margin (%)
Real-estate Loans	76,595	10,664	14%	11%
of which guaranteed exposures	52,792	3,998	11%	10%
Renewable exposures	4,852	2,135	44%	39%
Other retail credits	21,726	6,712	25%	22%
VSB and professionals	11,160	3,943	29%	25%
<b>Total Group Retail Clients</b>	<b>114,333</b>	<b>23,454</b>	<b>19%</b>	<b>16%</b>

*Societe Generale includes a similar set of tables for its Wholesale portfolios*

## Section 4

# Liquidity and Funding

## Recommendation 18a: Describe how the bank manages its potential liquidity needs

### Liquidity Risk Management

We manage liquidity risk according to the following principles:

**Global Core Liquid Assets.** We maintain substantial liquidity (GCLA, previously GCE) to meet a broad range of potential cash outflows and collateral needs in a stressed environment.

**Asset-Liability Management.** We assess anticipated holding periods for our assets and their expected liquidity in a stressed environment. We manage the maturities and diversity of our funding across markets, products and counterparties, and seek to maintain liabilities of appropriate tenor relative to our asset base.

**Contingency Funding Plan.** We maintain a contingency funding plan to provide a framework for analyzing and responding to a liquidity crisis situation or periods of market stress. This framework sets forth the plan of action to fund normal business activity in emergency and stress situations. These principles are discussed in more detail below.

#### Global Core Liquid Assets

Our most important liquidity policy is to pre-fund our estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. We believe that the securities held in our GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of resale agreements, and that this cash would allow us to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

The table below presents the fair value of the securities and certain overnight cash deposits that are included in our GCLA.

\$ in millions	Average for the Year Ended December	
	2014	2013
U.S. dollar-denominated	\$134,223	\$136,824
Non-U.S. dollar-denominated	45,410	45,826
<b>Total</b>	<b>\$179,633</b>	<b>\$182,650</b>

The U.S. dollar-denominated GCLA is composed of (i) unencumbered U.S. government and federal agency obligations (including highly liquid U.S. federal agency mortgage-backed obligations), all of which are eligible as collateral in Federal Reserve open market operations and (ii) certain overnight U.S. dollar cash deposits. The non-U.S. dollar-denominated GCLA is composed of only unencumbered German, French, Japanese and United Kingdom government obligations and certain overnight cash deposits in highly liquid currencies. We strictly limit our GCLA to this narrowly defined list of securities and cash because they are highly liquid, even in a difficult funding environment. We do not include other potential sources of excess liquidity in our GCLA, such as less liquid unencumbered securities or committed credit facilities.

The table below presents the fair value of our GCLA by asset class.

\$ in millions	Average for the Year Ended December	
	2014	2013
Overnight cash deposits	\$ 57,177	\$ 61,265
U.S. government obligations	62,838	76,019
U.S. federal agency obligations, including highly liquid U.S. federal agency mortgage- backed obligations	16,722	2,551
German, French, Japanese and United Kingdom government obligations	42,896	42,815
<b>Total</b>	<b>\$179,633</b>	<b>\$182,650</b>

The table below presents the GCLA of Group Inc. and our major broker-dealer and bank subsidiaries.

\$ in millions	Average for the Year Ended December	
	2014	2013
Group Inc.	\$ 37,699	\$ 29,752
Major broker-dealer subsidiaries	89,549	93,103
Major bank subsidiaries	52,385	59,795
<b>Total</b>	<b>\$179,633</b>	<b>\$182,650</b>

Our GCLA reflects the following principles:

- The first days or weeks of a liquidity crisis are the most critical to a company's survival;
- Focus must be maintained on all potential cash and collateral outflows, not just disruptions to financing flows. Our businesses are diverse, and our liquidity needs are determined by many factors, including market movements, collateral requirements and client commitments, all of which can change dramatically in a difficult funding environment;
- During a liquidity crisis, credit-sensitive funding, including unsecured debt and some types of secured financing agreements, may be unavailable, and the terms (e.g., interest rates, collateral provisions and tenor) or availability of other types of secured financing may change; and
- As a result of our policy to pre-fund liquidity that we estimate may be needed in a crisis, we hold more unencumbered securities and have larger debt balances than our businesses would otherwise require. We believe that our liquidity is stronger with greater balances of highly liquid unencumbered securities, even though it increases our total assets and our funding costs.

We believe that our GCLA provides us with a resilient source of funds that would be available in advance of potential cash and collateral outflows and gives us significant flexibility in managing through a difficult funding environment.

In order to determine the appropriate size of our GCLA, we use an internal liquidity model, referred to as the Modeled Liquidity Outflow, which captures and quantifies our liquidity risks. We also consider other factors including, but not limited to, an assessment of our potential intraday liquidity needs through an additional internal liquidity model, referred to as the Intraday Liquidity Model, and a qualitative assessment of the condition of the financial markets and the firm.

We distribute our GCLA across entities, asset types, and clearing agents to provide us with sufficient operating liquidity to ensure timely settlement in all major markets, even in a difficult funding environment.

We maintain our GCLA to enable us to meet current and potential liquidity requirements of our parent company, Group Inc., and its subsidiaries. Our Modeled Liquidity Outflow and Intraday Liquidity Model incorporate a consolidated requirement for Group Inc. as well as a standalone requirement for each of our major broker-dealer and bank subsidiaries. Liquidity held directly in each of these major subsidiaries is intended for use only by that subsidiary to meet its liquidity requirements and is assumed not to be available to Group Inc. unless (i) legally provided for and (ii) there are no additional regulatory, tax or other restrictions. In addition, the Modeled Liquidity Outflow and Intraday Liquidity Model also incorporate a broader assessment of standalone liquidity requirements for other subsidiaries and we hold a portion of our GCLA directly at Group Inc. to support such requirements. In addition to the GCLA, we maintain cash balances in several of our other entities, primarily for use in specific currencies, entities, or jurisdictions where we do not have immediate access to parent company liquidity.

In addition to our GCLA, we have a significant amount of other unencumbered cash and "Financial instruments owned, at fair value," including other government obligations, high-grade money market securities, corporate obligations, marginable equities, loans and cash deposits not included in our GCLA. The fair value of these assets averaged \$94.52 billion for 2014 and \$90.77 billion for 2013. We do not consider these assets liquid enough to be eligible for our GCLA.

**Modeled Liquidity Outflow.** Our Modeled Liquidity Outflow is based on conducting multiple scenarios that include combinations of market-wide and firm-specific stress. These scenarios are characterized by the following qualitative elements:

- Severely challenged market environments, including low consumer and corporate confidence, financial and political instability, adverse changes in market values, including potential declines in equity markets and widening of credit spreads; and
- A firm-specific crisis potentially triggered by material losses, reputational damage, litigation, executive departure, and/or a ratings downgrade.

The following are the critical modeling parameters of the Modeled Liquidity Outflow:

- Liquidity needs over a 30-day scenario;
- A two-notch downgrade of our long-term senior unsecured credit ratings;
- A combination of contractual outflows, such as upcoming maturities of unsecured debt, and contingent outflows (e.g., actions though not contractually required, we may deem necessary in a crisis). We assume that most contingent outflows will occur within the initial days and weeks of a crisis;
- No issuance of equity or unsecured debt;
- No support from government funding facilities. Although we have access to various central bank funding programs, we do not assume reliance on them as a source of funding in a liquidity crisis; and
- No asset liquidation, other than the GCLA.

The Modeled Liquidity Outflow is calculated and reported to senior management on a daily basis. We regularly refine our model to reflect changes in market or economic conditions and our business mix.

**Intraday Liquidity Model.** Our Intraday Liquidity Model measures our intraday liquidity needs using a scenario analysis characterized by the same qualitative elements as our Modeled Liquidity Outflow. The model assesses the risk of increased intraday liquidity requirements during a scenario where access to sources of intraday liquidity may become constrained.

The following are key modeling elements of the Intraday Liquidity Model:

- Liquidity needs over a one-day settlement period;
- Delays in receipt of counterparty cash payments;
- A reduction in the availability of intraday credit lines at our third-party clearing agents; and
- Higher settlement volumes due to an increase in activity.

We regularly refine our model to reflect changes in market conditions, business mix and operational processes.



## Recommendation 18a: Describe how the bank manages its potential liquidity needs

### Liquidity risk management framework

ING's liquidity risk management framework incorporates all relevant risk principles with regard to the daily and on-going management of funding and liquidity risk. The framework contains the following key elements:

- › **Liquidity risk appetite:** This is set by Management Board Bank in line with ING's complexity, business mix and liquidity risk profile and is reviewed on an annual basis by ALCO Bank and forms part of the input of business units in their medium term business plans. The defined risk appetite is allocated to the regional ALCO's.
- › **Funding:** The Bank Treasury function will set and update the funding strategy and funding planning, taking into account diversification in sources and tenor of funding.
- › **Intraday Liquidity Management:** Bank Treasury actively manages its short term liquidity positions and risks to meet payment and settlement obligations on a timely basis under both normal and stressed conditions.
- › **Collateral Position Management:** Bank Treasury actively manages the liquidity risk of its collateral positions to meet ING's collateral needs, and resources, under both normal and stressed conditions and in accordance with all internal and regulatory rules.
- › **Liquidity buffers:** ALCO Bank ensures that sufficient liquidity is maintained, in accordance with Bank- and regulatory rules and standards, including a buffer of unencumbered, high quality liquid assets, to withstand stress events, such as those involving the loss or impairment of both unsecured and secured funding sources.
- › **Liquidity risk transfer and pricing:** ALCO Bank sets and maintains a Funds Transfer Pricing (FTP) framework that optimises Bank-wide funding and liquidity risk management, whereby all business units must transfer their structural funding and liquidity risks to Bank Treasury whilst managing their own customer behaviour liquidity risk costs.
- › **Stress testing:** ALCO ensures that liquidity stress tests are planned, designed, conducted and reviewed, to identify sources of potential liquidity strain, to determine how these can and will be addressed and to ensure that current exposures remain within the established liquidity risk tolerance.
- › **Contingency Funding Plan:** ALCO ensures the design, regular test and maintenance of formal Contingency Funding planning, setting out the strategies for addressing liquidity shortfalls in emergency situations, outlining procedures to manage these situations, establishing clear lines of responsibility, and articulating clear implementation and escalation procedures.

### Implementation of the framework

#### Liquidity risk appetite

ING's liquidity risk appetite is expressed in a set of limits to manage the level of liquidity risk ING is willing to take in the pursuit of its strategic objectives. These limits are embedded in risk appetite statements (RAS) which reflect three pillars of addressing risk:

- › Structural sources of risk:
  - › Limits on liquidity mismatches
  - › Limits on exposures to short term professional money markets
  - › Defining target Loan-to-Deposit ratios
- › Levels of liquidity:
  - › Compliance with regulatory requirements
  - › Adequate levels related to defined stress scenarios
- › Funding diversification:
  - › Limiting or reducing dependency on single providers
  - › Concentration limits per funding sources

Based on the above, ING Bank has defined the following funding and liquidity risk management risk appetite statements:

- › The structural mismatch in expected liquidity tenors of ING Bank's assets and liabilities per significant currency is manageable. Also refer to Note 45 in which 'Assets by contractual maturity' are shown.
- › Home/host regulatory liquidity limits must be pro-actively complied with.
- › The time-to-survive in a funding stress situation must extend over defined period, also depending on the level of stress applied.
- › Funding of all longer-term assets and investments must be done by stable and longer-term liabilities.
- › Geographical dependencies with respect to intra-group funding are to be limited.
- › Diversification must be in place of funding profile, across funds providers, instrument types, geographic markets, tenors and currencies.

The risk appetite statements are also directly linked to liquidity stress testing.

#### Intraday liquidity management

The objective of managing intraday liquidity and its risks at ING is twofold: it is focused on preventing damage to the institution's own liquidity position, and, in light of its role in global financial markets, ING also takes into account the potential damage to other parties which can arise through chain effects in payment and securities transactions. Intraday liquidity management is managed through the risk appetite statement, by setting amongst others monitoring metrics and triggers on daily net negative liquidity positions and levels of payments outflows.

#### Collateral position management

The objective of the Collateral Management is to ascertain that ING Bank can at all times meet collateral requirements for ING's collateral needs.

#### Liquidity buffers

The liquidity buffer ING Bank holds can be seen as the short-term part of the counterbalancing capacity, i.e. the total of available sources and measures within ING to generate liquidity, and serves as a cushion for liquidity needs under normal and stressed conditions.

The size and composition of the Liquidity buffer depends on ING Bank's Risk Appetite (risk tolerance) and regulatory liquidity standards.

In the buffer, only assets that are included that are "unencumbered" and freely available for liquidity purposes.

Bank Treasury ensures central management of all liquidity buffers within ING Bank, both buffers at Bank level and buffers at local business unit level.

The liquidity buffer is held as an insurance against a range of stress scenarios, covering the additional need for liquidity that may arise over a defined short period of time under stress conditions. ING's minimum standards for liquidity buffers are described below:

- › When local regulatory rules require so, local liquidity buffers can be established. Although locally established, these buffers must be centrally functionally managed by the BT function.
- › The buffer must be adequate in relation to the contractual and expected expiry calendars and other expected or planned developments.
- › The size of the buffers is supported by estimates of liquidity needs performed under the Bank's or business entity's stress testing and aligned with the liquidity risk appetite.
- › The liquidity buffer is composed of cash and core assets that are eligible for the Liquidity Coverage Ratio (LCR) and/or highly marketable, which are not pledged to payment systems or clearing houses. For longer term buffer purposes, a broader set of liquid assets might be appropriate, subject to the Bank's or entity's ability to generate liquidity from them under stress, within the specified period of time.
- › The location and size of liquidity buffers reflects the Bank's or entity's structure (e.g. legal and geographical) and business activities.
- › The size and status of the buffers are reported to ALCO on a monthly basis.

As part of the liquidity buffer management, ING Bank also monitors the existing asset encumbrance. More information can be found in Pillar III.

### Liquidity risk transfer and pricing

Funds Transfer Pricing (FTP) is an internal measurement and allocation system that assigns a profit contribution to funds raised, lent, or invested. FTP is the pricing mechanism used within ING to transfer interest rate risk, basis risk and liquidity risk positions from commercial units to Bank Treasury. The FTP framework enables local ALCOs to set their local FTP levels and manage these risks for all internal transfers at local level. This means that these risks are transferred from the business to a separate Bank Treasury book where they can be monitored and managed more efficiently and effectively. The liquidity costs, benefits and risks are considered in the product pricing, design and offering and in every relevant Product Approval and Review Process (PARP) or deal approval and other related processes for commercial products by the business units.

### Stress testing

Stress testing allows a bank to examine the effect of exceptional but plausible future events on the liquidity position of the bank and provides insight into which entities, business lines or portfolios are vulnerable to which type of risks and/or in which type of scenarios. Liquidity stress testing is an important tool in identifying, assessing, measuring and controlling funding and liquidity risks, providing a complementary and forward-looking perspective to other liquidity and funding risk management tools.

In accordance with Dutch Central Bank guidelines, ING Bank's liquidity positions are stress tested on a monthly basis under a scenario that is a mix between a market event and an ING Bank specific event. The outcome of stress tests is evaluated and provides input to any follow-up and additional contingency measures required.

In addition to the bank-wide stress test framework as described in the ING Bank risk profile section, ING Bank produces several stress test reports with respect to the funding and liquidity position on a regular basis. Some of these stress tests are regulatory driven, and others are based on internal stress scenarios:

- › On a weekly basis ING reports an internal liquidity stress scenario. This report shows the development of the liquidity buffer during a 3-month-stress period, on a consolidated (bank) level and for the main entities, and split in Euro and US Dollar.
- › On a monthly basis ING Bank reports a number of stress scenarios, either based on regulatory requirements:
  - › 1-month DNB liquidity buffer, according to DNB regulation;
  - › Liquidity Coverage Ratio (LCR), based on CRR/CRD IV or on own defined stress scenarios related to time-to-survive periods.

On ad-hoc basis ING Bank has performed additional stress tests related to the funding and liquidity position. Overall, stress testing is an integral part of the liquidity and funding risk management framework and also serves as input for the contingency funding plan. From a currency perspective, stress tests are applied on Euro and US Dollar whilst other currencies are monitored. This aligns with the Basel3 and CRR approach with regard to major currencies.

### Contingency funding plan

In the contingency funding plan, contingency liquidity risk is addressed which specifically relates to the organisation and planning of liquidity management in time of stress. Within ING Bank, for contingency purposes, a specific crisis team – consisting of key Board Members, representatives from staff departments (e.g. Finance, Risk and Capital Management) and Bank Treasury – is responsible for liquidity management in times of crisis. Throughout the organisation adequate and up-to-date contingency funding plans are in place to enable senior management to act effectively and efficiently in times of crisis. These contingency plans are tested on a regular basis, both centrally and at business unit level.

## Recommendation 18b: Provide a quantitative analysis of the components of the liquidity reserve held to meet these needs, ideally by providing averages as well as period-end balances

TD's liquidity policy stipulates that the Bank must maintain sufficient "available liquidity" to cover "required liquidity" at all times throughout the Severe Combined Stress scenario. The liquid assets TD includes as available liquidity must be currently marketable, of sufficient credit quality and available-for-sale and/or pledging to be considered readily convertible into cash over the 90-day survival horizon. Liquid assets

that TD considers when determining the Bank's available liquidity are summarized in the following table, which does not include assets held within the Bank's insurance businesses, as these assets are dedicated to cover insurance liabilities and are not considered available to meet the Bank's general liquidity requirements.

TABLE 58 SUMMARY OF LIQUID ASSETS BY TYPE AND CURRENCY<sup>1,2</sup>

(billions of Canadian dollars, except as noted)

As at

	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets
October 31, 2014					
Cash and due from Banks	\$ 0.1	\$ –	\$ 0.1	–%	\$ –
Canadian government obligations	10.0	27.2	37.2	10	21.0
NHA MBS	39.4	1.0	40.4	11	2.1
Provincial government obligations	6.9	5.2	12.1	4	6.7
Corporate issuer obligations	8.3	3.4	11.7	3	0.2
Equities	22.7	3.8	26.5	7	6.2
Other marketable securities and/or loans	2.4	0.9	3.3	1	0.8
<b>Total Canadian dollar-denominated</b>	<b>89.8</b>	<b>41.5</b>	<b>131.3</b>	<b>36</b>	<b>37.0</b>
Cash and due from Banks	39.8	–	39.8	11	1.1
U.S. government obligations	–	24.8	24.8	7	23.6
U.S. federal agency obligations, including U.S. federal agency mortgage-backed obligations	31.2	5.6	36.8	10	13.1
Other sovereign obligations	23.3	28.7	52.0	14	10.5
Corporate issuer obligations	54.5	10.8	65.3	18	13.8
Equities	9.7	2.6	12.3	3	1.7
Other marketable securities and/or loans	4.2	0.1	4.3	1	–
<b>Total non-Canadian dollar-denominated</b>	<b>162.7</b>	<b>72.6</b>	<b>235.3</b>	<b>64</b>	<b>63.8</b>
<b>Total</b>	<b>\$ 252.5</b>	<b>\$ 114.1</b>	<b>\$ 366.6</b>	<b>100%</b>	<b>\$ 100.8</b>
October 31, 2013					
Canadian government obligations	\$ 16.7	\$ 27.3	\$ 44.0	13%	\$ 25.3
NHA MBS	42.6	0.6	43.2	13	7.9
Provincial government obligations	4.3	5.4	9.7	3	5.9
Corporate issuer obligations	6.5	4.0	10.5	3	0.6
Equities	20.1	3.0	23.1	7	4.8
Other marketable securities and/or loans	2.8	0.2	3.0	1	0.3
<b>Total Canadian dollar-denominated</b>	<b>93.0</b>	<b>40.5</b>	<b>133.5</b>	<b>40</b>	<b>44.8</b>
Cash and due from Banks	20.6	–	20.6	6	0.5
U.S. government obligations	1.7	28.6	30.3	9	28.6
U.S. federal agency obligations, including U.S. federal agency mortgage-backed obligations	26.0	4.9	30.9	9	7.7
Other sovereign obligations	27.4	23.8	51.2	16	3.1
Corporate issuer obligations	41.7	2.6	44.3	13	5.1
Equities	8.0	1.7	9.7	3	0.8
Other marketable securities and/or loans	6.0	5.5	11.5	4	5.8
<b>Total non-Canadian dollar-denominated</b>	<b>131.4</b>	<b>67.1</b>	<b>198.5</b>	<b>60</b>	<b>51.6</b>
<b>Total</b>	<b>\$ 224.4</b>	<b>\$ 107.6</b>	<b>\$ 332.0</b>	<b>100%</b>	<b>\$ 96.4</b>

<sup>1</sup> Positions stated include gross asset values pertaining to secured borrowing/lending and reverse-repurchase/repurchase businesses.

<sup>2</sup> Liquid assets include collateral received that can be rehypothecated or otherwise redeployed.

Liquid assets are held in The Toronto-Dominion Bank and multiple domestic and foreign subsidiaries and branches and are summarized in the following table.

TABLE 59 SUMMARY OF UNENCUMBERED LIQUID ASSETS BY BANK, SUBSIDIARIES, AND BRANCHES<sup>1</sup>

(billions of Canadian dollars)

As at

	October 31 2014	October 31 2013
The Toronto-Dominion Bank (Parent)	\$ 89.4	\$ 57.7
Bank subsidiaries	150.2	143.3
Foreign branches	26.2	34.6
<b>Total</b>	<b>\$ 265.8</b>	<b>\$ 235.6</b>

<sup>1</sup> Certain comparative amounts have been reclassified to conform with the presentation adopted in the current year.

The Bank's monthly average liquid assets for the years ended October 31 are summarized in the following table.

TABLE 60 SUMMARY OF AVERAGE LIQUID ASSETS BY TYPE AND CURRENCY<sup>1</sup>

(billions of Canadian dollars, except as noted)

Average for the year ended

	Bank-owned liquid assets	Securities received as collateral from securities financing and derivative transactions <sup>2</sup>	Total liquid assets	Encumbered liquid assets	Unencumbered liquid assets <sup>2</sup>
October 31, 2014					
Cash and due from Banks	\$ 0.3	\$ –	\$ 0.3	–%	\$ –
Canadian government obligations	10.2	30.0	40.2	11	23.3
NHA MBS	40.0	0.7	40.7	11	4.7
Provincial government obligations	5.4	5.5	10.9	3	6.0
Corporate issuer obligations	9.6	3.4	13.0	4	0.7
Equities	23.3	3.8	27.1	8	5.0
Other marketable securities and/or loans	2.1	1.0	3.1	1	0.9
<b>Total Canadian dollar-denominated</b>	<b>90.9</b>	<b>44.4</b>	<b>135.3</b>	<b>38</b>	<b>40.6</b>
Cash and due from Banks	33.8	–	33.8	9	0.8
U.S. government obligations	1.0	30.5	31.5	9	30.5
U.S. federal agency obligations, including U.S. federal agency mortgage-backed obligations	28.8	5.0	33.8	9	10.0
Other sovereign obligations	24.5	23.8	48.3	14	6.6
Corporate issuer obligations	49.5	4.7	54.2	15	8.5
Equities	8.8	2.8	11.6	3	1.8
Other marketable securities and/or loans	5.4	3.6	9.0	3	3.2
<b>Total non-Canadian dollar-denominated</b>	<b>151.8</b>	<b>70.4</b>	<b>222.2</b>	<b>62</b>	<b>61.4</b>
<b>Total</b>	<b>\$ 242.7</b>	<b>\$ 114.8</b>	<b>\$ 357.5</b>	<b>100%</b>	<b>\$ 102.0</b>
October 31, 2013					
Canadian government obligations	\$ 15.0	\$ 28.8	\$ 43.8	14%	\$ 23.8
NHA MBS	39.8	0.5	40.3	12	7.8
Provincial government obligations	4.0	5.6	9.6	3	5.4
Corporate issuer obligations	6.6	3.5	10.1	3	0.6
Equities	21.4	4.0	25.4	8	5.3
Other marketable securities and/or loans	1.6	0.2	1.8	1	0.3
<b>Total Canadian dollar-denominated</b>	<b>88.4</b>	<b>42.6</b>	<b>131.0</b>	<b>41</b>	<b>43.2</b>
Cash and due from Banks	19.0	–	19.0	6	0.1
U.S. government obligations	3.0	28.6	31.6	10	29.9
U.S. federal agency obligations, including U.S. federal agency mortgage-backed obligations	25.7	5.2	30.9	10	7.8
Other sovereign obligations	25.2	20.9	46.1	14	2.5
Corporate issuer obligations	37.0	2.4	39.4	12	4.9
Equities	5.3	1.8	7.1	2	1.1
Other marketable securities and/or loans	7.5	8.0	15.5	5	8.2
<b>Total non-Canadian dollar-denominated</b>	<b>122.7</b>	<b>66.9</b>	<b>189.6</b>	<b>59</b>	<b>54.5</b>
<b>Total</b>	<b>\$ 211.1</b>	<b>\$ 109.5</b>	<b>\$ 320.6</b>	<b>100%</b>	<b>\$ 97.7</b>

<sup>1</sup> Positions stated include gross asset values pertaining to secured borrowing/lending and reverse-repurchase/repurchase businesses.

<sup>2</sup> Liquid assets include collateral received that can be rehypothecated or otherwise redeployed.

Average liquid assets held in The Toronto-Dominion Bank and multiple domestic and foreign subsidiaries and branches are summarized in the following table.

TABLE 61 SUMMARY OF AVERAGE UNENCUMBERED LIQUID ASSETS BY BANK, SUBSIDIARIES, AND BRANCHES<sup>1</sup>

(billions of Canadian dollars)

Average for the year ended

	October 31 2014	October 31 2013
The Toronto-Dominion Bank (Parent)	\$ 71.1	\$ 60.0
Bank subsidiaries	149.5	131.4
Foreign branches	34.9	31.5
<b>Total</b>	<b>\$ 255.5</b>	<b>\$ 222.9</b>

<sup>1</sup> Certain comparative amounts have been reclassified to conform with the presentation adopted in the current year.



## Recommendation 18b: Provide a quantitative analysis of the components of the liquidity reserve held to meet these needs, ideally by providing averages as well as period-end balances

### 7.3 Liquid Assets

Liquid assets are assets that are readily available and can be easily monetised to meet liquidity shortfalls under times of stress. Such assets are internally defined under the governance of the relevant oversight committees, taking into account asset class, issuer type and credit rating, among other criteria, before they are reflected as available funds under the cashflow maturity mismatch analysis used to manage liquidity risk within the risk tolerance.

In addition to the characteristics of the liquid assets, the treasury function within DBS should be able to operationally monetise the pool of liquid assets to meet liquidity shortfalls under times of stress. A further requirement is that these liquid assets are unencumbered by being free of legal, regulatory, contractual or other restrictions.

In practice, liquid assets are maintained in key locations and currencies to ensure that operating entities in such locations possess a degree of self-sufficiency to support business needs as well as protect against contingencies. The main portion of DBS' liquid assets is centrally maintained in Singapore to support liquidity needs in smaller overseas subsidiaries and branches. Internally, DBS sets a requirement to maintain its pool of liquid assets above a minimum level as a source of contingent funds, taking into account projected stress shortfalls under its cashflow maturity mismatch analysis and other factors.

The table below shows DBS' encumbered and unencumbered liquid assets by instrument and counterparty against other assets in the same category under the balance sheet. Figures are based on the carrying amount as at the balance sheet date.

In SGD million	Liquid Assets			Average <sup>(c)</sup>	Others <sup>(d)</sup>	Total
	Encumbered	Unencumbered	Total [1]			
					[2]	[1] + [2]
<b>As at 31 Dec 2014</b>						
<b>Cash and balances with central banks<sup>(a)</sup></b>	7,666	7,347	15,013	13,633	4,504	19,517
<b>Due from banks<sup>(b)</sup></b>	-	12,563	12,563	11,478	29,700	42,263
<b>Government securities and treasury bills</b>	2,093	27,331	29,424	31,032	270	29,694
<b>Banks and corporate securities</b>	623	23,300	23,923	22,405	13,840	37,763
<b>Total</b>	10,382	70,541	80,923	78,548	48,314	129,237

(a) Unencumbered balances with central banks comprise holdings that are unrestricted and available overnight. The encumbered portion represents the mandatory balances held with central banks

(b) Liquid assets comprise nostro accounts and eligible certificates of deposits

(c) Total liquid assets reflected on an average basis over the four quarters in 2014

(d) 'Others' refer to assets that are not recognised as part of the available pool of liquid assets for liquidity management under stress due to (but not limited to) inadequate or non-rated credit quality, operational challenges in monetisation (for example, holdings in physical scrips), among other considerations

In addition to the above table, collateral received in reverse repo transactions amounting to SGD 4,001 million are recognised for liquidity management under stress.

As can be observed from the table, DBS' funding strategy in the normal course of its business does not rely on collateralised wholesale funding. Instead, liquid assets are maintained as a source of contingent funds to meet potential shortfalls that may arise under times of stress, as assessed under regulatory standards and our internal measures.

### 7.4 Regulatory Requirements

On 28 November 2014, the MAS published MAS' Notice to Banks No. 649 "Minimum Liquid Assets (MLA) and Liquidity Coverage Ratio (LCR)" (MAS Notice 649), which sets out the implementation of the Basel III LCR in Singapore. DBS, as a bank incorporated and headquartered in Singapore, is required to comply with the LCR standards under MAS Notice 649 from 1 January 2015. We are well above the minimum LCR requirements under MAS Notice 649.

Based on our internal assessment and participation in the Quantitative Impact Studies by the Basel Committee on Banking Supervision, DBS is well-positioned to meet the minimum standards of the Basel III Net Stable Funding Ratio (NSFR). The international timeline targeted for implementation is January 2018.



## Recommendation 18c: Provide an explanation of possible limitations on the use of the liquidity reserve maintained in any material subsidiary or currency

### Liquidity Reserves

Liquidity reserves comprise available cash and cash equivalents, highly liquid securities (includes government, agency and government guaranteed) as well as other unencumbered central bank eligible assets.

The volume of our liquidity reserves is a function of our expected monthly stress result, both at an aggregate level as well as at an individual currency level. To the extent we receive incremental short-term wholesale liabilities which attract a high stress roll-off, we will largely keep the proceeds of such liabilities in cash or highly liquid securities as a stress mitigant. Accordingly, the total volume of our liquidity reserves will fluctuate as a function of the level of short-term wholesale liabilities held, although this has no material impact on our overall liquidity position under stress. Our liquidity reserves include only assets that are freely transferable within the Group, or can be applied against local entity stress outflows. We hold the vast majority of our liquidity reserves centrally, at our parent and our foreign branches with further reserves held at key locations in which we are active. While we hold our reserves across major currencies, their size and composition are subject to regular senior management review. In addition to the reported liquidity reserves below, there was an amount of € 32 billion of liquidity reserves, in excess of local stress outflows, that remains in entities which are subject to transfer restrictions due to local connected lending requirements or similar regulatory restrictions. We therefore do not include such amounts into our freely transferable liquidity reserves.

#### Composition of our freely transferable liquidity reserves by parent company (including branches) and subsidiaries

in € bn.	Dec 31, 2014		Dec 31, 2013	
	Carrying Value	Liquidity Value	Carrying Value	Liquidity Value
Available cash and cash equivalents (held primarily at central banks)	65	65	78	77
Parent (incl. foreign branches)	54	54	68	67
Subsidiaries	11	11	10	10
Highly liquid securities (includes government, government guaranteed and agency securities)	103	96	95	89
Parent (incl. foreign branches)	81	75	71	67
Subsidiaries	23	20	24	22
Other unencumbered central bank eligible securities	16	11	23	17
Parent (incl. foreign branches)	14	10	17	13
Subsidiaries	2	1	6	4
<b>Total liquidity reserves</b>	<b>184</b>	<b>171</b>	<b>196</b>	<b>183</b>
Parent (incl. foreign branches)	149	139	156	147
Subsidiaries	35	32	41	36

As of December 31, 2014, our freely transferable liquidity reserves amounted to € 184 billion compared with € 196 billion as of December 31, 2013. The primary driver of the decrease of € 12 billion in 2014 was a reduction of € 19 billion in our unsecured wholesale funding during the year, together with reductions in other liability sources. Our average liquidity reserves during the year were € 190 billion compared with € 216 billion during 2013. In the table above the carrying value represents the market value of our liquidity reserves while the liquidity value reflects our assumption of the value that could be obtained, primarily through secured funding, taking into account the experience observed in secured funding markets at times of stress.

*Deutsche Bank does not quantify the limitations of the use of the liquidity reserve by subsidiary or currency, but instead quantifies the “freely transferable” liquidity reserve.*

*Also see National Bank of Canada’s implementation of 19a (summary of encumbered and unencumbered assets) on the following page for an alternative implementation of this recommendation*

## Recommendation 19: Summarise encumbered and unencumbered assets in a tabular format by balance sheet categories. Include collateral received that can be rehypothecated or otherwise redeployed

### EDTF | Asset encumbrance

CHF million	Total Group assets (IFRS)	Encumbered		Unencumbered		Assets which cannot be pledged as collateral	Percentage of cash and securities available to secure funding
		Assets pledged as collateral	Assets otherwise restricted to use to secure funding	Cash and securities available to secure funding	Other realizable assets		
Balance sheet as of 31 December 2014							
Cash and balances with central banks	104,073	0	0	97,617	6,453	4	36%
Due from banks	13,334	0	3,511		9,816	7	
Financial assets designated at fair value	4,951	0	458		1,693	2,800	
Loans	315,757	27,973	0	476	281,077	6,231	0%
of which: mortgage loans	164,722	27,973	0		136,750	0	
Lending	334,042	27,973	3,969	476	292,586	9,038	0%
Cash collateral on securities borrowed	24,063	0	0			24,063	
Reverse repurchase agreements	68,414	0	1,896			66,518	
Collateral trading	92,477	0	1,896			90,582	
Trading portfolio assets excluding financial assets for unit-linked investment contracts	120,746	61,304 <sup>1</sup>	8,158	41,737	9,566	0	16%
of which: government bills/bonds	13,587	6,096	2,628	4,160	702	0	2%
of which: corporate bonds, municipal bonds, including bonds issued by financial institutions	12,904	3,656	3,441	3,399	2,408	0	1%
of which: loans	3,244	0	0		3,244	0	
of which: investment fund units	13,393	3,865	1,990	7,230	308	0	3%
of which: asset-backed securities	2,091	200	0	1,499	393	0	1%
of which: mortgage-backed securities	1,133	116	0	721	295	0	0%
of which: equity instruments	69,763	47,487	98	19,685	2,511	0	7%
of which: precious metals and other physical commodities	5,764	0	0	5,764	0	0	2%
Financial assets for unit-linked investment contracts	17,410	0	17,410	0	0	0	0%
Positive replacement values	256,978	0	0			256,978	
Financial investments available-for-sale	57,159	2,868 <sup>2</sup>	1,209	39,244	13,838	0	15%
Cash collateral receivables on derivative instruments	30,979	0	6,135			24,843	
Investments in associates	927	0	0		927	0	
Property and equipment	6,854	0	0		6,854	0	
Goodwill and intangible assets	6,785	0	0			6,785	
Deferred tax assets	11,060	0	0			11,060	
Other assets	22,988	0	221			22,767	
Other	79,593	0	6,356		7,781	65,457	
Total assets 31.12.14	1,062,478	92,144	38,997	179,074	330,224	422,058	67%
Total assets 31.12.13	1,013,355	82,000	36,525	166,895	298,348	429,587	75%

CHF million	Fair value of assets received which can be sold or repledged	Encumbered		Unencumbered		
		Fair value of assets received that have been sold or repledged as collateral	Fair value of assets received otherwise restricted to use to secure funding	Fair value of assets available to secure funding	Fair value of other realizable assets	
Off-balance sheet as of 31 December 2014						
Fair value of assets received as collateral which can be sold or repledged	388,855	271,963	9,681	89,371	17,841	33%
Total off-balance sheet 31.12.14	388,855	271,963	9,681	89,371	17,841	33%
Total off-balance sheet 31.12.13	351,712	240,176	28,074	54,990	28,471	25%

<b>Total balance sheet and off-balance sheet 31.12.14</b>	<b>364,108</b>	<b>48,678</b>	<b>268,444</b>	<b>348,064</b>	<b>422,058</b>	<b>100%</b>
Total balance sheet and off-balance sheet 31.12.13	322,176	69,618	221,885	323,523	424,370	100%

<sup>1</sup> Includes CHF 56,018 million assets pledged as collateral which may be sold or repledged by counterparties. <sup>2</sup> Includes CHF 2,662 million assets pledged as collateral which may be sold or repledged by counterparties. ▲

## Recommendation 19: Summarise encumbered and unencumbered assets in a tabular format by balance sheet categories. Include collateral received that can be rehypothecated or otherwise redeployed

### Encumbered and unencumbered assets

in € bn. On-balance sheet	Dec 31, 2014					
	Carrying value				Fair value	
	Unencumbered assets				Unencumbered assets	
	Assets	Encumbered assets	Readily available	Other	Encumbered assets	Unencumbered assets
Debt securities	184.2	42.4	141.8	0	42.4	141.8
Equity instruments	69.5	49.7	19.8	0	49.7	19.8
Other assets:						
Cash and due from banks & interest earning deposits with Banks	82.0	6.9	75.1	0		
Securities borrowed or purchased under resale agreements <sup>1</sup>	43.6	0	0	43.6		
Financial assets at fair value through profit and loss <sup>2</sup>						
Trading assets	17.1	0	17.1	0		
Positive market value from derivative financial instruments	630.4	0	0	630.4		
Securities borrowed or purchased under resale agreements <sup>1</sup>	80.9	0	0	80.9		
Other financial assets at fair value through profit or loss	14.9	0	14.9	0		
Financial assets available for sale <sup>2</sup>	2.9	0	2.9	0		
Loans	398.0	44.9	19.4	333.7		
Other assets	166.5	62.9	0	103.6		
<b>Total</b>	<b>1,689.9</b>	<b>206.7</b>	<b>291.0</b>	<b>1,192.2</b>		

<sup>1</sup> Securities borrowed and securities purchased under resale agreements are all shown as other unencumbered. The use of the underlying collateral is separately captured in the off-balance sheet table below.

<sup>2</sup> Excludes Debt securities and Equity instruments (separately disclosed above).

in € bn. Off-balance sheet	Dec 31, 2014			
	Fair value of collateral received			
	Unencumbered assets			
	Assets	Encumbered assets	Readily available	Other
Collateral received:	253.1	201.9	49.8	1.4
Debt securities	175.4	127.0	48.4	0
Equity instruments	76.3	74.9	1.4	0
Other collateral received	1.4	0	0	1.4
Own debt securities issued other than covered bonds and asset backed securities	0	0	0	0

The above tables set out a breakdown of on- and off-balance sheet items, broken down between encumbered, readily available and other. Any securities borrowed or purchased under resale agreements are shown based on the fair value of collateral received.

The above tables of encumbered assets include assets that are not encumbered at an individual entity level, but which may be subject to restrictions in terms of their transferability within the group. Such restrictions may be due to local connected lending requirements or similar regulatory restrictions. In this situation it is not feasible to identify individual balance sheet items that cannot be transferred. "Own debt securities issued other than covered bonds and asset backed securities" refers to those own bond holdings that are not derecognized from the balance sheet by a non-IFRS institution. This is not applicable for Deutsche Bank AG.



## Recommendation 19: Summarise encumbered and unencumbered assets in a tabular format by balance sheet categories. Include collateral received that can be rehypothecated or otherwise redeployed

### Liquid Asset Portfolio

As at October 31  
(millions of Canadian dollars)

	2014					2013
	Bank-owned liquid assets <sup>(1)</sup>	Liquid assets received <sup>(2)</sup>	Total liquid assets	Encumbered liquid assets <sup>(3)</sup>	Unencumbered liquid assets	Unencumbered liquid assets
Cash and deposits with financial institutions	8,086	–	8,086	1,054	7,032	3,289
Securities						
Issued or guaranteed by Canada, U.S. Treasury, other U.S. agencies and other foreign governments	13,806	23,255	37,061	27,041	10,020	10,964
Issued or guaranteed by provinces	12,275	12,045	24,320	20,100	4,220	3,615
Issued or guaranteed by municipalities and school boards	1,088	160	1,248	92	1,156	682
Other debt securities	4,102	1,181	5,283	1,106	4,177	2,365
Equity securities	20,441	31,869	52,310	32,957	19,353	16,092
Loans						
Securities backed by insured residential mortgages	2,221	–	2,221	619	1,602	620
	62,019	68,510	130,529	82,969	47,560	
As at October 31, 2013	57,310	58,757	116,067	78,440		37,627

As at October 31  
(millions of Canadian dollars)

	2014	2013
Unencumbered liquid assets by entity		
National Bank (parent)	32,104	26,096
Domestic subsidiaries	7,882	8,475
Foreign subsidiaries and branches	7,574	3,056
	47,560	37,627

As at October 31  
(millions of Canadian dollars)

	2014	2013
Unencumbered liquid assets by currency		
Canadian dollar	29,091	24,274
U.S. dollar	17,719	12,840
Other currencies	750	513
	47,560	37,627

### Liquid Asset Portfolio – Average<sup>(4)</sup>

(millions of Canadian dollars)

	Year ended October 31, 2014				
	Bank-owned liquid assets <sup>(1)</sup>	Liquid assets received <sup>(2)</sup>	Total liquid assets	Encumbered liquid assets <sup>(3)</sup>	Unencumbered liquid assets
Cash and deposits with financial institutions	7,459	–	7,459	174	7,285
Securities					
Issued or guaranteed by Canada, U.S. Treasury, other U.S. agencies and other foreign governments	17,478	21,942	39,420	29,457	9,963
Issued or guaranteed by provinces	12,665	11,593	24,258	20,113	4,145
Issued or guaranteed by municipalities and school boards	826	175	1,001	118	883
Other debt securities	3,480	1,202	4,682	1,521	3,161
Equity securities	19,842	29,034	48,876	30,837	18,039
Loans					
Securities backed by insured residential mortgages	2,029	–	2,029	657	1,372
	63,779	63,946	127,725	82,877	44,848

(1) Bank-owned liquid assets include assets for which there are no legal or geographic restrictions.

(2) Securities received as collateral with respect to securities financing and derivative transactions and securities purchased under reverse repurchase agreements and securities borrowed.

(3) In the normal course of its funding activities, the Bank pledges assets as collateral in accordance with standard terms. Encumbered liquid assets include assets used to cover short sales, obligations related to securities sold under repurchase agreements and securities loaned, guarantees related to security-backed loans and borrowings, collateral related to derivative financial instrument transactions, asset-backed securities and untransferred but legally restricted amounts.

(4) The average is based on the sum of the end-of-period balances of the 12 months of the year divided by 12.

## Recommendation 20: Consolidated total assets, liabilities and off-balance sheet commitments by remaining contractual maturity

### Note 32: Contractual Maturities of Assets and Liabilities and Off-Balance Sheet Commitments

The tables below show the remaining contractual maturity of on-balance sheet assets and liabilities and off-balance sheet commitments. The contractual maturity of financial assets and liabilities is an input to, but is not necessarily consistent with, the expected maturity of assets and liabilities that is used in the management of liquidity and funding risk. We forecast asset and liability cash flows both under normal market conditions and under a number of stress scenarios to manage liquidity and funding risk. Stress scenarios include assumptions for loan

repayments, deposit withdrawals, and credit commitment and liquidity facility drawdowns by counterparty and product type. Stress scenarios also consider the time horizon over which liquid assets can be monetized and the related haircuts and potential collateral requirements that may result from both market volatility and credit rating downgrades, among other assumptions. For further details, see the Liquidity and Funding Risk section on pages 95 to 99 of our 2014 Management's Discussion and Analysis.

	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
<b>On-Balance Sheet Financial Instruments</b>										
<b>Assets</b>										
Cash and cash equivalents	27,625	-	-	-	-	-	-	-	761	28,386
Interest bearing deposits with banks	4,124	1,420	521	14	31	-	-	-	-	6,110
Securities										
Trading securities	542	1,159	584	1,344	1,274	5,255	9,722	17,409	47,733	85,022
Available-for-sale securities	1,014	345	553	1,138	714	8,750	21,047	11,699	1,706	46,966
Held-to-maturity securities	-	-	113	98	294	1,356	4,172	4,311	-	10,344
Other securities	-	10	3	2	-	-	45	19	908	987
<b>Total securities</b>	<b>1,556</b>	<b>1,514</b>	<b>1,253</b>	<b>2,582</b>	<b>2,282</b>	<b>15,361</b>	<b>34,986</b>	<b>33,438</b>	<b>50,347</b>	<b>143,319</b>
Securities borrowed or purchased under resale agreements	39,014	10,255	2,536	678	938	134	-	-	-	53,555
Loans										
Residential mortgages	1,284	1,528	3,763	4,725	4,470	20,497	55,659	9,087	-	101,013
Consumer instalment and other personal	386	458	1,097	1,193	1,257	6,491	20,847	8,981	23,433	64,143
Credit cards	-	-	-	-	-	-	-	-	7,972	7,972
Businesses and governments	7,701	9,520	3,438	4,201	11,019	10,315	37,537	6,294	30,741	120,766
Customers' liability under acceptances	8,871	1,920	77	1	9	-	-	-	-	10,878
Allowance for credit losses	-	-	-	-	-	-	-	-	(1,734)	(1,734)
<b>Total loans and acceptances, net of allowance</b>	<b>18,242</b>	<b>13,426</b>	<b>8,375</b>	<b>10,120</b>	<b>16,755</b>	<b>37,303</b>	<b>114,043</b>	<b>24,362</b>	<b>60,412</b>	<b>303,038</b>
Other Assets										
Derivative instruments	2,703	2,348	1,387	1,746	796	3,436	8,955	11,284	-	32,655
Premises and equipment	-	-	-	-	-	-	-	-	2,276	2,276
Goodwill	-	-	-	-	-	-	-	-	5,353	5,353
Intangible assets	-	-	-	-	-	-	-	-	2,052	2,052
Current tax assets	-	-	-	-	-	-	-	-	665	665
Deferred tax assets	-	-	-	-	-	-	-	-	3,019	3,019
Other	1,509	271	149	4	-	64	3,545	2,689	8,231	
<b>Total other assets</b>	<b>4,212</b>	<b>2,619</b>	<b>1,536</b>	<b>1,750</b>	<b>796</b>	<b>3,436</b>	<b>9,019</b>	<b>14,829</b>	<b>16,054</b>	<b>54,251</b>
<b>Total Assets</b>	<b>94,773</b>	<b>29,234</b>	<b>14,221</b>	<b>15,144</b>	<b>20,802</b>	<b>56,234</b>	<b>158,048</b>	<b>72,629</b>	<b>127,574</b>	<b>588,659</b>

	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
<b>Liabilities and Equity</b>										
<b>Deposits (1)</b>										
Banks	7,495	4,680	1,067	597	2	-	-	-	4,402	18,243
Businesses and governments	26,644	25,061	20,255	10,157	8,439	16,347	23,914	8,198	100,124	239,139
Individuals	2,039	3,290	5,472	4,296	5,288	6,386	16,454	1,528	90,953	135,706
<b>Total deposits</b>	<b>36,178</b>	<b>33,031</b>	<b>26,794</b>	<b>15,050</b>	<b>13,729</b>	<b>22,733</b>	<b>40,368</b>	<b>9,726</b>	<b>195,479</b>	<b>393,088</b>
<b>Other liabilities</b>										
Derivative instruments	1,545	2,321	1,325	2,095	1,399	4,565	9,633	10,774	-	33,657
Acceptances	8,871	1,920	77	1	9	-	-	-	-	10,878
Securities sold but not yet purchased	27,348	-	-	-	-	-	-	-	-	27,348
Securities lent or sold under repurchase agreements	36,757	2,624	149	95	70	-	-	-	-	39,695
Current tax liabilities	-	-	-	-	-	-	-	-	235	235
Deferred tax liabilities	-	-	-	-	-	-	-	-	178	178
Securitization and liabilities related to structured entity	3	429	1,560	341	1,135	3,976	10,066	4,955	-	22,465
Other	7,226	142	16	330	26	193	3,577	1,723	7,565	20,798
<b>Total other liabilities</b>	<b>81,750</b>	<b>7,436</b>	<b>3,127</b>	<b>2,862</b>	<b>2,639</b>	<b>8,734</b>	<b>23,276</b>	<b>17,452</b>	<b>7,978</b>	<b>155,254</b>
Subordinated debt	-	-	-	-	-	-	100	4,813	-	4,913
<b>Total Equity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>35,404</b>	<b>35,404</b>
<b>Total Liabilities and Equity</b>	<b>117,928</b>	<b>40,467</b>	<b>29,921</b>	<b>17,912</b>	<b>16,368</b>	<b>31,467</b>	<b>63,744</b>	<b>31,991</b>	<b>238,861</b>	<b>588,659</b>

(1) Deposits payable on demand and payable after notice have been included under no maturity.

	0 to 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 to 2 years	2 to 5 years	Over 5 years	No maturity	Total
<b>Off-Balance Sheet Commitments</b>										
Commitments to extend credit (1)	1,313	1,717	3,844	6,048	3,830	15,872	51,086	1,549	-	85,259
Operating leases	26	52	77	77	76	281	630	638	-	1,857
Financial guarantee contracts (1)	5,269	-	-	-	-	-	-	-	-	5,269
Purchase obligations	58	113	169	169	169	586	783	209	-	2,256

(1) A large majority of these commitments expire without being drawn upon. As a result, the total contractual amounts may not be representative of the funding likely to be required for these commitments.

## Recommendation 20: Consolidated total assets, liabilities and off-balance sheet commitments by remaining contractual maturity

### Contractual maturities of financial assets, financial liabilities and off-balance sheet items

The following tables provide remaining contractual maturity profiles of all our assets, liabilities, and off-balance sheet items at their carrying value (i.e. amortized cost or fair value) at the balance sheet date and have been enhanced in response to EDTF recommendations. Off-balance sheet items are allocated based on the expiry date of the contract.

Details of contractual maturities and commitments to extend funds are a source of information for the management of liquidity risk. Among other purposes, these details form a basis for modeling a behavioural balance sheet with effective maturities to calculate liquidity risk measures. For further details, refer to the Risk measurement section.

Contractual maturities of financial assets, financial liabilities and off-balance sheet items

Table 62

	As at October 31, 2014										
	Less than 1 month	1 to 3 months	3 to 6 months	6 to 9 months	9 to 12 months	1 year to 2 years	2 years to 5 years	5 years and greater	With no specific maturity	Total	
(Millions of Canadian dollars)											
<b>Assets</b>											
Cash and deposits with banks	\$ 22,871	\$ 218	\$ –	\$ –	\$ –	\$ –	\$ –	\$ –	\$ 2,731	\$ 25,820	
Securities											
Trading (1)	94,025	13	65	55	48	229	558	5,236	51,151	151,380	
Available-for-sale	4,450	3,739	2,528	433	1,113	3,417	18,307	11,959	1,822	47,768	
Assets purchased under reverse repurchase agreements and securities borrowed	54,860	24,728	28,241	8,261	10,361	2,142	–	–	6,987	135,580	
Loans (net of allowance for loan losses)	19,260	10,776	7,490	14,961	16,081	73,788	176,063	29,787	87,023	435,229	
Other											
Customers' liability under acceptances	6,218	2,013	399	433	2,393	–	6	–	–	11,462	
Derivatives	4,145	7,275	3,483	2,673	1,909	8,507	21,331	38,071	8	87,402	
Other financial assets	18,729	672	585	169	106	245	281	828	828	22,443	
Total financial assets	\$ 224,558	\$ 49,434	\$ 42,791	\$ 26,985	\$ 32,011	\$ 88,328	\$ 216,546	\$ 85,881	\$ 150,550	\$ 917,084	
Other non-financial assets	1,847	779	679	409	52	589	1,637	2,302	15,172	23,466	
<b>Total assets</b>	<b>\$ 226,405</b>	<b>\$ 50,213</b>	<b>\$ 43,470</b>	<b>\$ 27,394</b>	<b>\$ 32,063</b>	<b>\$ 88,917</b>	<b>\$ 218,183</b>	<b>\$ 88,183</b>	<b>\$ 165,722</b>	<b>\$ 940,550</b>	
<b>Liabilities and equity</b>											
Deposits (2)											
Unsecured borrowing	\$ 31,190	\$ 22,626	\$ 27,372	\$ 18,602	\$ 21,581	\$ 39,693	\$ 49,523	\$ 9,727	\$ 310,045	\$ 530,359	
Secured borrowing	561	2,715	2,950	5,331	4,786	9,753	21,099	10,135	–	57,330	
Covered bonds	748	–	2,558	–	–	4,908	14,556	3,641	–	26,411	
Other											
Acceptances	6,218	2,013	399	433	2,393	–	6	–	–	11,462	
Obligations related to securities sold short	50,345	–	–	–	–	–	–	–	–	50,345	
Obligations related to assets sold under repurchase agreements and securities loaned	58,208	1,252	1,306	1,051	574	–	–	–	1,940	64,331	
Derivatives	3,745	6,997	3,845	3,351	2,042	10,345	22,295	36,359	3	88,982	
Other financial liabilities	18,094	1,121	492	170	298	309	530	4,033	357	25,404	
Subordinated debentures	200	–	–	–	–	–	–	7,659	–	7,859	
Total financial liabilities	\$ 169,309	\$ 36,724	\$ 38,922	\$ 28,938	\$ 31,674	\$ 65,008	\$ 108,009	\$ 71,554	\$ 312,345	\$ 862,483	
Other non-financial liabilities	1,454	2,970	674	57	78	917	2,456	7,956	7,002	23,564	
Equity	–	–	–	–	–	–	–	–	54,503	54,503	
<b>Total liabilities and equity</b>	<b>\$ 170,763</b>	<b>\$ 39,694</b>	<b>\$ 39,596</b>	<b>\$ 28,995</b>	<b>\$ 31,752</b>	<b>\$ 65,925</b>	<b>\$ 110,465</b>	<b>\$ 79,510</b>	<b>\$ 373,850</b>	<b>\$ 940,550</b>	
<b>Off-balance sheet items</b>											
Financial guarantees	\$ 646	\$ 2,391	\$ 2,289	\$ 1,982	\$ 2,970	\$ 1,325	\$ 5,292	\$ 254	\$ 59	\$ 17,208	
Lease commitments	58	114	167	165	161	634	1,220	1,291	–	3,810	
Commitments to extend credit	1,660	6,352	7,329	6,806	8,513	19,768	108,250	11,539	2,299	172,516	
Other commitments	127	420	575	879	2,578	289	984	263	62,319	68,434	
<b>Total off-balance sheet items</b>	<b>\$ 2,491</b>	<b>\$ 9,277</b>	<b>\$ 10,360</b>	<b>\$ 9,832</b>	<b>\$ 14,222</b>	<b>\$ 22,016</b>	<b>\$ 115,746</b>	<b>\$ 13,347</b>	<b>\$ 64,677</b>	<b>\$ 261,968</b>	

(1) Trading debt securities classified as fair value through profit or loss have been included in the less than 1 month category as there is no expectation to hold these assets to their contractual maturity.

(2) A major portion of relationship-based deposits are repayable on demand or at short notice on a contractual basis while, in practice, these customer balances form a core base, as explained in the preceding Deposit profile section, for our operations and liquidity needs.

### Contractual maturities of financial liabilities and off-balance sheet items – undiscounted basis

The following tables provide remaining contractual maturity analysis of our financial liabilities and off-balance sheet items. The amounts disclosed in the following table are the contractual undiscounted cash flows of all financial liabilities (i.e. par value or amount payable upon maturity). The amounts do not reconcile directly with those in our consolidated balance sheets as the table only incorporates cash flows relating to payments on maturity of the instrument and do not recognize premiums, discounts or mark-to-market adjustments recognized in the instruments' carrying value as at the balance sheet date. Financial liabilities are based upon the earliest period in which they are required to be paid. For off-balance sheet items, the undiscounted cash flows potentially payable under financial guarantees and commitments to extend credit are classified on the basis of the earliest date they can be called.

Contractual maturities of financial liabilities and off-balance sheet items – undiscounted basis \*

Table 63

	As at October 31, 2014					
	On demand	Within 1 year	1 year to 2 years	2 years to 5 years	5 years and greater	Total
(Millions of Canadian dollars)						
<b>Financial liabilities</b>						
Deposits (1)	\$ 289,204	\$ 161,953	\$ 54,385	\$ 84,609	\$ 22,967	\$ 613,118
Other						
Acceptances	–	11,456	–	6	–	11,462
Obligations related to securities sold short	–	50,345	–	–	–	50,345
Obligations related to assets sold under repurchase agreements and securities loaned	1,941	62,391	–	–	–	64,332
Other liabilities	358	20,174	309	530	4,013	25,384
Subordinated debentures	–	200	–	–	7,632	7,832
	291,503	306,519	54,694	85,145	34,612	772,473
<b>Off-balance sheet items</b>						
Financial guarantees (2)	5,883	11,206	111	7	1	17,208
Operating leases	–	665	634	1,220	1,291	3,810
Commitments to extend credit (2)	137,696	34,819	1	–	–	172,516
	143,579	46,690	746	1,227	1,292	193,534
<b>Total financial liabilities and off-balance sheet items</b>	<b>\$ 435,082</b>	<b>\$ 353,209</b>	<b>\$ 55,440</b>	<b>\$ 86,372</b>	<b>\$ 35,904</b>	<b>\$ 966,007</b>



## Recommendation 21: Bank's funding strategy, including key sources and any funding concentrations, to enable effective insight into available funding sources, reliance on wholesale funding, any geographical or currency risks and changes in those sources over time

### Funding management

**Audited | EDTF |** Group Treasury regularly monitors our funding status, including concentration risks, to ensure we maintain a well-balanced and diversified liability structure. Our funding activities are planned by analyzing the overall liquidity and funding profile of our balance sheet, taking into account the amount of stable funding that would be needed to support ongoing business activities through periods of difficult market conditions. ▲

Our business activities generate asset and liability portfolios that are highly diversified with respect to market, product, tenor and currency. This reduces our exposure to individual funding sources and provides a broad range of investment opportunities, reducing liquidity risk.

Our wealth management businesses and Retail & Corporate provide significant, cost-efficient and reliable sources of funding. These include core deposits and pledging a portion of our portfolio of Swiss residential mortgages as collateral to generate long-term funding through Swiss Pfandbriefe and our own covered bond program. In addition, we have a number of short, medium and long-term funding programs under which we issue senior unsecured and structured notes, as well as short-term secured debt, generally for the highest-quality assets. These programs allow institutional and private investors in Europe, the US and Asia Pacific to customize their investments in UBS's debt. Collectively, these broad product offerings and funding sources, together with the global scope of our business activities, support our funding stability.

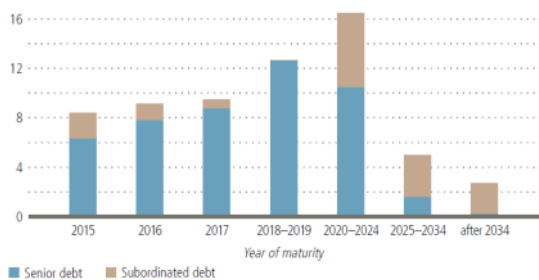
### Changes in sources of funding during the reporting period

**EDTF |** During 2014, the composition of our funding sources moved toward less reliance on wholesale funding. At the same time, our Retail & Corporate and wealth management businesses continued to attract new customer deposits. In 2014, total customer deposits increased to CHF 410 billion from CHF 391 billion, or 59.5% of our total funding sources. Our ratio of customer deposits to outstanding loan balances was 130%, compared with 136% as of 31 December 2013.

### EDTF | Long-term debt<sup>1</sup> – contractual maturities

CHF billion

As of 31.12.14



<sup>1</sup> Excluding structured debt. ▲

### EDTF | Asset funding

CHF billion, except where indicated

As of 31.12.14

Assets		Liabilities and equity	
117	Cash, balances with central banks and due from banks	Due to banks	10
57	Financial investments available-for-sale	Short-term debt issued <sup>1</sup>	27
92	Cash collateral on securities borrowed and reverse repurchase agreements	Long-term debt issued <sup>2</sup>	28
138	Trading portfolio assets	Cash collateral on securities lent and repurchase agreements	21
316	Loans	Demand deposits	187
87	Other (including net replacement values)	Time deposits	52
		Fiduciary deposits	15
		Retail savings/deposits	156
		Financial liabilities designated at fair value <sup>3</sup>	75
		Held at amortized cost	64
		Other	118
		Total equity	54

<sup>1</sup> Short-term debt issued is comprised of certificates of deposit, commercial paper, acceptances and promissory notes, and other money market paper. <sup>2</sup> Long-term debt issued also includes debt with a remaining time to maturity of less than one year. <sup>3</sup> Including structured over-the-counter debt instruments. ▲

### EDTF | Funding by product and currency

	In CHF billion											
	All currencies		All currencies <sup>1</sup>		CHF <sup>1</sup>		EUR <sup>1</sup>		USD <sup>1</sup>		Others <sup>1</sup>	
	31.12.14	31.12.13	31.12.14	31.12.13	31.12.14	31.12.13	31.12.14	31.12.13	31.12.14	31.12.13	31.12.14	31.12.13
Securities lending	9.2	9.5	1.3	1.4	0.1	0.3	0.2	0.3	0.9	0.6	0.2	0.2
Repurchase agreements	11.8	13.8	1.7	2.1	0.0	0.0	0.4	0.5	0.5	1.3	0.8	0.3
Due to banks	10.5	12.9	1.5	2.0	0.4	0.5	0.1	0.2	0.5	0.7	0.5	0.6
Short-term debt issued <sup>2</sup>	27.4	27.6	4.0	4.2	0.2	0.3	0.3	0.2	3.1	3.2	0.4	0.5
Retail savings/deposits	156.4	143.1	22.7	21.8	13.4	13.7	0.8	1.0	8.5	7.2	0.0	0.0
Demand deposits	186.7	179.0	27.1	27.3	7.9	9.0	5.3	5.5	10.0	9.0	3.9	3.9
Fiduciary deposits	14.8	21.5	2.1	3.3	0.1	0.1	0.5	0.6	1.2	2.2	0.4	0.4
Time deposits	52.3	47.3	7.6	7.2	1.3	0.4	0.2	0.3	3.8	4.0	2.3	2.5
Long-term debt issued <sup>3</sup>	139.1	123.9	20.2	18.9	2.6	3.0	5.5	5.7	10.2	8.0	1.9	2.2
Cash collateral payables on derivative instruments	42.4	44.5	6.1	6.8	0.3	0.3	2.6	3.3	2.4	2.5	0.8	0.8
Prime brokerage payables	38.6	32.5	5.6	5.0	0.0	0.0	0.7	0.7	4.0	3.3	0.9	0.8
<b>Total</b>	<b>689.2</b>	<b>655.5</b>	<b>100.0</b>	<b>100.0</b>	<b>26.2</b>	<b>27.4</b>	<b>16.7</b>	<b>18.2</b>	<b>45.1</b>	<b>42.0</b>	<b>12.0</b>	<b>12.3</b>

<sup>1</sup> As a percent of total funding sources. <sup>2</sup> Short-term debt issued is comprised of certificates of deposit, commercial paper, acceptances and promissory notes, and other money market paper. <sup>3</sup> Long-term debt issued also includes debt with a remaining time to maturity of less than one year. ▲

## Recommendation 21: Bank's funding strategy, including key sources and any funding concentrations, to enable effective insight into available funding sources, reliance on wholesale funding, any geographical or currency risks and changes in those sources over time

### FUNDING SOURCES AND USES

We fund our balance sheet primarily through core customer deposits, long-term debt, including structured notes, and shareholders' equity. We monitor the funding sources, including their concentrations, according to their currency, tenor, geography and maturity, and whether they are secured or unsecured. A substantial portion of our balance sheet is  $\odot$  match funded and requires no unsecured funding. Match funded balance sheet items consist of assets and liabilities with close to equal liquidity durations and values so that the liquidity and funding generated or required by the positions are substantially equivalent.

Cash and due from banks and  $\odot$  reverse repurchase agreements are highly liquid. A significant part of our assets, principally unencumbered trading assets that support the securities business, is comprised of securities inventories and collateralized receivables that fluctuate and are generally liquid. These liquid assets are available to settle short-term liabilities.

Loans, which comprise the largest component of our illiquid assets, are funded by our core customer deposits, with an excess coverage of 18% as of the end of 2014, compared to 22% as of the end of 2013, reflecting an increase in loans and in deposits. We fund other illiquid assets, including real estate, private equity and other long-term investments as well as the  $\odot$  haircut for the illiquid portion of securities, with long-term debt and equity, in which we try to maintain a substantial funding buffer.

Our core customer deposits totaled CHF 317 billion as of the end of 2014, an increase of 7% compared to CHF 297 billion as of the end of 2013 and an increase of 11% compared to CHF 285 billion as of the end of 2012, reflecting growth in the customer deposit base in Private Banking & Wealth Management in 2014 and 2013. Core customer deposits are from clients with whom we have a broad and longstanding relationship. Core customer deposits exclude deposits from banks and certificates of deposit. We place a priority on maintaining and growing customer deposits, as they have proved to be a stable and resilient source of funding even in difficult market conditions. Our core customer deposit funding is supplemented by the issuance of long-term debt.

► Refer to the chart "Balance sheet funding structure" and "Balance sheet and off-balance sheet" for further information.

### Balance sheet funding structure

as of December 31, 2014 (CHF billion)

Reverse repurchase agreements	55	Match funded	97	Repurchase agreements
Encumbered trading assets	78		36	Short positions
Funding-neutral assets <sup>1</sup>	117		117	Funding-neutral liabilities <sup>1</sup>

Cash & due from banks	80	118% coverage	27	Other short-term liabilities <sup>2</sup>
Unencumbered liquid assets <sup>3</sup>	174		78	Due to banks
			26	Short-term borrowings
Loans <sup>4</sup>	269		317	Deposits <sup>5</sup>
			time	67
			demand	145
			savings	78
Other illiquid assets	148	fiduciary	27	
		178	Long-term debt	
		45	Total equity	

Assets	921	921	Liabilities and Equity
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<sup>1</sup> Primarily includes brokerage receivables/payables, positive/negative replacement values and cash collateral.

<sup>2</sup> Primarily includes excess of funding neutral liabilities (brokerage payables) over corresponding assets.

<sup>3</sup> Primarily includes unencumbered trading assets, unencumbered investment securities and excess reverse repurchase agreements, after haircuts.

<sup>4</sup> Excludes loans with banks.

<sup>5</sup> Excludes due to banks and certificates of deposit.

### Funding management

Treasury is responsible for the development, execution and regular updating of our funding plan. The plan reflects projected business growth, development of the balance sheet, future funding needs and maturity profiles as well as the effects of changing market and regulatory conditions.

Interest expense on long-term debt, excluding structured notes, is monitored and managed relative to certain indices, such as the  $\odot$  London Interbank Offered Rate (LIBOR), that are relevant to the financial services industry. This approach to term funding best reflects the sensitivity of both our liabilities and our assets to changes in interest rates. Our average funding cost, which is allocated to the divisions, remained largely unchanged compared to the end of 2013.

We continually manage the impact of funding spreads through careful management of our liability maturity mix and opportunistic issuance of debt. The effect of funding spreads on interest expense depends on many factors, including the absolute level of the indices on which our funding is based.

We diversify our long-term funding sources by issuing structured notes, which are debt securities on which the return is linked to commodities, stocks, indices or currencies or other assets, as well as covered bonds. We generally hedge structured notes with positions in the underlying assets or  $\odot$  derivatives.

We also use other collateralized financings, including  $\odot$  repurchase agreements and securities lending agreements. The level of our repurchase agreements fluctuates, reflecting market opportunities, client needs for highly liquid collateral, such as US treasuries and agency securities, and the impact of balance sheet and  $\odot$  risk-weighted asset (RWA) limits. In addition, matched book trades, under which securities are purchased under agreements to resell and are simultaneously sold under agreements to repurchase with comparable maturities, earn spreads, are relatively risk free and are generally related to client activity.

Our primary source of liquidity is funding through consolidated entities. The funding through non-consolidated special purpose entities (SPEs) and asset securitization activity is immaterial.



**Recommendation 21:** Bank's funding strategy, including key sources and any funding concentrations, to enable effective insight into available funding sources, reliance on wholesale funding, any geographical or currency risks and changes in those sources over time.

### Sources of funding

(Audited)

Our primary sources of funding are customer current accounts and customer savings deposits payable on demand or at short notice. We issue wholesale securities (secured and unsecured) to supplement our customer deposits and change the currency mix, maturity profile or location of our liabilities.

The 'Funding sources and uses' table below, which provides a consolidated view of how our balance sheet is funded, should be read in light of the LFRF, which requires operating entities to manage liquidity and funding risk on a stand-alone basis.

The table analyses our consolidated balance sheet according to the assets that primarily arise from

### Funding sources and uses<sup>23</sup>

(Audited)

	2014 US\$m	2013 US\$m
<b>Sources</b>		
Customer accounts <sup>1</sup>	1,350,642	1,361,297
Deposits by banks <sup>1</sup>	77,426	86,507
Repurchase agreements – non-trading <sup>1</sup>	107,432	164,220
Debt securities issued	95,947	104,080
Subordinated liabilities	26,664	28,976
Financial liabilities designated at fair value	76,153	89,084
Liabilities under insurance contracts	73,861	74,181
Trading liabilities	190,572	207,025
– repos	3,798	17,421
– stock lending	12,032	12,218
– settlement accounts	17,454	17,428
– other trading liabilities	157,288	159,958
Total equity	199,979	190,459
<b>At 31 December</b>	<b>2,198,676</b>	<b>2,305,829</b>

For footnote, see page 202.

operating activities and the sources of funding primarily supporting these activities. The assets and liabilities that do not arise from operating activities are presented as a net balancing source or deployment of funds.

The level of customer accounts continued to exceed the level of loans and advances to customers. The positive funding gap was predominantly deployed in liquid assets – cash and balances with central banks and financial investments – as required by the LFRF.

Loans and other receivables due from banks continued to exceed deposits taken from banks. The Group remained a net unsecured lender to the banking sector.

For a summary of sources and utilisation of repos and stock lending, see the Appendix to Risk on page 219.

	2014 US\$m	2013 US\$m
<b>Uses</b>		
Loans and advances to customers <sup>1</sup>	974,660	992,089
Loans and advances to banks <sup>1</sup>	112,149	120,046
Repurchase agreements – non-trading <sup>1</sup>	161,713	179,690
Trading assets	304,193	303,192
– reverse repos	1,297	10,120
– stock borrowing	7,969	10,318
– settlement accounts	21,327	19,435
– other trading assets	273,600	263,319
Financial investments	415,467	425,925
Cash and balances with central banks	129,957	166,599
Net deployment in other balance sheet assets and liabilities	100,537	118,288
<b>At 31 December</b>	<b>2,198,676</b>	<b>2,305,829</b>

### Cross-border, intra-Group and cross-currency liquidity and funding risk

(Unaudited)

The stand-alone operating entity approach to liquidity and funding mandated by the LFRF restricts the exposure of our operating entities to the risks that can arise from extensive reliance on cross-border funding. Operating entities manage their funding sources locally, focusing predominantly on the local customer deposit base. The RBWM, CMB and GPB customer relationships that give rise to core deposits within an operating entity generally reflect a local customer relationship with that operating entity. Access to public debt markets is co-ordinated globally by the Global Head of Balance Sheet Management and the Group Treasurer with Group ALCO monitoring all planned public debt issuance on a monthly basis. As a general principle, operating entities are only permitted to issue in their local currency and are encouraged to focus on local private placements. The public issuance of debt instruments in foreign currency is tightly controlled and generally restricted to HSBC Holdings and HSBC Bank.

A central principle of our stand-alone approach to LFRF is that operating entities place no future reliance on other Group entities. However, operating entities may, at their discretion, utilise their respective committed facilities from other Group entities if necessary. In addition, intra-Group large exposure limits are applied by national regulators to individual legal entities locally, which restricts the unsecured exposures of legal entities to the rest of the Group to a percentage of the lender's regulatory capital.

Our LFRF also considers the ability of each entity to continue to access foreign exchange markets under stress when a surplus in one currency is used to meet a deficit in another currency, for example, by using the foreign currency swap markets. Where appropriate, operating entities are required to monitor stressed coverage ratios and ACF ratios for non-local currencies and set limits for them. Foreign currency swap markets in currency pairs settled through the Continuous Link Settlement Bank are considered to be extremely deep and liquid and it is assumed that capacity to access these markets is not exposed to idiosyncratic risks. The table below shows the ACF ratios by material currencies for the year ended 31 December 2014.

### Advances to core funding ratios by material currency<sup>25</sup>

(Unaudited)

	At 31 December 2014 %
HSBC UK <sup>26</sup>	
Local currency (sterling)	98
US dollars	100
Euros	99
Consolidated	97
The Hongkong and Shanghai Banking Corporation <sup>27</sup>	
Local currency (Hong Kong dollars)	81
US dollars	74
Consolidated	75
HSBC USA <sup>28</sup>	
Local currency (US dollars)	100
Consolidated	100
Total of HSBC's other principal entities <sup>29</sup>	
Local currency	97
US dollars	101
Consolidated	92

For footnotes, see page 202.

For all HSBC's operating entities, the only significant foreign currencies that exceed 5% of Group balance sheet liabilities are the Hong Kong dollar, euro, sterling and US dollar.

### Wholesale term debt maturity profile

(Unaudited)

The maturity profile of our wholesale term debt obligations is set out in the table on page 170, 'Wholesale funding principal cash flows payable by HSBC under financial liabilities by remaining contractual maturities'.

The balances in the table do not agree directly with those in the consolidated balance sheet as the table presents gross cash flows relating to principal payments and not the balance sheet carrying value, which includes debt securities and subordinated liabilities measured at fair value.



## Section 5

# Market risk

## Recommendation 22: Linkages between line items in the balance sheet and the income statement with positions included in the traded market risk disclosures

### Equity securities classified as available for sale

#### Fair value of equity securities (Audited)

	2014 US\$bn	2013 US\$bn
Private equity holdings <sup>37</sup>	2.0	2.7
Investment to facilitate ongoing business <sup>38</sup>	1.2	1.2
Other strategic investments	7.5	5.2
<b>At 31 December</b>	<b>10.7</b>	<b>9.1</b>

For footnotes, see page 202.

The fair value of equity securities classified as available for sale can fluctuate considerably. The table above sets out the maximum possible loss on shareholders' equity

#### Balances included and not included in trading VaR (Unaudited)

##### At 31 December 2014

<b>Assets</b>	
Cash and balances at central banks	
Trading assets	
Financial assets designated at fair value	
Derivatives	
Loans and advances to banks	
Loans and advances to customers	
Reverse repurchase agreements – non-trading	
Financial investments	
<b>Liabilities</b>	
Deposits by banks	
Customer accounts	
Repurchase agreements – non-trading	
Trading liabilities	
Financial liabilities designated at fair value	
Derivatives	
Debt securities in issue	

from available-for-sale equity securities. The increase in other strategic investments was largely due to the increase in the market value of the Industrial Bank investment offsetting the decrease in private equity holdings from the disposal of various direct and private equity fund investments.

### Market risk balance sheet linkages

(Unaudited)

The information below and on page 180 aims to facilitate an understanding of linkages between line items in the balance sheet and positions included in our market risk disclosures, in line with recommendations made by the Enhanced Disclosure Task Force.

Balance sheet US\$m	Balances included in trading VaR US\$m	Balances not included in trading VaR US\$m	Primary market risk sensitivities
129,957		129,957	B
304,193	276,419	27,774	A
29,037		29,037	A
345,008	333,880	11,128	A
112,149		112,149	B
974,660		974,660	B
161,713		161,713	C
415,467		415,467	A
77,426		77,426	B
1,350,642		1,350,642	B
107,432		107,432	C
190,572	170,576	19,996	A
76,153		76,153	A
340,669	334,199	6,470	A
95,947		95,947	C

The table represents account lines where there is some exposure to market risk according to the following asset classes:

- A Foreign exchange, interest rate, equity and credit spread.
- B Foreign exchange and interest rate.
- C Foreign exchange, interest rate and credit spread.

The table above splits the assets and liabilities into two categories:

- those that are included in the trading book and are measured by VaR; and
- those that are not in the trading book and/or are not measured by VaR.

The breakdown of financial instruments included and not included in trading VaR provides a linkage with market risk to the extent that it is reflected in our risk framework. However, it is important to highlight that

the table does not reflect how we manage market risk, since we do not discriminate between assets and liabilities in our VaR model.

The assets and liabilities included in trading VaR give rise to a large proportion of the income included in net trading income. As set out on page 49, HSBC's net trading income in 2014 was US\$6,760m (2013: US\$8,690m). Adjustments to trading income such as valuation adjustments do not feed the trading VaR model.

### Market risk linkages to the accounting balance sheet

#### Trading assets and liabilities

The Group's trading assets and liabilities are in almost all cases originated by GB&M. The assets and liabilities are classified as held for trading if they have been acquired or incurred principally for the purpose of selling or repurchasing in the near term, or form part of a portfolio of identified financial instruments that are managed together and for which there is evidence of a recent pattern of short-term profit-taking. These assets and liabilities are treated as traded risk for the purposes of market risk management, other than a limited number of exceptions, primarily in Global Banking where the short-term acquisition and disposal of the assets are linked to other non-trading related activities such as loan origination.

#### Financial assets designated at fair value

Financial assets designated at fair value within HSBC are predominantly held within the Insurance entities. The majority of these assets are linked to policyholder liabilities for either unit-linked or insurance and investment contracts with DPF. The risks of these assets largely offset the market risk on the liabilities under the policyholder contracts, and are risk managed on a non-trading basis.

#### Financial liabilities designated at fair value

Financial liabilities designated at fair value within HSBC are primarily fixed-rate securities issued by HSBC entities for funding purposes. An accounting mismatch would arise if the debt securities were accounted for at amortised cost because the derivatives which economically hedge market risks on the securities would be accounted for at fair value with changes recognised in the income statement. The market risks of these liabilities are treated as non-traded risk, the principal risks being interest rate and/or foreign exchange risks. We also incur liabilities to customers under investment contracts, where the liabilities on unit-linked contracts are based on the fair value of assets within the unit-linked funds. The exposures on these funds are treated as non-traded risk and the principal risks are those of the underlying assets in the funds.

#### Derivative assets and liabilities

We undertake derivative activity for three primary purposes; to create risk management solutions for clients, to manage the portfolio risks arising from client business and to manage and hedge our own risks. Most of our derivative exposures arise from sales and trading activities within GB&M and are treated as traded risk for market risk management purposes.

Within derivative assets and liabilities there are portfolios of derivatives which are not risk managed on a trading intent basis and are treated as non-traded risk for VaR measurement

purposes. These arise when the derivative was entered into in order to manage risk arising from non-traded exposures. They include non-qualifying hedging derivatives and derivatives qualifying for fair value and cash flow hedge accounting. The use of non-qualifying hedges whose primary risks relate to interest rate and foreign exchange exposure is described on page 181. Details of derivatives in fair value and cash flow hedge accounting relationships are given in Note 16 on the Financial Statements. Our primary risks in respect of these instruments relate to interest rate and foreign exchange risks.

#### Loans and advances to customers

The primary risk on assets within loans and advances to customers is the credit risk of the borrower. The risk of these assets is treated as non-trading risk for market risk management purposes.

#### Financial investments

Financial investments include assets held on an available-for-sale and held-to-maturity basis. An analysis of the Group's holdings of these securities by accounting classification and issuer type is provided in Note 18 on the Financial Statements and by business activity on page 60. The majority of these securities are mainly held within Balance Sheet Management ('BSM') in GB&M. The positions which are originated in order to manage structural interest rate and liquidity risk are treated as non-trading risk for the purposes of market risk management. Available-for-sale security holdings within insurance entities are treated as non-trading risk and are largely held to back non-linked insurance policyholder liabilities.

The other main holdings of available-for-sale assets are the ABSs within GB&M's legacy credit business, which are treated as non-trading risk for market risk management purposes, the principal risk being the credit risk of the obligor.

The Group's held-to-maturity securities are principally held within the Insurance business. Risks of held-to-maturity assets are treated as non-trading risk for market risk management purposes.

#### Repurchase (repo) and reverse repurchase (reverse repo) agreements non-trading

Reverse repo agreements, classified as assets, are a form of collateralised lending. HSBC lends cash for the term of the reverse repo in exchange for receiving collateral (normally in the form of bonds).

Repo agreements, classified as liabilities, are the opposite of reverse repo, allowing HSBC to obtain funding by providing collateral to the lender.

Both transaction types are treated as non-trading risk for market risk management and the primary risk is counterparty credit risk.

For information on the accounting policies applied to financial instruments at fair value, see Note 13 on the Financial Statements.

## Recommendation 22: Linkages between line items in the balance sheet and the income statement with positions included in the traded market risk disclosures

### Linkages between Balance Sheet Items and Market Risk Disclosures

The table below presents items reported in our Consolidated Balance Sheet that are subject to market risk, comprised of balances that are subject to traded risk and non-traded risk measurement techniques.

	As at October 31, 2014				As at October 31, 2013				
	Subject to market risk				Subject to market risk				
(Canadian \$ in millions)	Consolidated Balance Sheet	Traded risk (1)	Non-traded risk (2)	Not subject to market risk	Consolidated Balance Sheet	Traded risk (1)	Non-traded risk (2)	Not subject to market risk	Main risk factors for non-traded risk balances
<b>Assets Subject to Market Risk</b>									
Cash and cash equivalents	28,386	-	28,386	-	26,089	-	26,089	-	Interest rate
Interest bearing deposits with banks	6,110	930	5,180	-	6,518	1,511	5,007	-	Interest rate
Securities									
Trading	85,022	78,997	6,025	-	75,159	69,393	5,766	-	Interest rate, credit spread
Available-for-sale	46,966	-	46,966	-	53,710	-	53,710	-	Interest rate, credit spread
Held-to-maturity	10,344	-	10,344	-	6,032	-	6,032	-	Interest rate
Other	987	-	987	-	899	-	899	-	Equity
Securities borrowed or purchased under resale agreements	53,555	-	53,555	-	39,799	-	39,799	-	Interest rate
Loans and acceptances (net of allowance for credit losses)	303,038	-	303,038	-	279,294	-	279,294	-	Interest rate, foreign exchange
Derivative instruments	32,655	31,627	1,028	-	30,259	29,484	775	-	Interest rate, foreign exchange
Other assets	21,596	-	7,787	13,809	19,285	-	7,692	11,593	Interest rate
Total Assets	588,659	111,554	463,296	13,809	537,044	100,388	425,063	11,593	
<b>Liabilities Subject to Market Risk</b>									
Deposits	393,088	7,639	385,449	-	368,369	5,928	362,441	-	Interest rate, foreign exchange
Derivative instruments	33,657	32,310	1,347	-	31,974	31,184	790	-	Interest rate, foreign exchange
Acceptances	10,878	-	10,878	-	8,472	-	8,472	-	Interest rate
Securities sold but not yet purchased	27,348	27,348	-	-	22,446	22,446	-	-	Interest rate
Securities lent or sold under repurchase agreements	39,695	-	39,695	-	28,884	-	28,884	-	Interest rate
Other liabilities	43,676	-	43,263	413	41,724	-	41,179	545	Interest rate
Subordinated debt	4,913	-	4,913	-	3,996	-	3,996	-	Interest rate
Total Liabilities	553,255	67,297	485,545	413	505,865	59,558	445,762	545	

(1) Primarily comprised of BMO's balance sheet items that are subject to the trading and underwriting risk management framework and fair valued through profit or loss.

(2) Primarily comprised of BMO's balance sheet items that are subject to the structural balance sheet and insurance risk management framework, or are available-for-sale securities. Certain comparative figures have been reclassified to conform to the current year's presentation.



## Recommendation 23: Provide qualitative and quantitative breakdowns of significant trading and non-trading market risk factors that may be relevant to the bank's portfolio beyond interest rates, foreign exchange, commodity and equity measures

### EDTF | Market risk exposures arising from our primary business activities

CHF billion

Business activity	Balance sheet line item	Trading book / Banking book	Market risk type					Trading book market risk RWA category					
			Equities	Interest rates	Credit spreads	Foreign exchange	Commodities	Regulatory VaR	Stressed VaR	Risks-not-in-VaR	Incremental risk charge	Comprehensive risk measure	Total market risk RWA
<b>Wealth Management<sup>1</sup></b>								0.0	0.0				0.0
<b>Wealth Management Americas</b>								0.2	0.5	0.0	0.3		1.0
Client deposits	Due to customers	Banking book	○										
Securities backed lending and mortgages	Loans	Banking book	○										
Municipal securities and closed-end funds trading	Trading portfolio assets and liabilities	Trading book <sup>2</sup>	○	○				○	○		○		
<b>Retail &amp; Corporate<sup>1</sup></b>								0.0	0.0				0.0
<b>Global Asset Management</b>								0.0	0.0				0.0
<b>Investment Bank</b>								1.8	4.0	5.0	2.5	0.0	13.6
<b>Investor Client Services</b>													
Fixed income, equities, foreign exchange and commodities, securities and derivatives	Trading portfolio assets and liabilities and positive and negative replacement values	Trading book	●	●	●	●	○	●	●	●	●		
Structured notes	Financial liabilities designated at fair value												
<b>Corporate Client Solutions</b>													
Originate to distribute loans and CMBs origination <sup>1</sup>	Trading portfolio assets	Trading book	○	●								○	
Take and hold loans	Loans	Banking book	○										
Loans, structured loans, reverse repurchase agreements and securities borrowing	Financial assets designated at fair value	Banking book	○										
<b>Corporate Center – Core Functions<sup>1,4</sup></b>								(0.5)	(1.1)	0.1	(0.2)		(1.8)
Centralized liquidity and funding	Debt issued and due to banks	Banking book	●										
	Repurchase and reverse repurchase agreements	Trading book	○					○	○				
	Balances with central banks and Due from banks	Banking book	○										
Global and local liquidity reserves	Financial investments available-for-sale	Banking book	●										
	Trading portfolio assets	Trading book	○	○				○	○		●		
Mortgage and other loans	Loans	Banking book	●										
Client deposits	Due to customers	Banking book	●										
Hedging instruments and other derivatives	Positive and negative replacement values	Banking book	●										
<b>Corporate Center – Non-core and Legacy Portfolio</b>								0.5	0.8	0.9	0.4	0.1	3.6
Assets and derivatives considered to be non-core	Trading portfolio assets and liabilities and positive and negative replacement values	Trading book	●	●	●			○	○	○	○	○	
Structured notes	Financial liabilities designated at fair value												
Counterparty CVA management <sup>3</sup>	Positive and negative replacement values	Trading book	●	●	●								
Reclassified held for trading assets, and corporate and asset-based lending	Loans	Banking book	○										
<b>Total</b>								2.0	4.1	5.9	3.0	0.1	16.5

● Key contributor ○ Less significant contributor

### Other market risk exposures

#### Own credit

EDTF | We are exposed to changes in UBS's own credit which are reflected in the valuation of those financial liabilities designated at fair value, for which UBS's own credit risk would be considered by market participants. We also estimate debit valuation adjustments (DVA) to incorporate own credit in the valuation of derivatives. Changes in fair value due to changes in own credit are recognized in the income statement and therefore affect shareholders' equity and CET1 capital. ▲

→ Refer to "Note 24 Fair value measurement" in the "Financial information" section of this report for more information on own credit

#### Structural foreign exchange risk

EDTF | On consolidation, assets and liabilities held in foreign operations are translated into Swiss francs at the closing foreign exchange rate on the balance sheet date, and items of income and expense are translated into Swiss francs at the average rate for the period. The resulting foreign exchange differences are recognized in *Other comprehensive income* and therefore affect shareholders' equity and Basel III CET1 capital.

Group Treasury employs strategies to manage this foreign currency exposure, including matched funding of assets and liabilities and net investment hedging. ▲

→ Refer to the "Treasury management" section of this report for more information on our exposure to and management of structural foreign exchange risk

#### Equity investments

Audited | EDTF | Under IFRS, equity investments not in the trading book may be classified as *Financial investments available-for-sale*, *Financial assets designated at fair value* or *Investments in associates*.

We make direct investments in a variety of entities and buy equity holdings in both listed and unlisted companies for a variety of purposes. This includes investments such as exchange and clearing house memberships that are held to support our business activities. We may also make investments in funds that we manage, in order to fund or "seed" them at inception, or to demonstrate that our interests concur with those of investors. We also buy, and are sometimes required by agreement to buy, securities and units from funds that we have sold to clients.

The fair value of equity investments tends to be dominated by factors specific to the individual investments. Equity investments are generally intended to be held for the medium or long term and may be subject to lockup agreements. For these reasons, we generally do not control these exposures using the market risk measures applied to trading activities. Such equity investments are, however, subject to a different range of controls, including pre-approval of new investments by business management and Risk Control, portfolio and concentration limits, and regular monitoring and reporting to senior management. They are also included in our Group-wide statistical and stress testing metrics which flow into our risk appetite framework.

As of 31 December 2014, we held equity investments totaling CHF 1.6 billion, of which CHF 0.7 billion were classified as *Financial investments available-for-sale*, and CHF 0.9 billion as *Investments in associates*. This was broadly unchanged from the prior year. ▲▲

→ Refer to "Note 15 Financial investments available-for-sale" and "Note 30 Interests in other entities" in the "Financial information" section of this report for more information

#### Pension risk

EDTF | We maintain a number of defined benefit pension plans for past and current employees. The ability of each plan to meet the projected pension payments is maintained principally through investments. Pension risk arises because the fair value of these plan assets might decline, their investment returns might decrease or the estimated value of the defined benefit obligation might increase. If plan assets are insufficient to meet the projected pension payments, UBS may be required, or might choose, to make extra contributions to the pension plans.

Under IFRS, remeasurements of the defined benefit obligation and the fair values of the plan assets are recognized through *Other comprehensive income* and therefore affect shareholders' equity. An increase in the overall net defined benefit liability of a pension plan (where the defined benefit obligation exceeds the fair value of plan assets) will reduce our equity. Where the defined benefit obligation is less than the fair value of the plan assets, the pension plan is in a surplus position. Such surplus can only be recognized on the balance sheet to the extent that it does not exceed the estimated future economic benefit. Where the amount of surplus recognized has been capped, any reduction in the estimated future economic benefit will reduce equity. Changes in the surplus, due to changes in the defined benefit obligation or fair value of plan assets, will not affect equity until the surplus falls below any cap.

Remeasurements of the defined benefit obligations and plan assets similarly affect our Basel III CET1 capital on a fully applied basis, albeit pension surpluses are not recognized.

Investment policies and strategies are in place for our defined benefit pension plans which take account of the maturity profile of plan liabilities and ensure diversified portfolios of assets are maintained. These strategies are managed by responsible governance bodies in each jurisdiction according to local laws and regulations.

Pension risk is included in our Group-wide statistical and stress testing metrics which flow into our risk appetite framework. ▲

→ Refer to "Note 28 Pension and other post-employment benefit plans" in the "Financial information" section of this report for more information

#### UBS own share exposure

EDTF | We hold our own shares primarily to hedge employee share and option participation plans. A smaller number are held by the Investment Bank in connection with market-making and hedging activities. ▲

→ Refer to "Holding of UBS Group AG shares" in the "Capital management" section of this report for more information

#### Debt investments

Audited | EDTF | Debt investments classified as *Financial investments available-for-sale* are measured at fair value with changes in fair value recorded through *Equity*, and can broadly be categorized as money market instruments and debt securities primarily held for statutory, regulatory or liquidity reasons.

The risk control framework applied to debt instruments classified as *Financial investments available-for-sale* depends on the nature of the instruments and the purpose for which we hold them. Our exposures may be included in market risk limits or be subject to specific monitoring such as interest rate sensitivity analysis. They are also included in our Group-wide statistical and stress testing metrics which flow into our risk appetite framework.

Debt instruments classified as *Financial investments available-for-sale* had a fair value of CHF 56.5 billion as of 31 December 2014 compared with CHF 58.9 billion as of 31 December 2013. ▲▲

## **Recommendation 23:** Provide qualitative and quantitative breakdowns of significant trading and non-trading market risk factors that may be relevant to the bank's portfolio beyond interest rates, foreign exchange, commodity and equity measures

### **Real Estate price risk in banking books**

Real estate price risk arises from the possibility that real estate prices fluctuate. This affects both the value of real estate assets and earnings related to real estate activities.

#### **Governance**

Real Estate is a run-off business consisting of Real Estate Development and Real Estate Investment Management activities which are being wound down by sale of assets, strict execution of contract maturity or through portfolio sales.

#### **Risk profile**

ING Bank has two main different categories of real estate exposure on its banking books: first, the own buildings ING Bank occupies, and second - development assets, which mostly consists of former Real Estate Development and Real Estate Investment Management activities.

ING Bank's real estate exposure in the banking books (i.e. including leverage and committed purchases) is EUR 1.8 billion. For market risk management purposes, the total real estate exposure amounts to EUR 1.7 billion since property from foreclosures (EUR 0.08 billion) and third party interest (EUR 0.02 billion) are excluded.

ING Bank has EUR 0.2 billion recognised at fair value through profit and loss and EUR 1.5 billion is recognised at cost or revalued through equity (with impairments going through profit and loss).

A split on the real estate exposure per continent and sector based on the risk management view is shown below.

Real Estate market risk exposure in banking books (by geographic area and sector type)				
	2014	2013		
Continent			Sector	
Europe	1,352	1,993	Residential	270
Americas	142	145	Office	1,102
Australia	0	94	Retail	181
Asia	101	135	Industrial	22
Other	91	115	Other	111



## Recommendation 24: Provide qualitative and quantitative disclosures that describe significant market risk measurement model limitations, assumptions, validation procedures, use of proxies, changes in risk measures and models through time and descriptions of the reasons for back-testing exceptions

### Management of risks not fully captured in models, including Risks not in VaR (RNIVs)

The Group's risk identification process captures risks that either have been observed to, or have the capacity to, produce material losses in normal and stressed market conditions. To ensure risk coverage, the range of key risks is identified following either market convention, regulatory guidance, or the specific historical experience of the Group and is considered as part of the new product processes.

In some instances, the Management and Regulatory VaR model may not appropriately measure some market risks, especially where market moves are not directly observable via prices, the Group has policies to ensure that add-ons are applied where risks are not captured by the model. RNIVs refer to those key risks that are not captured, or not adequately captured, in VaR and SVaR. RNIVs can include:

- Risks not fully captured elsewhere and/or illiquid risk factors such as cross-risks;
- Basis risks;
- Higher-order risks;
- Calibration parameters, for instance to model parameter uncertainty; and
- Potential losses in excess of fair valuation adjustments taken in line with the Valuation Control Framework. Please see Note 18 in the 2014 Annual Report 'Fair value of assets and liabilities' for more details on fair value adjustments.

The treatment of RNIVs follows whether the risks are considered VaR type or non-VaR type, which depends on, and can change with, the evolving state of financial markets:

- VaR-type RNIVs: Typically represent risks that are not well captured in VaR, mainly because of infrastructure limitations or methodology limitations. In this instance two metrics are calculated, a VaR RNIV and a SVaR RNIV, using the same confidence level, capital horizon and observation period as VaR and SVaR respectively and are capitalised using the same multipliers as VaR and SVaR; and
- Non VaR-type RNIVs: Typically represent risks which would not be well captured by any VaR model either because it represents an event not historically observed in the VaR time series (e.g., currency peg break) or a market risk factor which is not seen to move frequently (e.g. correlation). These are typically estimated using stress scenarios. The stress methodology is calibrated equivalently to at least 99% confidence level and a capital horizon of at least 10 days over an appropriate observation period, depending on the liquidity of the risk. For the purpose of regulatory capital, the capital charge is equal to the loss arising from the stress test except when these risks are already adequately captured elsewhere e.g. via the IRC or APR models, which are intended to capture certain risks not adequately covered by VaR.

For regulatory capital these RNIVs are aggregated without any offsetting or diversification benefit.

### Traded market risk control

The metrics that are used to measure market risk are controlled through the implementation of an appropriate limit framework. Limits are set at the total Group level, asset class level, for example, interest rate risk, and at business level, for example, securitised products. Stress limits and many book limits, such as foreign exchange and interest rate sensitivity limits, are also used to control risk appetite.

Firm-wide limits are reported to the BFRC and are termed A-level limits for total management VaR, asset class VaR, primary stress and secondary stresses and business scenarios. These are then cascaded down by risk managers in order to meet the firm-wide risk appetite.

Each A-level limit is set after consideration is given to revenue generation opportunities and overall risk appetite approved by the Board. Compliance with limits is monitored by the independent risk functions in the trading businesses with oversight provided by Group Market Risk.

Throughout 2014, Group Market Risk continued its ongoing programme of conformance reviews on the trading businesses' market risk management practices. These reviews are intended to verify the business's conformance with the Market Risk Control Framework and best practices.

### Traded market risk reporting

Trading businesses market risk managers produce a number of detailed and summary market risk reports daily, weekly, fortnightly and monthly for business and risk managers. Where relevant on a Group-wide basis, these are sent to Group Market Risk for review and a risk summary is presented at the Group Market Risk Committee and the trading businesses' various market risk committees. The overall market risk profile is also presented to BFRC on a regular basis.

The table below shows the VaR back testing exceptions on portfolios aligned to the Group's business in 2014. A back testing exception is generated when a loss is greater than the VaR for a given day.

Portfolios	Total exceptions	Status
Equities	4	Green
Commodities (Core)	3	Green
Foreign exchange	0	Green
Fixed income rates	2	Green
Client capital management	0	Green
Credit sub-portfolios	0	Green
Counterparty risk trading		
single name trading	3	Green
Treasury	1	Green

### Management of non-traded market risk

#### Non-traded risk measurement

Barclays uses a range of complementary technical approaches to measure non-traded market risk.

#### Summary of measures for non-traded market risk

Measure	Definition
Annual earnings at risk	Impact on earnings of a parallel (upward or downward) movement in interest rates.
Economic value of equity (EVE)	Change in the present value of the banking book of a parallel (upward or downward) interest rate shock.
Economic capital	Economic Capital (EC) is held to protect against unexpected loss (in excess of expected loss) and calculated over a one-year time horizon.
Value at risk (VaR)	An estimate of the potential loss arising from unfavourable market movements, if the current positions were to be held unchanged for a set period of time.
Stress testing	Scenario based stress testing using a variety of economic parameters to quantify the impact to P&L and the balance sheet under various levels of stress.

The risk in each business is measured and controlled using both an income metric (Annual Earnings at Risk) and value metrics (Economic Value of Equity, Economic Capital and VaR).

#### Annual Earnings at Risk (AEaR)

AEaR measures the sensitivity of net interest income over the next one-year period. It is calculated as the difference between the estimated income using the expected base rate forecast and the lowest estimated income following a parallel increase or decrease in interest rates (200bps), subject to a minimum interest rate of 0%. 200bp shocks are consistent with industry best practice and supported by banking regulators.

The main model assumptions are:

- The balance sheet is kept at the current level, i.e. no growth is assumed; and
- Balances are adjusted for an assumed behavioural profile. This includes the treatment of fixed rate loans including mortgages.

AEaR is applied to the entire banking book, including the liquidity buffer and internal trades with the trading book to hedge against interest rate risk in the banking book exposures. The metric provides a measure of how interest rate risk may impact the Group's earnings, providing a simple comparison between risk and returns. The main disadvantage of the metric is its short-term focus, as it only measures the impact on a position in the first 12 months. In order to counter this, the Group has implemented additional economic value risk metrics.

See page 79 for a review of AEaR in 2014.

#### Economic Value of Equity (EVE)

EVE calculates the change in the present value of the banking book for a parallel upward and downward interest rate (200bps) shock. This shock is useful for drawing comparisons across portfolios, and is also a regulatory reporting requirement. Note that the EVE calculation measures sensitivity in terms of present value, while AEaR measures income sensitivity.

The EVE measure is applied to the entire banking book, that is, the same coverage as AEaR, and covers the full life of transactions and hedges ensuring the risk over the whole life of positions are considered. The main weaknesses of this model stem from its simplicity. In particular, it does not capture the impact of business growth or of management actions and is based on the balance sheet as at the reporting date.

### Economic Capital (EC, for recruitment, prepayment and residual risk)

EC consistent models, based on DVaR methodologies, are used to measure unexpected losses to a 99.98% confidence interval over a one-year period. Within non-traded risk, this measure aims to capture recruitment risk, prepayment risk and residual risk for banking book products (see definitions on page 137). EC metrics typically measure variations in economic value from specific sources of risk, for example, prepayment risk EC for fixed rate mortgages predicts the cost of hedging to reduce any mismatch exposure resulting from the impact of an interest rate shock on customer prepayment levels.

EC is used in the active management of the banking book. Limits are set against EC metrics and breaches trigger mitigating actions to reduce exposure to appropriate levels. EC modelling is typically applied only to fixed rate products and the majority of variable rate and administered rate portfolios are not subject to an EC measure.

An advantage of EC is that it can calculate unexpected losses to an appropriate degree of confidence given the nature of the risks and covers sources of loss beyond the scope of other models (for instance, AEaR only covers income changes over a one-year period; EVE only considers existing business and does not include any dynamic customer behaviour assumptions). The main weaknesses come from necessary simplifying assumptions. In the case of models based on statistical confidence intervals, the choice of the statistical distribution may drive under-prediction of very extreme events (i.e. the real distribution may be fat-tailed). To mitigate this, the Group continues to improve its models using long time series of historical data to capture the extreme effects.

See page 79 for a review of EC in 2014.

#### Value at Risk (VaR)

VaR is an estimate of the potential loss arising from unfavourable market movements, if the current positions were to be held unchanged for a set period. For internal market risk management purposes, the Group uses a historical simulation methodology with a two-year equally weighted historical period, at the 95% confidence level for banking book portfolios covered by the measure. This calculation is a present value sensitivity while AEaR is an income sensitivity.

Daily VaR is used to measure residual interest and foreign exchange risks within certain banking book portfolios.

Quarterly scaled VaR is used to measure risk in the Liquidity Buffer Investment Portfolio. The calculation uses a five-year historical period, a 95% confidence level and is scaled from daily to quarterly by an approved constant factor.

#### Stress testing

Stress losses are calculated for the liquidity buffer portfolio, but not subject to controlled limits.

All non-traded market risk positions are subject to the Group's annual stress testing exercise where scenarios based on economic parameters are used to determine the potential impact of the positions on results and the balance sheet.

#### Non-traded market risk control

Non-traded market risk is controlled through the use of limits on many of the above risk measures. Limits are set at the total business level and then cascaded down. The total business level limits are owned by the BCROs, while the overall Group AEaR limit is agreed with Group Market Risk and approved by the FRC. Compliance with limits is monitored by the respective business market risk team with oversight provided by Group Market Risk.

Businesses manage their interest rate risk exposures by transferring this risk to Group Treasury, who will then mitigate this risk using external markets if appropriate to keep the overall exposure within the agreed risk appetite. Group policy prevents non-trading businesses to run trading books; this is only permitted for the Investment Bank, Group Treasury, Barclays Non-Core and Africa Banking.

*Barclays' Pillar 3 disclosure on market risk model limitations and back-testing exceptions is complemented by tables and charts showing the severity of those exceptions during the reporting period*



## Recommendation 24: Provide qualitative and quantitative disclosures that describe significant market risk measurement model limitations, assumptions, validation procedures, use of proxies, changes in risk measures and models through time and descriptions of the reasons for back-testing exceptions

### VaR limitations\*

- Historical VaR and RBS's implementation of this risk measurement methodology have a number of known limitations, as summarised below, and VaR should be interpreted in light of these. RBS's approach is to supplement VaR with other risk metrics that address these limitations to ensure appropriate coverage of all material market risks.
- Historical simulation VaR may not provide the best estimate of future market movements. It can only provide a forecast of portfolio losses based on events that occurred in the past. The RBS model uses the previous two years of data; this period represents a balance between model responsiveness to recent shocks and risk factor data coverage.
- The use of a 99% confidence level VaR statistic does not provide information about losses beyond this level, usually referred to as 'tail' risks. These risks are more appropriately assessed using measures such as Stressed VaR and stress testing.
- The use of a one-day time horizon does not fully capture the profit and loss implications of positions that cannot be liquidated or hedged within one day. This may not fully reflect market risk at times of severe illiquidity in the market when a one-day period may be insufficient to liquidate or hedge positions fully. Thus, the regulatory VaR that is used for modelled market risk capital uses a ten-day time horizon.

### VaR validation\*

A dedicated model-testing team in Market Risk works with the risk managers to:

- Test the accuracy of the valuation methods used in the VaR model on appropriately chosen test portfolios and trades;
- Apply in-house models to perform advanced internal back-testing to complement the regulatory back-testing;
- Identify risks not adequately captured in VaR, and ensure that such risks are addressed via the RNIV framework (refer to page 309);
- Identify any model weaknesses or scope limitations and their impact; and
- Identify and give early warning of any market or portfolio weakness that may become significant.

In addition, independent VaR model reviews are carried out by Model Risk (as detailed on page 315).

As well as being an important market risk measurement and control tool, the VaR model is also used to determine a significant component of the market risk capital requirement (refer to page 311 for more information on calculation of capital requirements). Therefore, it is subject to not only ongoing internal review and validation but also regulator-prescribed back-testing.

### VaR back-testing\*

The main approach employed to assess the ongoing model performance is back-testing, which counts the number of days when a loss exceeds the corresponding daily VaR estimate, measured at a 99% confidence level.

- When RBS uses ten-day risk factor changes in the calculation of the regulatory VaR, the ten-day periods overlap, which can introduce an autocorrelation bias in the 99% confidence level VaR statistic. The analysis performed has shown the bias to be small and acceptable for a ten-day period.
- The VaR of trading positions is computed at the close of business. Positions may change substantially during the course of the trading day and so intra-day price volatility and trading may not be captured by the model.
- The data used in the model are collected from global sources. For some sources, local end-of-day, rather than London end-of-day, data may be used, resulting in a timing mismatch. This timing mismatch is more material for 1-day return periods than for 10-day periods (which are used for capitalisation purposes) as the overlaps are inherently smaller across shorter periods. When deciding whether or not to use local end-of-day timing, the internal model review committee balances the principle of aligning the treatment of positions and their associated hedges against the goal of using London end-of-day timing consistently.
- Risk factors relevant to a specific portfolio may be omitted, due to a lack of reliable data, or the use of proxy risk factors, for example. RBS has developed the RNIV framework to address these issues.

There are two types of profit and loss (P&L) used in back-testing comparisons: Clean P&L and Hypothetical (Hypo) P&L.

The Clean P&L for a particular business day is the firm's actual P&L that day in respect of the trading activities within the scope of the firm regulatory VaR model, including any intraday activities, adjusted by stripping out:

- Fees and commissions;
- Brokerage;
- Additions to, and releases from, reserves that are not directly related to market risk; and
- Any Day 1 P&L exceeding an amount of £500,000 (per transaction).

The Hypo P&L reflects the firm's Clean P&L excluding any intra-day activities.

A portfolio is said to produce a back-testing exception when the Clean Hypo P&L exceeds the VaR level on a given day. Such an event may be caused by a large market movement or may highlight issues such as a missing risk factor or inappropriate time series. Any such issues identified are analysed and addressed through taking appropriate remediation or development action. RBS monitors both Clean and Hypo back-testing exceptions.

Regulatory back-testing is performed and reported on a daily basis for legal entities and major business portfolios. Franchise-level market teams also perform back-testing at the lower levels as part of the internal ongoing VaR model validation.

The back-testing described above primarily applies to CIB and RCR models, which are approved by the regulators. However, where appropriate, back-testing is also performed for other portfolios that are not subject to regulatory approval.

The table below shows regulatory back-testing exceptions for a period of 250 days for 1-day 99% traded regulatory VaR vs. Clean and Hypo P&L for the legal entities approved by the PRA and De Nederlandsche Bank.

Description	Back-testing exceptions		Model status
	Clean	Hypo	
The Royal Bank of Scotland plc	—	—	Green
National Westminster Bank Plc	3	3	Green
RBS Securities Inc (RBSSI)	1	1	Green
RBS Financial Products Inc	—	—	Green
The Royal Bank of Scotland N.V.	1	—	Green

### Key points

- Statistically RBS would expect to see back-testing exceptions 1% of the time over a one-year period. From a capital requirement perspective, the PRA categorises a firm's VaR model as green, amber or red. A green model status is consistent with a satisfactory VaR model and is achieved for models that have four or fewer exceptions in a continuous 12 month period. RBS's VaR model has maintained a green status for its regulated legal entities and hence has considered that no action is required to rectify or adapt its VaR models.
- The exception at the RBSSI level resulted from losses in the US Credit business relating to the mining and chemical sectors and from losses on inflation securities.
- The exceptions at the NatWest level were driven by: the re-marking in August of certain inflation products following independent price verification; losses on euro and sterling positions as foreign exchange spot rates moved significantly in September; and a one-day delay in booking by a trader in September.
- The exception at the RBS N.V. level in December was primarily driven by the unwinding of a Brazilian fund.

The table below shows internal back-testing exceptions for a period of 250 days for 1-day 99% traded internal VaR vs. Clean and Hypo P&L for major CIB businesses.

Description	Back-testing exceptions	
	Actual	Hypo
Credit	1	1
Currencies	—	2
CIB ROR	1	2

Note:

(1) The business classification for the purpose of back-testing has been revised to bring it in line with the new RBS business hierarchy effective 3 February 2014. Back-testing exceptions for these businesses are also counted from this date.

### Key points

- As noted above, statistically RBS would expect to see back-testing exceptions 1% of the time over a one-year period. At RBS plc level, there was one exception during 2014, confirming that the model was satisfactory.
- The top-level businesses presented in the table above are subject to quarterly governance by the PRA. For some of these businesses, exceptions were noted during 2014 and analysis conducted as explained below.
- The exceptions in the Currencies business occurred in the normal course of business and were mainly due to market moves adversely affecting spot and volatility foreign exchange positions in the business.
- The exceptions in the Credit business mainly occurred due to CDS spread tightening adversely affecting the overall short position.
- CIB RoR experienced one actual and two hypothetical exceptions during 2014. All exceptions were due to fair value differences on the execution of a risk migration trade.

### 1-day 99% traded internal VaR

The table below analyses internal VaR for RBS's trading portfolios, segregated by type of market risk exposure, and split between CIB and RCR or Non-Core.

	2014				2013				2012			
	Average £m	Period end £m	Maximum £m	Minimum £m	Average £m	Period end £m	Maximum £m	Minimum £m	Average £m	Period end £m	Maximum £m	Minimum £m
Interest rate	17.4	16.9	39.8	10.8	37.2	44.1	78.2	19.1	62.6	75.6	95.7	40.8
Credit spread	23.1	14.2	42.8	13.4	60.0	37.3	86.8	33.3	69.2	74.1	94.9	44.9
Currency	4.7	5.5	9.7	1.0	8.6	6.5	20.6	3.6	10.3	7.6	21.3	2.6
Equity	3.0	3.7	6.5	1.2	5.8	4.1	12.8	3.2	6.0	3.9	12.5	1.7
Commodity	0.6	0.4	2.5	0.3	0.9	0.5	3.7	0.3	2.0	1.5	6.0	0.9
Diversification (1)	(18.2)				(23.7)				(55.4)			
Total	27.8	22.5	58.2	17.1	79.3	68.8	118.8	42.1	97.3	107.3	137.0	66.5
CIB	26.3	21.3	48.8	15.5	64.2	52.4	104.6	35.6	74.6	88.1	118.0	47.4
RCR	4.5	3.0	16.2	2.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Non-Core	n/a	n/a	n/a	n/a	19.3	15.2	24.9	14.9	30.1	22.8	41.9	22.0

Note:

(1) RBS benefits from diversification as it reduces risk by allocating positions across various financial instrument types, currencies and markets. The extent of the diversification benefit depends on the correlation between the assets and risk factors in the portfolio at a particular time. The diversification factor is the sum of the VaR on individual risk types less the total portfolio VaR.

Source: RBS 2014 Annual Report, pgs 304-308



## Recommendation 25: Describe market risk management techniques beyond VaR, such as stress tests, etc.

### Market risk

Market risk is defined to be the impact of market prices upon the financial condition of the firm. This includes potential gains or losses due to changes in market determined variables such as interest rates, credit spreads, equity prices, commodity prices, foreign exchange rates and implied volatilities.

The measures of financial condition impacted by market risk, and ways in which market risk manifests itself, are as follows:

- Positions whose revaluation gains and losses are reported in Revenue, which includes:
  - Changes in the fair value of instruments classified or designated as at fair value through profit and loss (FVTPL),
  - Impairment on available-for-sale (AFS) securities, and
  - Hedge ineffectiveness.
- CET1 capital, which includes:
  - All of the above, plus
  - Changes in the fair value of AFS securities where revaluation gains and losses are reported as other comprehensive income,
  - Changes in the Canadian dollar value of investments in foreign subsidiaries, net of hedges, due to foreign exchange translation, and
  - Remeasurements of employee benefit plans.
- CET1 Ratio, which includes:
  - All of the above, plus
  - Changes in risk-weighted assets (RWA) resulting from changes in traded market risk factors, and
  - Changes in the Canadian dollar value of RWA due to foreign exchange translation.
- The economic value of the bank, which includes:
  - Points 1 and 2 above, plus
  - Changes in the value of other non-trading positions whose value is a function of market risk factors.

### Market risk controls – FVTPL positions

As an element of the Enterprise Risk Appetite Framework, the Board of Directors approves the overall market risk constraints for RBC. GRM creates and manages the control structure for FVTPL positions that ensures that business is conducted consistent with Board requirements. The Market and Trading Credit Risk function within GRM is responsible for creating and managing the controls and governance procedures that ensure that risk taken is consistent with risk appetite constraints set by the Board. These controls include limits on:

- Market risk positions;
- Probabilistic measures of potential loss such as Value-at-Risk and Stressed Value-at-Risk defined below; and
- Scenario based stress tests which utilize both actual historical market scenarios such as the global financial crisis of 2008 and hypothetical scenarios designed to be more forward looking. These stress tests apply severe and long duration stresses to market variables.

**Market Risk Positions** – are measures of potential loss due to changes in market variables.

**Value-at-Risk (VaR)** – is a statistical measure of potential loss for a financial portfolio computed at a given level of confidence and over a defined holding period. We measure VaR at the 99<sup>th</sup> percentile confidence level for price movements over a 1 day holding period using historic simulation of the last two years of equally weighted historic market data. These calculations are updated daily with current risk positions with the exception of CVA and certain other positions which are updated weekly.

**Stressed Value-at-Risk (SVaR)** – is calculated in an identical manner as VaR with the exception that it is computed using a fixed historical one year period of extreme volatility and its inverse rather than the most recent two year history. The stress period used is the interval from September 2008 through August 2009. Stressed VaR is calculated weekly for all portfolios.

VaR and SVaR are statistical estimates based on historical market data and should be interpreted with knowledge of their limitations – which include the following:

- VaR and SVaR will not be predictive of future losses if the realized market movements differ significantly from the periods used to compute them.
- VaR and SVaR project potential losses over a one day holding period and do not project potential losses for risk positions held over longer time periods.
- VaR and SVaR are measured using positions at close of business and do not include the impact of trading activity over the course of a day.

We validate our VaR and SVaR measures through a variety of means – including subjecting the models to vetting and validation by a group independent of the model developers and by back-testing the VaR against daily marked-to-market revenue to identify and examine events in which actual outcomes in trading revenue exceed the VaR projections.

**Stress Tests** – Our market risk stress testing program is used to identify and control risk due to large changes in market prices and rates. We conduct stress testing daily on positions that are marked-to-market. The stress tests simulate both historical and hypothetical events which are severe and long term in duration. Historical scenarios are taken from actual market events over the last 30 years and range in duration up to 90 days. Examples include the equity market crash of 1987 and the global financial crisis of 2008. Hypothetical scenarios are designed to be forward looking at potential future market stresses, and are designed to be severe but plausible. We are constantly evaluating and refining these scenarios as market conditions change. Stress results are calculated assuming an instantaneous revaluation of our positions with no management action.

These measures are computed on all positions that are FVTPL for financial reporting purposes, with the exception of those in a designated hedging relationship and those in our insurance businesses.

### Market risk measures for other FVTPL positions – Assets and liabilities of RBC Insurance

We offer a range of insurance products to clients and hold investments to meet the future obligations to policyholders. The investments which support actuarial liabilities are predominantly fixed income assets designated as at FVTPL. Consequently changes in the fair values of these assets are recorded in investment income in the consolidated statements of income and are largely offset by changes in the fair value of the actuarial liabilities, the impact of which is reflected in insurance policyholder benefits and claims. As at October 31, 2014, we had liabilities in respect to insurance obligations of \$8.6 billion and trading securities of \$6.8 billion in support of the liabilities.

### Market risk controls – Structural Interest Rate Risk (SIRR) Positions <sup>(1)</sup>

The asset/liability mismatch of positions not marked-to-market is referred to as SIRR and is subject to a separate set of limits and controls. The Board of Directors approves the overall risk appetite for SIRR, and Asset Liability Committee (ALCO) along with GRM provide oversight for this risk through risk policies, limits, and operating standards. In addition, interest rate risk reports are reviewed regularly by GRM, ALCO, the Group Risk Committee, the Risk Committee of the Board and the Board of Directors.

<sup>(1)</sup> SIRR positions include impact of derivatives in hedge accounting relationships and AFS securities used for interest rate risk management.

### Structural Interest Rate Risk measurement

SIRR measures include the impact of interest rate changes to both one year's net interest income and the instantaneous impact to economic value of equity. These measures are reported on a weekly basis and are subject to limits and controls set by ALCO and GRM.

We further supplement our assessment by measuring interest rate risk for a range of dynamic and static market scenarios. Dynamic scenarios simulate our interest income in response to various combinations of business and market factors. Business factors include assumptions about future pricing strategies and volume and mix of new business, whereas market factors include assumed changes in interest rate levels and changes in the shape of the yield curve. Static scenarios supplement dynamic scenarios and are employed for assessing the risks to the value of equity and net interest income.

As part of our monitoring process, the effectiveness of our interest rate risk mitigation activity is assessed on value and earnings bases, and model assumptions are validated against actual client behavior.

### Market risk measures – Structural Interest Rate Positions

The following table provides the potential before-tax impact of an immediate and sustained 100 bps and 200 bps increase or decrease in interest rates on net interest income and economic value of equity of our non-trading portfolio, assuming that no further hedging is undertaken. These measures are based upon assumptions made by senior management and validated by empirical research. All interest rate risk measures are based upon interest rate exposures at a specific time and continuously change as a result of business activities and our risk management actions.

Over the course of 2014, our interest rate risk exposure was within our target level.

Market risk measures – Non-trading banking activities\*

Table 55

(Millions of Canadian dollars)	2014						2013		2012			
	Economic value of equity risk			Net interest income risk (2)			Economic value of equity risk	Net interest income risk (2)	Economic value of equity risk	Net interest income risk (2)		
	Canadian dollar impact	U.S. dollar impact (1)	Total	Canadian dollar impact	U.S. dollar impact (1)	Total						
<b>Before-tax impact of:</b>												
100bps increase in rates	\$ (910)	\$ (6)	\$ (916)	\$ 402	\$ 12	\$ 414	\$ (540)	\$ 391	\$ (497)	\$ 397		
100bps decrease in rates	755	(1)	754	(346)	(2)	(348)	446	(303)	405	(322)		
<b>Before-tax impact of:</b>												
200bps increase in rates	(1,893)	(17)	(1,910)	736	27	763	(1,160)	758	(1,005)	842		
200bps decrease in rates	1,264	(5)	1,259	(431)	(3)	(434)	799	(398)	651	(370)		

\* This table represents an integral part of our 2014 Annual Consolidated Financial Statements.

(1) Represents the impact on the non-trading portfolios held in our U.S. banking operations.

(2) Represents the 12-month Net interest income exposure to an instantaneous and sustained shift in interest rates.

### Market risk measures for other material non-trading portfolios

#### Non-trading foreign exchange rate risk

Foreign exchange rate risk is the potential adverse impact on earnings and economic value due to changes in foreign currency rates. Our revenue, expenses and income denominated in currencies other than the Canadian dollar are subject to fluctuations as a result of changes in the value of the average Canadian dollar relative to the average value of those currencies. Our most significant exposure is to the U.S. dollar due to our level of operations in the U.S., and other activities conducted in U.S. dollars. Other significant exposures are to the British pound and the Euro due to our activities conducted internationally in these currencies. A strengthening or weakening of the Canadian dollar compared to the U.S. dollar, British pound and the Euro could reduce or increase, as applicable, the translated value of our foreign currency denominated revenue, expenses and earnings and could have a significant effect on the results of our operations. We are also exposed to foreign exchange rate risk arising from our investments in foreign operations. For un-hedged equity investments, when the Canadian dollar appreciates against other currencies, the unrealized translation losses on net foreign investments decreases our shareholders' equity through the other components of equity and decreases the translated value of the RWA of the foreign currency-denominated operations. The reverse is true when the Canadian dollar depreciates against other currencies. Consequently, we consider these impacts in selecting an appropriate level of our investments in foreign operations to be hedged.

Our overall trading and non-trading market risk objectives, policies and methodologies have not changed significantly from 2013.

## Section 6

# Credit risk



## Recommendation 26a: Summarize credit risk profile, including significant credit risk concentrations including a quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet (1 of 2)

### Credit risk

(Unaudited)

Credit risk is the risk of financial loss if a customer or counterparty fails to meet an obligation under a contract. It arises principally from direct lending, trade finance and leasing business, but also from other products such as guarantees and credit derivatives and from holding assets in the form of debt securities.

There were no material changes to our policies and practices for the management of credit risk in 2014.

A summary of our current policies and practices regarding credit risk is provided in the Appendix to Risk on page 204.

Our maximum exposure to credit risk is presented on page 131 and credit quality on page 133. While credit risk arises across most of our balance sheet, losses have typically been incurred on loans and advances and securitisation exposures and other structured products. As a result, our disclosures focus primarily on these two areas.

This year we have redesigned the 'Credit risk' section in order to enhance clarity and reduce duplication. It now begins with a summary of credit risk followed by an overview of our gross exposures. We describe various measures of credit quality such as past due status, impaired loans and renegotiated loans before analysing impairment allowances. There are specific sections on wholesale lending and personal lending where additional detail is provided and we cover areas of particular focus such as our exposure to commercial real estate in wholesale lending and our Consumer and Mortgage Lending ('CML') portfolio in personal lending. This is followed by a section describing our securitisation exposures and other structured products. Information on our exposures to oil and gas, Russia and Greece is provided in 'Areas of special interest' on page 126.

Following the change in balance sheet presentation explained on page 347, non-trading reverse repos are shown separately on the balance sheet and are no longer included in 'Loans and advances to customers' and 'Loans and advances to banks'. Comparative data have been re-presented accordingly. As a result, any analysis that references loans and advances to customers or banks excludes non-trading reverse repos. The amount of the non-trading reverse repos to customers and banks is set out on page 151.

Loan impairment charges, loan impairment allowances and impaired loans all reduced compared with 2013.

Gross loans and advances decreased by US\$28bn which included adverse foreign exchange movements of US\$51bn; excluding these movements customer lending grew in 2014.

The commentary that follows is on a constant currency basis, whilst tables are presented on a reported basis.

### Summary of credit risk

(Unaudited)

	2014 US\$bn	2013 US\$bn	Page
<b>At year-end</b>			
Maximum exposure to credit risk	3,133	3,112	131
Gross loans and advances <sup>1</sup>			
– personal lending	393	411	132
– wholesale lending	706	716	132
<b>Total</b>	<b>1,099</b>	<b>1,127</b>	<b>132</b>
Impaired loans			
– personal lending	15	19	137
– wholesale lending	14	18	137
<b>Total</b>	<b>29</b>	<b>37</b>	<b>137</b>
Impaired loans as a % of gross loans and advances			
– personal lending	3.9%	4.6%	
– wholesale lending	2.0%	2.5%	
– total	2.7%	3.3%	
	US\$bn	US\$bn	
Impairment allowances			
– personal lending	4.6	6.6	143
– wholesale lending	7.8	8.6	143
<b>Total</b>	<b>12.4</b>	<b>15.2</b>	<b>143</b>
Loans and advances net of impairment allowances <sup>1</sup>	1,087	1,112	
<b>For year ended 31 December</b>			
Loan impairment charge			
– personal lending	1.8	3.1	141
– wholesale lending	2.3	2.9	141
<b>Total</b>	<b>4.1</b>	<b>6.0</b>	<b>141</b>

For footnote, see page 202.

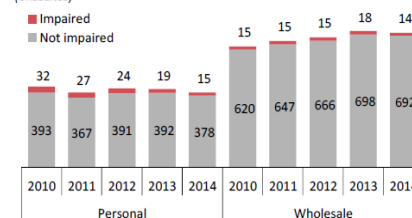
See page 158 for further details in respect of the constant currency reconciliation. For an analysis of loans and advances by country see page 160.

Wholesale gross loans and advances increased by US\$21bn. Asia grew by US\$16bn and North America by US\$10bn with more modest levels of growth in the Middle East and North Africa and Latin America. This was offset by a decrease of US\$15bn in Europe. Loan impairment charges were lower in 2014 as we continued to benefit from the improvement in various economies and the low interest rate environment.

Personal lending balances, excluding the planned US CML portfolio run off, grew by US\$7.7bn. This was primarily driven by increased mortgage and other lending in Asia and growth in the mortgage portfolio in both North America and Latin America. The growth was partially offset by lower lending balances in Europe due to repayments on the mortgage and credit card portfolio in the UK. The CML portfolio declined by a further US\$5.7bn during the year. Loan impairment charges were down as a result of improvements in the US housing market and the continued run-off of the CML portfolio.

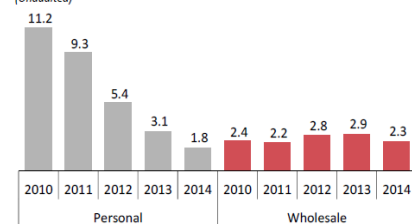
### Gross loans to customers and banks over five years<sup>1</sup> (US\$bn)

(Unaudited)



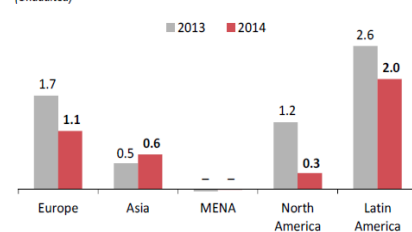
### Loan impairment charge over five years (US\$bn)

(Unaudited)



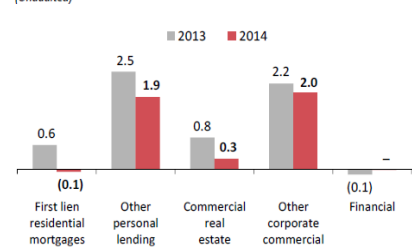
### Loan impairment charges by geographical region (US\$bn)

(Unaudited)



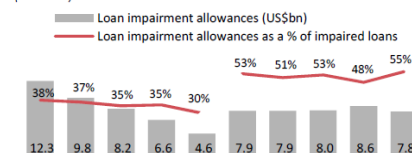
### Loan impairment charges by industry (US\$bn)

(Unaudited)



### Loan impairment allowances over five years

(Unaudited)



### Credit exposure

#### Maximum exposure to credit risk

(Audited)

The table on page 131 provides information on balance sheet items, offsets and loan and other credit-related commitments. Commentary on balance sheet movements is provided on page 58. The offset on derivatives increased in line with the increase in maximum exposure amounts.

The offset on corporate and commercial loans to customers decreased by US\$31bn. This reduction was in the UK where a small number of clients benefit from the use of net interest arrangements across their overdraft and deposit positions. During the year, as we aligned our approach in our Payments and Cash Management business to be more globally consistent, many of these clients increased the frequency with which they settled these balances thereby reducing the amount of offset available.

#### 'Maximum exposure to credit risk' table (page 131)

The table presents our maximum exposure to credit risk from balance sheet and off-balance sheet financial instruments before taking account of any collateral held or other credit enhancements (unless such enhancements meet accounting offsetting requirements). For financial assets recognised on the balance sheet, the maximum exposure to credit risk equals their carrying amount; for financial guarantees and similar contracts granted, it is the maximum amount that we would have to pay if the guarantees were called upon. For loan commitments and other credit-related commitments, it is generally the full amount of the committed facilities.

The offset in the table relates to amounts where there is a legally enforceable right of offset in the event of counterparty default and where, as a result, there is a net exposure for credit risk purposes. However, as there is no intention to settle these balances on a net basis under normal circumstances, they do not qualify for net presentation for accounting purposes.

In the case of derivatives the offset column also includes collateral received in cash and other financial assets.

#### Other credit risk mitigants

While not disclosed as an offset in the 'Maximum exposure to credit risk' table, other arrangements are in place which reduce our maximum exposure to credit risk. These include a charge over collateral over borrowers' specific assets such as residential properties. Other credit risk mitigants include short positions in securities and financial assets held as part of linked insurance/ investment contracts where the risk is predominantly borne by the policyholder. In addition, we hold collateral in the form of financial instruments that are not recognised on the balance sheet.

See Note 32 and from page 147 and page 156 respectively on the Financial Statements for further details on collateral in respect of certain loans and advances and derivatives.

## Recommendation 26a: Summarize credit risk profile, including significant credit risk concentrations including a quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet (2 of 2)

### Maximum exposure to credit risk (Audited)

	2014			2013		
	Maximum exposure US\$m	Offset US\$m	Net US\$m	Maximum exposure US\$m	Offset US\$m	Net US\$m
Cash and balances at central banks	129,957	–	129,957	166,599	–	166,599
Items in the course of collection from other banks	4,927	–	4,927	6,021	–	6,021
Hong Kong Government certificates of indebtedness	27,674	–	27,674	25,220	–	25,220
Trading assets	228,944	–	228,944	239,301	(1,777)	237,524
– Treasury and other eligible bills	16,170	–	16,170	21,584	–	21,584
– debt securities	141,532	–	141,532	141,644	–	141,644
– loans and advances to banks	27,581	–	27,581	27,885	–	27,885
– loans and advances to customers	43,661	–	43,661	48,188	(1,777)	46,411
Financial assets designated at fair value	9,031	–	9,031	12,719	–	12,719
– Treasury and other eligible bills	56	–	56	50	–	50
– debt securities	8,891	–	8,891	12,589	–	12,589
– loans and advances to banks	84	–	84	76	–	76
– loans and advances to customers	–	–	–	4	–	4
Derivatives	345,008	(313,300)	31,708	282,265	(252,344)	29,921
Loans and advances to customers held at amortised cost <sup>1</sup>	974,660	(67,094)	907,566	992,089	(96,726)	895,363
– personal	388,954	(4,412)	384,542	404,126	(1,348)	402,778
– corporate and commercial	535,184	(59,197)	475,987	537,922	(90,215)	447,707
– financial (non-bank financial institutions)	50,522	(3,485)	47,037	50,041	(5,163)	44,878
Loans and advances to banks held at amortised cost <sup>1</sup>	112,149	(258)	111,891	120,046	(587)	119,459
Reverse repurchase agreements – non-trading	161,713	(5,750)	155,963	179,690	(22,267)	157,423
Financial investments	404,773	–	404,773	416,785	–	416,785
– Treasury and other similar bills	81,517	–	81,517	78,111	–	78,111
– debt securities	323,256	–	323,256	338,674	–	338,674
Other assets	35,264	–	35,264	37,324	(22)	37,302
– assets held for sale	1,375	–	1,375	3,306	(22)	3,284
– endorsements and acceptances	10,775	–	10,775	11,624	–	11,624
– other	23,114	–	23,114	22,394	–	22,394
Financial guarantees and similar contracts <sup>2</sup>	47,078	–	47,078	46,300	–	46,300
Loan and other credit-related commitments <sup>3</sup>	651,380	–	651,380	587,603	–	587,603
<b>At 31 December</b>	<b>3,132,558</b>	<b>(386,402)</b>	<b>2,746,156</b>	<b>3,111,962</b>	<b>(373,723)</b>	<b>2,738,239</b>

For footnotes, see page 202.

### Loan and other credit-related commitments<sup>3</sup> (Unaudited)

	Europe US\$m	Asia <sup>4</sup> US\$m	MENA US\$m	North America US\$m	Latin America US\$m	Total US\$m
Personal	86,247	96,497	2,995	15,636	11,679	213,054
Corporate and commercial	98,045	138,366	20,141	102,911	17,540	377,003
Financial <sup>5</sup>	26,605	9,355	711	23,559	1,093	61,323
<b>At 31 December 2014</b>	<b>210,897</b>	<b>244,218</b>	<b>23,847</b>	<b>142,106</b>	<b>30,312</b>	<b>651,380</b>
Personal	92,148	74,445	2,940	15,647	9,774	194,954
Corporate and commercial	91,895	120,084	19,045	92,837	21,956	345,817
Financial <sup>5</sup>	18,930	8,477	705	17,478	1,242	46,832
<b>At 31 December 2013</b>	<b>202,973</b>	<b>203,006</b>	<b>22,690</b>	<b>125,962</b>	<b>32,972</b>	<b>587,603</b>

### Concentration of exposure (Unaudited)

Concentrations of credit risk are described in the Appendix to Risk on page 206.

The geographical diversification of our lending portfolio and our broad range of global businesses and products ensured that we did not overly depend on a few markets to generate growth in 2014. This diversification also supported our strategy for growth in faster-growing markets and those with international connectivity.

### Financial investments

Our holdings of available-for-sale government and government agency debt securities, corporate debt securities, ABSs and other securities were spread across a wide range of issuers and geographical regions in 2014, with 15% invested in securities issued by banks and other financial institutions and 72% in government or government agency debt securities. We also held assets backing insurance and investment contracts.

For an analysis of financial investments, see Note 18 on the Financial Statements.

### Trading assets

Trading securities remained the largest concentration within trading assets at 77% compared with 75% in 2013. The largest concentration within the trading securities

portfolio was in government and government agency debt securities. We had significant exposures to US Treasury and government agency debt securities (US\$26bn) and UK (US\$9.3bn) and Hong Kong (US\$6.9bn) government debt securities.

For an analysis of debt and equity securities held for trading, see Note 12 on the Financial Statements.

### Derivatives

Derivative assets were US\$345bn at 31 December 2014 (2013: US\$282bn). Details of derivative amounts cleared through an exchange, central counterparty and non-central counterparty are shown on page 150.

For an analysis of derivatives, see page 150 and Note 16 on the Financial Statements.

### Loans and advances to customers

The following tables analyse loans and advances to customers by industry sector and by the location of the principal operations of the lending subsidiary or, in the case of the operations of The Hongkong and Shanghai Banking Corporation, HSBC Bank, HSBC Bank Middle East Limited ('HSBC Bank Middle East') and HSBC Bank USA, by the location of the lending branch. The distribution of loans across geographical regions and industries remained similar to last year.

For an analysis of loans and advances by country see page 160.

### Gross loans and advances to customers by industry sector and by geographical region (Audited)

	Europe US\$m	Asia <sup>4</sup> US\$m	MENA US\$m	North America US\$m	Latin America US\$m	Total US\$m	As a % of total gross loans
Personal	178,531	129,515	6,571	65,400	13,537	393,554	39.9
– first lien residential mortgages <sup>6</sup>	131,000	93,147	2,647	55,577	4,153	286,524	29.0
– other personal <sup>7</sup>	47,531	36,368	3,924	9,823	9,384	107,030	10.9
Corporate and commercial	210,585	220,799	20,588	57,862	30,722	540,556	54.8
– manufacturing	39,456	37,767	2,413	15,299	12,051	106,986	10.9
– international trade and services	76,629	72,814	9,675	13,484	8,189	180,791	18.3
– commercial real estate	28,187	35,678	579	6,558	2,291	73,293	7.4
– other property-related	7,126	34,379	1,667	8,934	281	52,387	5.3
– government	2,264	1,195	1,552	164	968	6,143	0.6
– other commercial <sup>8</sup>	56,923	38,966	4,702	13,423	6,942	120,956	12.3
Financial	23,103	13,997	3,291	9,034	1,393	50,818	5.1
– non-bank financial institutions	21,867	13,410	3,289	9,034	1,199	48,799	4.9
– settlement accounts	1,236	587	2	–	194	2,019	0.2
Asset-backed securities reclassified	1,938	–	–	131	–	2,069	0.2
<b>Total gross loans and advances to customers at 31 December 2014 (A)</b>	<b>414,157</b>	<b>364,311</b>	<b>30,450</b>	<b>132,427</b>	<b>45,652</b>	<b>986,997</b>	<b>100.0</b>
Percentage of A by geographical region	42.0%	36.9%	3.1%	13.4%	4.6%	100.0%	–

HSBC provides a high level summary of its overall credit risk profile with clear linkages to more in-depth disclosures available elsewhere



## Recommendation 26a: Summarize credit risk profile, including significant credit risk concentrations including a quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet (1 of 3)

### Credit risk continued

#### Sector and geographical regional analyses\*

The table below details CRA by sector and geographical region for the wholesale portfolio. Sectors are based on RBS's sector concentration framework. Geographical region is based on the location of the customer's operations (or, in the case of individuals, location of residence).

	UK £m	Western Europe (excl. UK) £m	North America £m	Asia Pacific £m	Latin America £m	Other (1) £m	Total £m	RBS excluding RCR £m	RCR £m
2014									
Banks	3,131	26,520	4,106	5,599	700	1,511	41,567	39,687	1,880
Other financial institutions	24,430	10,635	9,261	3,312	1,329	955	49,922	48,216	1,706
Sovereign (2)	45,308	6,854	27,162	2,049	22	969	82,364	81,828	536
Property	44,401	11,858	6,846	1,035	254	587	64,981	50,160	14,821
Natural resources	7,825	4,030	7,070	3,322	228	2,135	24,610	21,700	2,910
Manufacturing	10,094	4,812	7,216	2,332	62	922	25,438	24,893	545
Transport (3)	10,750	4,206	4,251	1,583	233	8,471	29,494	25,590	3,904
Retail and leisure	15,539	3,221	5,736	694	47	447	25,684	23,856	1,828
Telecoms, media and technology	3,099	1,964	3,923	1,245	5	273	10,509	10,219	290
Business services	16,255	2,182	6,252	531	1,224	304	26,748	25,721	1,027
	180,832	76,282	81,823	21,702	4,104	16,574	381,317	351,870	29,447

								RBS excluding Non-Core	Non-Core
2013									
Banks	2,506	25,085	3,133	9,670	1,192	1,771	43,357	43,010	347
Other financial institutions	23,080	10,363	9,164	2,633	1,320	1,100	47,660	43,849	3,811
Sovereign (2)	55,041	8,685	18,203	3,394	37	687	86,047	84,726	1,321
Property	49,639	18,673	6,206	929	286	795	76,528	53,569	22,959
Natural resources	6,698	4,587	6,189	3,669	214	2,067	23,444	21,412	2,032
Manufacturing	8,843	4,962	6,208	2,278	120	1,397	23,808	23,276	532
Transport (3)	10,332	3,936	3,959	1,800	163	9,435	29,625	24,086	5,539
Retail and leisure	16,338	3,924	4,977	738	91	517	26,585	24,562	2,023
Telecoms, media and technology	3,356	2,591	3,401	1,403	29	491	11,271	9,810	1,461
Business services	16,527	2,733	6,053	757	1,233	206	27,509	26,518	991
	192,360	85,539	87,493	27,271	4,685	18,486	395,834	354,818	41,016

								RBS excluding Non-Core	Non-Core
2012									
Banks	5,023	36,573	6,421	8,837	1,435	2,711	61,000	60,609	391
Other financial institutions	20,997	13,398	10,189	2,924	4,660	789	52,957	47,425	5,532
Sovereign (2)	38,870	26,002	14,265	2,887	64	1,195	83,283	81,636	1,647
Property	54,831	23,220	7,051	1,149	2,979	1,280	90,510	56,566	33,944
Natural resources	6,103	5,911	6,758	4,129	690	1,500	25,091	21,877	3,214
Manufacturing	9,656	5,587	6,246	2,369	572	1,213	25,643	24,315	1,328
Transport (3)	12,298	5,394	4,722	5,065	2,278	4,798	34,555	26,973	7,582
Retail and leisure	17,229	5,200	4,998	1,103	270	658	29,458	26,203	3,255
Telecoms, media and technology	4,787	3,572	3,188	1,739	127	346	13,759	10,815	2,944
Business services	17,089	3,183	5,999	581	780	154	27,786	26,190	1,596
	186,883	128,040	69,837	30,783	13,855	14,644	444,042	382,609	61,433

#### Notes:

(1) Comprises Central and Eastern Europe, the Middle East, Central Asia and Africa, and supranationals such as the World Bank.

(2) Includes cash held at central banks.

(3) Excludes net investment in operating leases in shipping and aviation portfolios as they are accounted for as property, plant and equipment. However, operating leases are included in the monitoring and management of these portfolios.

### Key points\*

The revised RBS strategy and the creation of RCR as well as the general economic environment had a direct impact on the portfolios during the year, with the following key trends observed:

### Financial institutions

- The banking sector was one of the largest in the portfolio with exposure totalling £41.6 billion. Exposures were well diversified geographically and limits are controlled through a combination of the single name concentration framework, credit policies and country limits. Overall exposure did not change materially, with the decrease in Asia Pacific (largely driven by a reduction in lending in China) partially offset by increases in North America, Western Europe and the UK. Derivatives continued to generate the largest exposure for banks (70% of credit risk assets in the banks sector).

- Exposures to a range of financial companies, the largest of which were funds (26% - 25% in 2013), securitisation vehicles (19% - 22% in 2013), finance companies (17% - 14% in 2013) and financial intermediaries (16% - unchanged from 2013) including broker dealers and central counterparties (CCPs). The non-RCR other financial institutions exposure increased by 10% in 2014 driven by increased exposures to securitisation vehicles and finance companies. Product-based sub-limits were in place to ensure that exposure remained within appetite.

- At the year end, the total exposure to CCPs was £5.4 billion (2013 - £4.1 billion) as regulatory initiatives encouraged the wider use of CCPs for clearing over-the-counter derivatives.

- The sovereign portfolio comprised exposures to central banks, central governments and sub-sovereigns such as local authorities, primarily in the UK, US and Western Europe. Exposures to central banks were £75.3 billion at the year end, a reduction of 6% from 2013 driven by fluctuations in RBS Treasury activities.

### Property

- The majority of property exposure was CRE related in Ireland and the UK (refer to the CRE section on page 251 for further details). The remainder comprised lending to construction companies and building materials groups, which decreased by 5% (following a 15% reduction in 2013), and housing associations, which increased by 14% (2013 - 12%) and contributed to an improvement in the credit quality of the property portfolio. 23% of total property exposure was in RCR and the run-down of RCR property exposure contributed significantly to the improvement of portfolio asset quality. The CIB and CPB franchises accounted for 75% of total non-RCR property exposure. Property exposures in Ireland (including RCR) represented 12% of property CRA (down from 15% in 2013).

\*unaudited

### Shipping

- RBS's exposure to the shipping sector, which is mostly within RCR and CIB, declined 9% during the year, from £11.4 billion to £10.4 billion. The reduction was a result of scheduled loan repayments, secondary sales (RCR) and prepayments.

- Of the total exposure to the shipping sector, £7.9 billion (2013 - £8.6 billion) related to asset-backed ocean-going vessels. £5.7 billion of the asset-backed ocean-going vessel exposures were in CIB.

- The main concentration risks were the bulk sector which represented 38% of the portfolio; tankers at 29% and containers at 17%. The remaining exposures comprised gas, including liquid petroleum gas (10%) and others (6%).

- Conditions remained generally subdued during 2014. There has been a recent upturn in rates for tankers due to the fall in oil prices but difficulties remained for containers due to over supply. The majority of RBS's exposure is extended against security in vessels of recent build (average age across the portfolio of 6.4 years including RCR) with less than 3% of the CIB book being above 15 years of age. 87% of the portfolio was below 10 years.
- A key protection for RBS is the minimum security covenant. The overall loan-to-value (LTV) on the portfolio was 77%. The LTV for the RCR portfolio was 92% and for the remaining portfolio was 73%. In the CIB portfolio, approximately 20% of the portfolio had LTVs above 100%.

### Oil and gas

- Within natural resources, RBS had £10.7 billion of CRA in exposure to the oil and gas sector. CRA increased by 5% (£528 million) during 2014. Further disclosures regarding exposure to this sector are detailed on page 256.

### Other corporate sectors

- Exposure to the manufacturing sector increased by 7% driven predominantly by increases in the industrials and agriculture sub-sectors which increased by 10% and 9% respectively during the year.
- The reduction in exposure to the retail and leisure sector was in line with selective risk appetite. The reductions were predominantly in relation to Ulster Bank and CIB exposure, partially offset by modest growth in CFG in line with business strategy. The CPB retail and leisure portfolio was stable compared to last year.
- Exposure in the telecoms, media and technology sector fell by 7% during the year mostly driven by a 22% reduction in telecoms.
- Exposure in healthcare was £8.9 billion at the year end (2013 - £9.5 billion) with the exposure heavily biased towards the UK, which represented 69% of the exposure (70% in 2013).

RBS provides quantitative breakouts of major portfolios (Wholesale, CRE, Personal) along with detailed commentary on changes in risk exposure during the period



## Recommendation 26a: Summarize credit risk profile, including significant credit risk concentrations including a quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet (2 of 3)

### Key credit portfolios

#### Commercial real estate\*

The commercial real estate (CRE) sector comprised exposures to entities involved in the development of, or investment in, commercial and residential properties (including house builders). The analysis of lending utilizations below is gross of impairment provisions and excludes rate risk management and contingent obligations.

During 2014, an RBS-wide centre of excellence was created to develop, implement and oversee risk management strategy for this portfolio. The centre of excellence is responsible for the management of CRE credit risk, including setting CRE-specific credit risk appetite, credit policies and portfolio controls as well as oversight of valuations, environmental and flood appraisals. This sector is reviewed regularly at the Credit Risk Committee (CRC) and Executive Risk Forum (ERF) due to its relative size and riskiness. Both CRC and ERF monitor the performance of the portfolio to ensure it remains in line with expectations relative to credit quality, capital consumption and control framework compliance.

Ongoing credit risk management is supported by dedicated credit teams covering the CPB and CIB portfolios, a team specialising in commercial and residential property developments, and senior underwriters sanctioning the most sizeable and complex CRE exposures.

By segment	2014			2013			2012		
	Investment £m	Development £m	Total £m	Investment £m	Development £m	Total £m	Investment £m	Development £m	Total £m
UK PBB	3,757	501	4,258	3,931	510	4,441	4,793	618	5,411
Ulster Bank	952	336	1,288	3,419	718	4,137	3,575	729	4,304
Personal & Business Banking	4,709	837	5,546	7,350	1,228	8,578	8,368	1,347	9,715
Commercial Banking	15,145	2,775	17,920	16,616	2,957	19,573	17,711	3,473	21,184
Private Banking	1,051	244	1,295	n/a	n/a	n/a	n/a	n/a	n/a
Commercial & Private Banking	16,196	3,019	19,215	16,616	2,957	19,573	17,711	3,473	21,184
Corporate & Institutional Banking	721	255	976	898	183	1,081	1,479	372	1,851
Citizens Financial Group	5,017	—	5,017	4,018	—	4,018	3,857	3	3,860
RCR	6,169	6,394	12,563	n/a	n/a	n/a	n/a	n/a	n/a
Non-Core	n/a	n/a	n/a	11,624	7,704	19,328	17,686	8,744	26,430
	32,812	10,505	43,317	40,506	12,072	52,578	49,101	13,939	63,040

By geography (1)	Investment		Development		Total	Investment		Development		Total
	Commercial £m	Residential £m	Commercial £m	Residential £m		RBS excluding RCR £m	RCR £m	RBS excluding RCR £m	RCR £m	
2014										
UK (excluding NI (2))	17,327	4,757	600	3,446	26,130	19,882	2,203	3,506	539	26,130
Ireland (ROI and NI (2))	2,864	740	1,499	4,469	9,572	770	2,834	329	5,639	9,572
Western Europe (other)	1,222	53	189	24	1,488	232	1,042	4	210	1,488
US	4,063	1,358	—	59	5,480	5,376	45	53	6	5,480
RoW (2)	406	22	34	185	647	383	45	219	—	647
	25,882	6,930	2,322	8,183	43,317	26,643	6,169	4,111	6,394	43,317

#### By sub-sector (1)

2014	£m	£m	£m	£m	£m	£m
Residential	8,203	5,209	78	1,417	206	15,113
Office	3,297	504	609	81	137	4,628
Retail	4,909	809	173	157	91	6,139
Industrial	2,588	367	32	2	29	3,018
Mixed/other	7,133	2,683	596	3,823	184	14,419
	26,130	9,572	1,488	5,480	647	43,317

### Credit risk mitigation for commercial real estate

The market value of the collateral typically exceeds the loan amount at origination date. The market value is defined as the estimated amount for which the asset could be sold in an arm's length transaction by a willing seller to a willing buyer. External valuations for CRE lending are required at the inception of the loan. In addition to external valuations at inception, RBS uses a range of other types of information to value such collateral, including expert judgement and indices. External valuations may be sought should an adverse credit event occur - this requirement is assessed as part of the Watchlist process. The table below shows CRE (Non-RCR and RCR) lending split by loan-to-value ratio, which represents loan value before provisions relative to the value of the property financed.

Commercial real estate loan-to-value ratio	RCR			RBS excluding RCR			Total		
	Performing £m	Non-performing £m	Total £m	Performing £m	Non-performing £m	Total £m	Performing £m	Non-performing £m	Total £m
2014									
<= 50%	300	45	345	9,833	220	10,053	10,133	265	10,398
> 50% and <= 70%	602	173	775	8,750	301	9,051	9,352	474	9,826
> 70% and <= 90%	220	554	774	2,285	409	2,694	2,505	963	3,468
> 90% and <= 100%	41	116	157	343	134	477	384	250	634
> 100% and <= 110%	56	211	267	168	148	316	224	359	583
> 110% and <= 130%	49	438	487	326	201	527	375	639	1,014
> 130% and <= 150%	6	404	410	135	128	263	141	532	673
> 150%	65	4,160	4,225	305	495	800	370	4,655	5,025
Total with LTVs	1,339	6,101	7,440	22,145	2,036	24,181	23,484	8,137	31,621
Minimal security (1)	—	3,168	3,168	33	38	71	33	3,206	3,239
Other	34	1,921	1,955	5,956	546	6,502	5,990	2,467	8,457
Total	1,373	11,190	12,563	28,134	2,620	30,754	29,507	13,810	43,317
Total portfolio average LTV (2)	75%	338%	291%	56%	133%	62%	57%	287%	116%

### Credit quality

Credit quality metrics relating to CRE lending were as follows:

	Total			RCR		Non-Core	
	2014	2013	2012	2014	2013	2012	2012
Lending (gross)	£43,317m	£52,578m	£63,040m	£12,563m	£19,328m	£26,430m	
Of which REIL	£13,345m	£20,129m	£22,108m	£11,112m	£14,305m	£17,052m	
Provisions	£9,027m	£13,209m	£10,077m	£8,067m	£10,639m	£8,349m	
REIL as a % of gross loans to customers	30.8%	38.3%	35.1%	88.5%	74.0%	64.5%	
Provisions as a % of REIL	68%	66%	46%	73%	74%	49%	

#### Notes:

(1) Excludes property related lending to customers in other sectors managed by Real Estate Finance.

(2) Data at 31 December 2014 includes CRE lending from Private Banking in CPB of £1.3 billion that was excluded from 2013 and 2012 data. At 31 December 2013 CRE lending in Private Banking totalled £1.4 billion (2012 - £1.4 billion).

### By asset quality band

2014	AQ1-AQ2		AQ3-AQ4		AQ5-AQ6		AQ7-AQ8		AQ9		AQ10		Total
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	
RBS excluding RCR	758	9,431	13,857	3,873	215	2,620	30,754						
RCR	—	228	556	502	87	11,190	12,563						
	758	9,659	14,413	4,375	302	13,810	43,317						

Commercial Real Estate summary includes breakouts by segment, geography, sub-sector, LTV, credit quality and internal asset quality band

## Recommendation 26a: Summarize credit risk profile, including significant credit risk concentrations including a quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet (3 of 3)

### Oil and gas\*

RBS has £10.7 billion of credit risk assets (CRA) to the oil and gas sector. Including committed but undrawn facilities, the exposure to the sector is £24.1 billion.

The price of crude oil is subject to global demand and supply factors and therefore determined globally. It has fallen by more than 50% since June 2014. This steep decline has been driven by excess supply fears resulting from a combination of factors. These include the growth in US shale production and OPEC maintaining current production levels, as well as weaker demand in Europe and slower growth in China.

The table below provides a breakdown of oil and gas sector exposure on both a CRA basis and total exposure (including committed but undrawn exposure and contingent obligations) basis by business segment.

	2014				2013			
	CRA £m	%	Total £m	%	CRA £m	%	Total £m	%
Commercial Banking	671	6	1,035	4	772	8	1,203	5
Corporate & Institutional Banking	8,297	78	20,278	84	8,264	82	20,924	88
Citizens Financial Group	1,251	12	2,134	9	819	8	1,284	5
Others	101	1	243	1	144	1	276	1
RCR	352	3	457	2	145	1	147	1
	10,672	100	24,147	100	10,144	100	23,834	100
Of which: lending exposure	7,744	73	17,695	73	6,996	69	16,693	70

During 2014, CFG's exposure to this sector increased, partly due to the transfer of £0.4 billion (total exposure) of oil and gas exposures from CIB.

The committed lending exposure included legal commitments to syndicated bank facilities, with tenors up to five years. These committed facilities are for general corporate purposes including funding of operating needs and capital expenditures. These facilities are available as long as counterparties remain compliant with the terms of the credit agreement. Contingent obligations relate to guarantees, letters of credit and suretyships provided to customers.

RBS had no high-yield bond underwriting positions as at 31 December 2014; it had a simple sub investment grade loan underwriting of \$86 million in the Americas which, subsequent to year end, had been syndicated.

The price of natural gas is determined regionally. US natural gas prices have been relatively stable compared with the recent price of crude oil. The price of natural gas is not highly correlated to oil prices.

Exposures to this sector continue to be closely managed through the sector concentration framework and through ongoing customer and sub-sector reviews including stress testing. Risk appetite to the overall oil and gas sector was reduced during 2014. Further action is ongoing to mitigate exposure where possible.

At the year end, RBS's exposure to commodities financing was £1.0 billion, predominantly in relation to oil (£0.7 billion), metals (£0.2 billion) and coal (£0.1 billion).

### CIB oil and gas\*

#### Sub-sector and geography

The tables below provide a breakdown of CIB's oil and gas sector exposure - which represents 84% of RBS's exposure to this sector (including committed but undrawn exposure) - split by sub-sector and geography. The analysis is based on RBS's sector concentration framework.

	UK £m	Western Europe (excl. UK) £m	North America £m	Asia Pacific £m	Latin America £m	CEEMA(1) £m	Total £m
2014							
Producers (incl. integrated oil companies)	833	1,101	4,822	263	115	848	7,982
Oilfield service providers	153	675	1,007	742	—	535	3,112
Other wholesale and trading activities	295	794	683	907	—	122	2,801
Refineries	1	177	2,700	591	141	67	3,677
Pipelines	96	48	2,359	49	33	121	2,706
	1,378	2,795	11,571	2,552	289	1,693	20,278

### Including committed undrawn exposures

Of which: exploration and production	145	3	3,118	115	150	37	3,568
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	UK £m	Western Europe (excl. UK) £m	North America £m	Asia Pacific £m	Latin America £m	CEEMA(1) £m	Total £m
2013							
Producers (incl. integrated oil companies)	748	1,065	5,333	459	5	748	8,358
Oilfield service providers	180	835	1,078	507	61	323	2,984
Other wholesale and trading activities	297	915	553	893	—	147	2,805
Refineries	1	135	2,203	993	131	231	3,694
Pipelines	188	95	2,563	41	—	196	3,083
	1,414	3,045	11,730	2,893	197	1,645	20,924

The sub-sector within which a customer operates is a primary consideration for assessing the credit risk of a customer. Current areas of focus are towards customers involved in exploration and production principally in producers (E&P) and oilfield service providers (OFS). E&P customers represent approximately 18% of CIB's exposure to the oil and gas sector and OFS customers represent 15%.

E&P is most immediately exposed to the oil price decline and E&P companies are the primary customers for the service providers and are experiencing an adverse impact on their financial performance from a reduced level of contracts and lower contract rates as well as pressure to re-price existing services.

### Asset quality - AQ band

	2014 £m	%
AQ1	3,948	20
AQ2	1,999	10
AQ3	3,455	17
AQ4	7,521	37
AQ5	2,035	10
AQ6	1,025	5
AQ7	293	1
Other	2	—
	20,278	100

At the year end 83%, of the portfolio exposure was investment grade (AQ1-AQ4).

The impact of continuing low oil prices on the credit quality of the portfolio is subject to ongoing review, including stress testing. RBS is in regular contact with customers to understand the impacts on them of a sustained low oil price. This activity is backed up by a suite of early warning indicators used to identify customers who may be experiencing financial difficulty.

At the year end, the proportion of RBS's total oil and gas portfolio, excluding RCR, designated as Watchlist Red (performing customers who show signs of declining creditworthiness and so require active management) was 0.4%, of which 0.02% was managed by Restructuring.

### Counterparty credit risk

RBS mitigates counterparty credit risk arising from both derivatives and repurchase agreements through the use of netting, collateral and market standard documentation.

The other principal components of RBS's exposure to producers are Integrated Oil Companies (IOC) and National Oil Companies (NOC). IOC and NOC are less vulnerable to the oil price decline due to scale, diversification and in the case of NOC, explicit support from governments.

### Asset quality

The table below provides a breakdown of the asset quality of CIB's oil and gas sector portfolios.

Amounts owed by RBS to a counterparty are netted against amounts the same counterparty owes it, in accordance with relevant regulatory and internal policies. However, generally, this is only done if a netting and collateral agreement is in place as well as a legal opinion to the effect that the agreement is enforceable in the relevant jurisdictions.

Collateral may consist of either cash or securities. In the case of derivatives, collateral generally takes the form of cash. In the case of securities financing transactions, collateral usually takes the form of debt and, to a much lesser extent, equity securities at the outset. However, if the value of collateral falls relative to that of the obligation, RBS may require additional collateral in the form of cash (variation margin). The vast majority of agreements are subject to daily collateral calls with collateral valued using RBS's internal valuation methodologies.

Industry standard documentation, such as master repurchase agreements and credit support annexes accompanied by legal opinion, is used for financial collateral taken as part of trading activities.

RBS limits counterparty credit exposures by setting limits which take into account the potential adverse movement of an exposure after adjusting for the impact of netting and collateral where applicable.

### Mitigation of counterparty credit risk

	2014 £bn	2013 £bn	2012 £bn
Reverse repurchase agreements	64.7	76.5	104.8
Securities received as collateral (1,2)	(64.7)	(76.4)	(104.7)
Derivative assets gross exposure	354.0	288.0	441.9
Counterparty netting	(295.3)	(241.3)	(374.9)
Cash collateral held (2)	(33.3)	(24.4)	(34.3)
Securities received as collateral (2)	(7.0)	(6.0)	(5.6)

### Notes:

(1) In accordance with normal market practice, at 31 December 2014 £60.2 billion (2013 - £63.7 billion; 2012 - £100.7 billion) had been resold or re-pledged as collateral for RBS's own transactions.

(2) At fair value.

\*unaudited

RBS provides additional details on Oil & Gas exposure given its heightened relevance to investors following declines in oil prices in late 2014

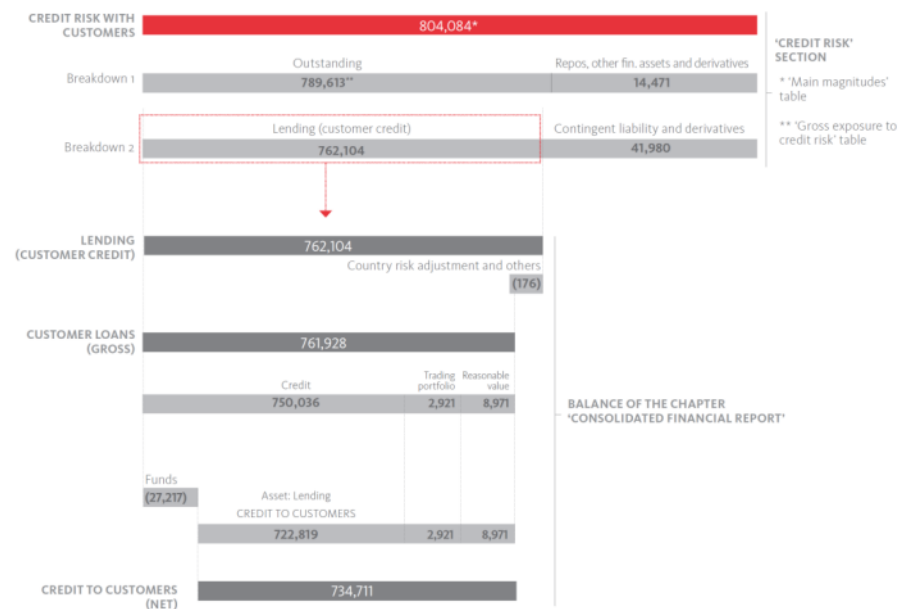


## Recommendation 26a: Summarize credit risk profile, including significant credit risk concentrations including a quantitative summary of aggregate credit risk exposures that reconciles to the balance sheet

Grupo Santander - Gross exposure to credit risk classified in accordance with legal company criteria  
Million euros. Data at 31 December 2014

	Credit to customers		Credit to entities <sup>1</sup>		Fixed income <sup>1</sup>		Derivatives and repos	Total
	Outstanding <sup>1</sup>	Commitments	Outstanding	Commitments	Sovereign	Private	REC <sup>4</sup>	
<b>Continental Europe</b>	<b>308,089</b>	<b>65,637</b>	<b>19,892</b>	<b>2,353</b>	<b>48,726</b>	<b>12,183</b>	<b>23,671</b>	<b>480,551</b>
Spain	198,175	53,326	14,506	2,219	37,256	7,713	20,032	333,227
Germany	30,896	592	1,191	-	-	233	18	32,929
Portugal	26,411	4,377	862	104	5,637	3,616	2,748	43,754
Others	52,608	7,342	3,333	30	5,833	622	873	70,641
<b>United Kingdom</b>	<b>250,921</b>	<b>42,153</b>	<b>28,633</b>	<b>-</b>	<b>6,078</b>	<b>6,883</b>	<b>14,501</b>	<b>349,169</b>
<b>Latin America</b>	<b>156,587</b>	<b>43,986</b>	<b>21,397</b>	<b>19</b>	<b>25,283</b>	<b>6,152</b>	<b>11,035</b>	<b>264,459</b>
Brazil	86,892	30,594	12,344	18	17,892	4,940	7,851	160,532
Chile	33,291	7,460	1,360	0	1,396	844	1,733	46,084
Mexico	27,198	5,685	4,395	-	4,621	341	1,399	43,639
Others	9,206	248	3,298	-	1,374	27	52	14,204
<b>United States</b>	<b>73,664</b>	<b>28,709</b>	<b>7,319</b>	<b>69</b>	<b>5,159</b>	<b>8,038</b>	<b>800</b>	<b>123,758</b>
<b>Rest of world</b>	<b>351</b>	<b>30</b>	<b>68</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>-</b>	<b>450</b>
<b>Total Group</b>	<b>789,613</b>	<b>180,515</b>	<b>77,308</b>	<b>2,440</b>	<b>85,246</b>	<b>33,258</b>	<b>50,007</b>	<b>1,218,387</b>
% of total	64.8%	14.8%	6.3%	0.2%	7.0%	2.7%	4.1%	100.0%
% change/Dec 13	10.9%	16.7%	-17.9%	28.5%	46.3%	9.8%	-14.4%	9.8%

Figures in million euros

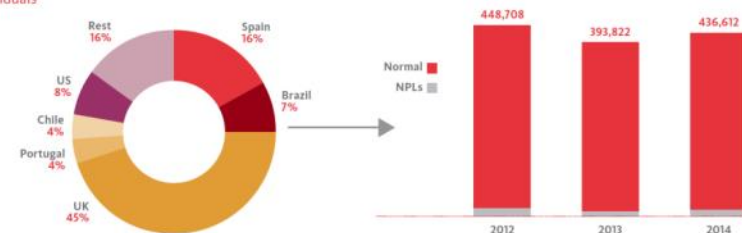


Grupo Santander -risk, NPLs, coverage, provisions and cost of credit\*  
Data at 31 December

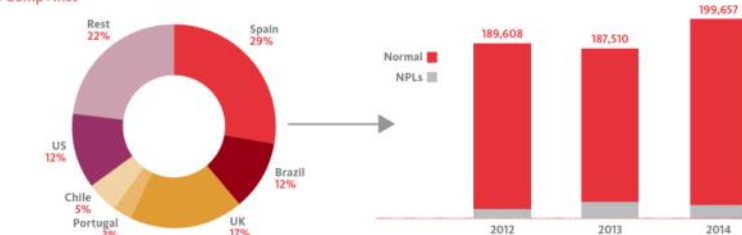
	Credit risk with customers <sup>1</sup> (million euros)			Non-performing loans (million euros)			NPL ratio (%)		
	2014	2013	2012	2014	2013	2012	2014	2013	2012
<b>Continental Europe</b>	<b>308,205</b>	<b>312,167</b>	<b>332,261</b>	<b>27,514</b>	<b>28,496</b>	<b>20,904</b>	<b>8.93</b>	<b>9.13</b>	<b>6.29</b>
Spain	182,974	189,783	210,536	13,512	14,223	8,093	7.38	7.49	3.84
Santander Consumer Finance <sup>1</sup>	63,654	58,628	59,387	3,067	2,351	2,315	4.82	4.01	3.90
Portugal	25,588	26,810	28,188	2,275	2,177	1,849	8.89	8.12	6.56
Poland	18,920	18,101	10,601	1,405	1,419	500	7.42	7.84	4.72
<b>United Kingdom</b>	<b>256,337</b>	<b>235,627</b>	<b>254,066</b>	<b>4,590</b>	<b>4,663</b>	<b>5,202</b>	<b>1.79</b>	<b>1.98</b>	<b>2.05</b>
<b>Latin America</b>	<b>167,065</b>	<b>146,956</b>	<b>155,846</b>	<b>7,767</b>	<b>7,342</b>	<b>8,369</b>	<b>4.65</b>	<b>5.00</b>	<b>5.37</b>
Brazil	90,572	79,216	89,142	4,572	4,469	6,113	5.05	5.64	6.86
Mexico	27,893	24,024	22,038	1,071	878	428	3.84	3.66	1.94
Chile	33,514	31,645	32,697	1,999	1,872	1,691	5.97	5.91	5.17
Argentina	5,703	5,283	5,378	92	75	92	1.61	1.42	1.71
<b>United States</b>	<b>72,477</b>	<b>44,372</b>	<b>49,245</b>	<b>1,838</b>	<b>1,151</b>	<b>1,351</b>	<b>2.54</b>	<b>2.60</b>	<b>2.74</b>
Puerto Rico	3,871	4,023	4,567	288	253	326	7.45	6.29	7.14
Santander Bank	45,825	40,349	44,678	647	898	1,025	1.41	2.23	2.29
SC USA	22,782	-	-	903	-	-	3.97	-	-
<b>Total Group</b>	<b>804,084</b>	<b>738,558</b>	<b>793,448</b>	<b>41,709</b>	<b>41,652</b>	<b>36,061</b>	<b>5.19</b>	<b>5.64</b>	<b>4.54</b>

### Geographic distribution and segmentation

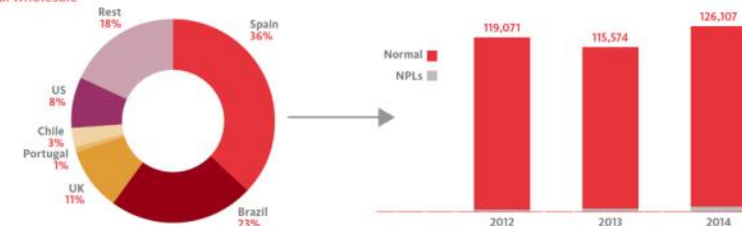
#### Individuals



#### SME+Comp+Inst



#### Global wholesale





## Recommendation 26b: Summarize credit risk profile, including detailed tables for both retail and corporate portfolios that segments them by relevant factors

### Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans <sup>(a)</sup>		Net charge-offs/ (recoveries) <sup>(b)</sup>		Average annual net charge-off/(recovery) rate <sup>(b)(c)</sup>	
	2014	2013	2014	2013	2014	2013	2014	2013
<b>Consumer, excluding credit card</b>								
<b>Loans, excluding PCI loans and loans held-for-sale</b>								
Home equity - senior lien	\$ 16,367	\$ 17,113	\$ 938	\$ 932	\$ 82	\$ 132	0.50%	0.72%
Home equity - junior lien	36,375	40,750	1,590	1,876	391	834	1.03	1.90
Prime mortgage, including option ARMs	104,921	87,162	2,190	2,666	39	59	0.04	0.07
Subprime mortgage	5,056	7,104	1,036	1,390	(27)	90	(0.43)	1.17
Auto <sup>(a)</sup>	54,536	52,757	115	161	181	158	0.34	0.31
Business banking	20,058	18,951	279	385	305	337	1.58	1.81
Student and other	10,970	11,557	270	86	347	297	3.07	2.51
<b>Total loans, excluding PCI loans and loans held-for-sale</b>	<b>248,283</b>	<b>235,394</b>	<b>6,418</b>	<b>7,496</b>	<b>1,318</b>	<b>1,907</b>	<b>0.55</b>	<b>0.82</b>
<b>Loans - PCI</b>								
Home equity	17,095	18,927	NA	NA	NA	NA	NA	NA
Prime mortgage	10,220	12,038	NA	NA	NA	NA	NA	NA
Subprime mortgage	3,673	4,175	NA	NA	NA	NA	NA	NA
Option ARMs	15,708	17,915	NA	NA	NA	NA	NA	NA
<b>Total loans - PCI</b>	<b>46,696</b>	<b>53,055</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>Total loans - retained</b>	<b>294,979</b>	<b>288,449</b>	<b>6,418</b>	<b>7,496</b>	<b>1,318</b>	<b>1,907</b>	<b>0.46</b>	<b>0.66</b>
Loans held-for-sale	395 <sup>(c)</sup>	614 <sup>(c)</sup>	91	—	—	—	—	—
<b>Total consumer, excluding credit card loans</b>	<b>295,374</b>	<b>289,063</b>	<b>6,509</b>	<b>7,496</b>	<b>1,318</b>	<b>1,907</b>	<b>0.46</b>	<b>0.66</b>
Lending-related commitments <sup>(b)</sup>	58,153	56,057						
Receivables from customers <sup>(c)</sup>	108	139						
<b>Total consumer exposure, excluding credit card</b>	<b>353,635</b>	<b>345,259</b>						
<b>Credit Card</b>								
Loans retained <sup>(a)</sup>	128,027	127,465	—	—	3,429	3,879	2.75	3.14
Loans held-for-sale	3,021	326	—	—	—	—	—	—
<b>Total credit card loans</b>	<b>131,048</b>	<b>127,791</b>	<b>—</b>	<b>—</b>	<b>3,429</b>	<b>3,879</b>	<b>2.75</b>	<b>3.14</b>
Lending-related commitments <sup>(b)</sup>	525,963	529,383						
<b>Total credit card exposure</b>	<b>657,011</b>	<b>657,174</b>						
<b>Total consumer credit portfolio</b>	<b>\$ 1,010,646</b>	<b>\$ 1,002,433</b>	<b>\$ 6,509</b>	<b>\$ 7,496</b>	<b>\$ 4,747</b>	<b>\$ 5,786</b>	<b>1.15%</b>	<b>1.40%</b>
<b>Memo: Total consumer credit portfolio, excluding PCI</b>	<b>\$ 963,950</b>	<b>\$ 949,378</b>	<b>\$ 6,509</b>	<b>\$ 7,496</b>	<b>\$ 4,747</b>	<b>\$ 5,786</b>	<b>1.30%</b>	<b>1.62%</b>

(a) At December 31, 2014 and 2013, excluded operating lease-related assets of \$6.7 billion and \$5.5 billion, respectively.

(b) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice.

(c) Receivables from customers represent margin loans to retail brokerage customers, and are included in accrued interest and accounts receivable on the Consolidated balance sheets.

### Wholesale credit portfolio

As of or for the year ended December 31, 2014 (in millions)	Selected metrics								
	Noninvestment-grade					30 days or more past due and accruing loans	Net charge-offs/(recoveries)	Credit derivative hedges <sup>(a)</sup>	Liquid securities and other cash collateral held against derivative receivables
	Credit exposure <sup>(a)</sup>	Investment-grade	Noncriticized	Criticized performing	Criticized nonperforming				
<b>Top 25 industries<sup>(a)</sup></b>									
Real Estate	\$ 107,386	\$ 80,219	\$ 25,558	\$ 1,356	\$ 253	\$ 309	\$ (9)	\$ (36)	\$ (27)
Banks & Finance Cos	68,203	58,360	9,266	508	69	46	(4)	(1,232)	(9,369)
Healthcare	57,707	49,361	7,816	488	42	193	17	(94)	(244)
Oil & Gas	48,315	33,547	14,685	82	1	15	2	(144)	(161)
Consumer Products	37,818	26,070	11,081	650	17	21	—	(20)	(2)
Asset Managers	36,374	31,880	4,436	57	1	38	(12)	(9)	(4,545)
State & Municipal Govt <sup>(b)</sup>	31,858	30,919	837	102	—	69	24	(148)	(130)
Retail & Consumer Services	28,258	18,233	9,023	971	31	56	4	(47)	(1)
Utilities	28,060	24,058	3,747	255	—	198	(3)	(155)	(193)
Central Govt	21,081	20,868	155	58	—	—	—	(11,297)	(1,071)
Technology	20,977	13,759	6,557	641	20	24	(3)	(225)	—
Machinery & Equipment Mfg	20,573	12,094	8,229	250	—	5	(2)	(157)	(19)
Transportation	16,365	11,444	4,835	86	—	5	(3)	(34)	(107)
Business Services	16,201	8,450	7,512	224	15	10	5	(9)	—
Metals/Mining	15,911	8,845	6,562	504	—	—	18	(377)	(19)
Media	14,534	9,131	5,107	266	30	1	(1)	(69)	(6)
Building Materials/Construction	13,672	6,721	6,271	674	6	12	2	(104)	—
Insurance	13,637	10,790	2,605	80	162	—	—	(52)	(2,372)
Automotive	13,586	8,647	4,778	161	—	1	(1)	(140)	—
Chemicals/Plastics	13,545	9,800	3,716	29	—	1	(2)	(14)	—
Telecom Services	13,136	8,277	4,303	546	10	—	(2)	(813)	(6)
Securities Firms & Exchanges	8,936	6,198	2,726	10	2	20	4	(102)	(216)
Agriculture/Paper Mfg	7,242	4,890	2,224	122	6	36	(1)	(4)	(4)
Aerospace/Defense	6,070	5,088	958	24	—	—	—	(71)	—
Leisure	5,562	2,937	2,023	478	124	6	—	(5)	(23)
All other <sup>(c)</sup>	210,526	190,135	19,581	622	188	1,235	(21)	(11,345)	(1,089)
<b>Subtotal</b>	<b>\$ 875,533</b>	<b>\$ 690,721</b>	<b>\$ 174,591</b>	<b>\$ 9,244</b>	<b>\$ 977</b>	<b>\$ 2,301</b>	<b>\$ 12</b>	<b>\$ (26,703)</b>	<b>\$ (19,604)</b>
Loans held-for-sale and loans at fair value		6,412							
Receivables from customers and other		28,972							
<b>Total</b>	<b>\$ 910,917</b>								

*JP Morgan provides high level summary views of credit risk in its Consumer and Wholesale portfolios as shown above by product type, geography and industry as well as additional breakouts by underlying credit quality (e.g., LTV vs FICO for mortgages, FICO for credit cards, internal rating for corporate exposure)*

## Recommendation 26b: Summarize credit risk profile, including detailed tables for both retail and corporate portfolios that segments them by relevant factors

Table 5.3 Exposure split by exposure class and exposure type, 31 December 2014

EURm	On-balance sheet items	Off-balance sheet items	Securities financing	Derivatives	Total
<b>IRB exposure classes</b>					
Institution	37,846	967	1,557	7,124	47,494
Corporate	124,997	31,174	751	14,920	171,841
– of which Advanced	102,624	25,996			128,621
Retail	155,880	11,419	0	140	167,440
– of which secured by immovable property	127,711	3,574			131,285
– of which other retail	25,912	7,208		112	33,231
– of which SME	2,257	638	0	29	2,924
Other non-credit obligation assets	2,337	7			2,343
<b>Total IRB approach</b>	<b>321,059</b>	<b>43,567</b>	<b>2,308</b>	<b>22,185</b>	<b>389,119</b>
<b>Standardised exposure classes</b>					
Central governments and central banks	61,695	924	930	3,119	66,668
Regional governments and local authorities	6,087	577	2	2,219	8,884
Institution	94	1	1,194	2,870	4,159
Corporate	1,687	77		157	1,922
Retail	4,194	101		1	4,296
Exposures secured by real estate	2,976	1,742			4,718
Other <sup>1)</sup>	6,928	200	233	441	7,803
<b>Total standardised approach</b>	<b>83,661</b>	<b>3,623</b>	<b>2,359</b>	<b>8,808</b>	<b>98,451</b>
<b>Total exposure</b>	<b>404,720</b>	<b>47,191</b>	<b>4,667</b>	<b>30,992</b>	<b>487,570</b>

<sup>1)</sup> Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

Table 5.6 Exposure split by industry group and by main exposure class, 31 December 2014

EURm	IRB approach				Standardised approach				Total 2013 <sup>2)</sup>
	Institution	Corporate	– of which SME	Retail	Other non-credit obligation assets	Central governments and central banks	Regional government and local authorities	Other <sup>1)</sup>	
Construction and engineering		4,664	2,247	255				260	5,179
Consumer durables (cars, appliances, etc.)		4,638	807	43				31	4,713
Consumer staples (food, agriculture, etc.)		14,017	9,203	171				259	14,447
Energy (oil, gas, etc.)		4,742	421	1				2	4,745
Health care and pharmaceuticals		2,031	572	72				39	2,141
Industrial capital goods		4,213	788	21				16	4,250
Industrial commercial services		13,759	4,382	337				317	14,413
IT software, hardware and services		2,132	646	58				36	2,226
Media and leisure		2,630	1,130	169				62	2,861
Metals and mining materials		1,070	298	9				20	1,098
Other financial institutions	47,494	15,665	3,069	56				5,167	68,383
Other materials (chemical, building materials, etc.)		7,932	1,532	70				178	8,180
Other, public and organisations		6,238	1,249	164,467	2,343	66,668	8,884	15,616	264,218
<b>Total exposure</b>	<b>47,494</b>	<b>171,841</b>	<b>60,258</b>	<b>167,440</b>	<b>2,343</b>	<b>66,668</b>	<b>8,884</b>	<b>22,898</b>	<b>487,570</b>
<b>Total exposure 2013</b>	<b>41,093</b>	<b>166,887</b>	<b>53,846</b>	<b>159,470</b>	<b>1,533</b>	<b>74,881</b>	<b>9,168</b>	<b>26,523</b>	<b>479,555</b>

<sup>1)</sup> Includes exposure classes public sector entities, multilateral development banks, international organisations, exposures in default, exposures associated with particularly high risk, covered bonds, securitisation positions, institutions and corporates with a short-term credit assessment, collective investment undertakings (CIU), equity and other items.

<sup>2)</sup> Distribution across industry groups restated.

Table 5.7 IRB corporate exposure split by industry group and geography, 31 December 2014

EURm	Denmark	Finland	Norway	Sweden	Baltic countries	Russia	USA	Other	Total	Total 2013
Construction and engineering	705	721	2,009	818	264	6	1	140	4,664	4,967
Consumer durables (cars, appliances, etc.)	424	594	1,845	1,118	63	31	277	286	4,638	4,672
Consumer staples (food, agriculture, etc.)	9,163	1,319	2,006	719	257	23	112	418	14,017	13,223
Energy (oil, gas, etc.)	147	92	598	257	318	1,149	106	2,075	4,742	4,847
Health care and pharmaceuticals	521	344	144	787	10	0	63	162	2,031	1,621
Industrial capital goods	794	1,163	321	1,048	11	3	352	521	4,213	5,170
Industrial commercial services	4,902	1,701	1,835	3,614	178	40	73	1,417	13,759	14,034
IT software, hardware and services	351	345	334	425	3	11	221	441	2,132	1,761
Media and leisure	583	503	579	781	44	1	0	138	2,630	2,594
Metals and mining materials	33	193	171	250	6	232	2	184	1,070	997
Other financial institutions	4,645	2,042	1,860	4,099	10	0	336	2,673	15,665	12,046
Other materials (chemical, building materials, etc.)	752	1,779	617	1,759	168	2,139	91	627	7,932	8,028
Other, public and organisations	1,832	982	650	1,171	277	12	5	1,310	6,238	7,121
Paper and forest materials	277	1,120	46	696	39	112	68	283	2,639	2,955
Real estate management and investment	10,265	7,311	10,202	15,829	1,338	197	31	823	45,996	43,043
Retail trade	4,181	2,434	1,668	2,625	501	39	125	1,072	12,645	11,600
Shipping and offshore	1,195	260	2,988	288	76	0	38	7,306	12,151	12,628
Telecommunication equipment	5	81	0	151	0	0	0	21	259	466
Telecommunication operators	408	153	383	474	1	56	67	191	1,734	1,863
Transportation	727	813	918	770	447	210	1	138	4,025	4,313
Utilities (distribution and production)	2,449	2,172	1,756	1,231	647	209	1	197	8,663	8,938
<b>Total exposure</b>	<b>44,359</b>	<b>26,123</b>	<b>30,933</b>	<b>38,908</b>	<b>4,658</b>	<b>4,470</b>	<b>1,969</b>	<b>20,421</b>	<b>171,841</b>	
<b>Total exposure 2013</b>	<b>37,803</b>	<b>24,735</b>	<b>33,564</b>	<b>37,946</b>	<b>4,349</b>	<b>5,002</b>	<b>2,067</b>	<b>21,422</b>		<b>166,887</b>

Due to new requirements the method for extracting geographical distribution has changed. Figures for 2013 are presented based on the new method to allow for comparability between the years.

Table 5.8 Exposure to central governments and central banks, distributed by credit quality step

EURm	Standard & Poor's rating		Risk weight	31 December 2014 Exposure	31 December 2013 Exposure
Credit quality step					
1	AAA to AA–		0%	65,472	74,331
2	A+ to A–		20%	525	149
3	BBB+ to BBB–		50%	478	345
4 to 6 or blank	BB+ and below, or without rating		100–250%	193	56
<b>Total</b>				<b>66,668</b>	<b>74,881</b>

## Recommendation 26c: Credit risk likely to arise from off-balance sheet commitments by type

### Off-balance sheet lending-related financial instruments, guarantees and other commitments

	Contractual amount					Carrying value <sup>(i)</sup>	
	2014					2013	2014 2013
	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total	
By remaining maturity at December 31, (in millions)							
<b>Lending-related</b>							
Consumer, excluding credit card:							
Home equity – senior lien	\$ 2,166	\$ 4,389	\$ 1,841	\$ 3,411	\$ 11,807	\$ 13,158	\$ – \$ –
Home equity – junior lien	3,469	5,920	2,141	3,329	14,859	17,837	– –
Prime mortgage <sup>(a)</sup>	8,579	–	–	–	8,579	4,817	– –
Subprime mortgage	–	–	–	–	–	–	– –
Auto	9,302	921	192	47	10,462	8,309	2 1
Business banking	10,557	807	117	413	11,894	11,251	11 7
Student and other	97	8	–	447	552	685	– –
<b>Total consumer, excluding credit card</b>	<b>34,170</b>	<b>12,045</b>	<b>4,291</b>	<b>7,647</b>	<b>58,153</b>	<b>56,057</b>	<b>13 8</b>
Credit card	525,963	–	–	–	525,963	529,383	– –
<b>Total consumer<sup>(b)</sup></b>	<b>560,133</b>	<b>12,045</b>	<b>4,291</b>	<b>7,647</b>	<b>584,116</b>	<b>585,440</b>	<b>13 8</b>
Wholesale:							
Other unfunded commitments to extend credit <sup>(c)(d)</sup>	68,688	83,877	112,992	7,119	272,676	246,495	374 432
Standby letters of credit and other financial guarantees <sup>(c)(d)(e)</sup>	22,584	29,753	34,982	2,555	89,874	92,723	788 943
Unused advised lines of credit	90,816	13,702	519	138	105,175	101,994	– –
Other letters of credit <sup>(c)</sup>	3,363	877	91	–	4,331	5,020	1 2
<b>Total wholesale<sup>(f)</sup></b>	<b>185,451</b>	<b>128,209</b>	<b>148,584</b>	<b>9,812</b>	<b>472,056</b>	<b>446,232</b>	<b>1,163 1,377</b>
<b>Total lending-related</b>	<b>\$ 745,584</b>	<b>\$ 140,254</b>	<b>\$ 152,875</b>	<b>\$ 17,459</b>	<b>\$ 1,056,172</b>	<b>\$ 1,031,672</b>	<b>\$ 1,176 \$ 1,385</b>
<b>Other guarantees and commitments</b>							
Securities lending indemnification agreements and guarantees <sup>(g)</sup>	\$ 171,059	\$ –	\$ –	\$ –	\$ 171,059	\$ 169,709	\$ – \$ –
Derivatives qualifying as guarantees	3,009	167	12,313	38,100	53,589	56,274	80 72
Unsettled reverse repurchase and securities borrowing agreements	40,993	–	–	–	40,993	38,211	– –
Loan sale and securitization-related indemnifications:							
Mortgage repurchase liability	NA	NA	NA	NA	NA	NA	275 681
Loans sold with recourse	NA	NA	NA	NA	6,063	7,692	102 131
<b>Other guarantees and commitments<sup>(h)</sup></b>	<b>487</b>	<b>506</b>	<b>3,391</b>	<b>1,336</b>	<b>5,720</b>	<b>6,786</b>	<b>(121) (99)</b>

### Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2014				2013			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
<b>Allowance for lending-related commitments</b>								
Beginning balance at January 1,	\$ 8	\$ –	\$ 697	\$ 705	\$ 7	\$ –	\$ 661	\$ 668
Provision for lending-related commitments	5	–	(90)	(85)	1	–	36	37
Other	–	–	2	2	–	–	–	–
<b>Ending balance at December 31,</b>	<b>\$ 13</b>	<b>\$ –</b>	<b>\$ 609</b>	<b>\$ 622</b>	<b>\$ 8</b>	<b>\$ –</b>	<b>\$ 697</b>	<b>\$ 705</b>

### Note 29 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for probable credit losses inherent in consumer (excluding credit card) and wholesale lending commitments, an allowance for credit losses on lending-related

commitments is maintained. See Note 15 for further discussion regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2014 and 2013. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases as permitted by law, without notice. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due.

December 31, (in millions)	2014			
	Credit exposure	On-balance sheet		Off-balance sheet <sup>(a)</sup>
		Loans	Derivatives	
Total consumer, excluding credit card	\$ 353,635	\$ 295,374	\$ —	\$ 58,153
Total credit card	657,011	131,048	—	525,963
Total consumer	1,010,646	426,422	—	584,116
Wholesale-related				
Real Estate	107,386	79,113	333	27,940
Banks & Finance Cos	68,203	24,244	22,057	21,902
Healthcare	57,707	13,793	4,630	39,284
Oil & Gas	48,315	15,616	1,872	30,827
Consumer Products	37,818	10,646	593	26,579
Asset Managers	36,374	8,043	9,569	18,762
State & Municipal Govt	31,858	7,593	4,079	20,186
Retail & Consumer Services	28,258	7,752	361	20,145
Utilities	28,060	4,843	2,317	20,900
Central Govt	21,081	1,081	11,819	8,181
Technology	20,977	4,727	1,341	14,909
Machinery & Equipment Mfg	20,573	6,537	553	13,483
Transportation	16,365	9,107	699	6,559
Business Services	16,201	4,867	456	10,878
Metals/Mining	15,911	5,628	601	9,682
All other <sup>(a)</sup>	320,446	120,912	17,695	181,839
Subtotal	875,533	324,502	78,975	472,056
Loans held-for-sale and loans at fair value	6,412	6,412	—	—
Receivables from customers and other <sup>(b)</sup>	28,972	—	—	—
Total wholesale-related	910,917	330,914	78,975	472,056
Total exposure <sup>(c)</sup>	\$ 1,921,563	\$ 757,336	\$ 78,975	\$ 1,056,172

(a) For more information on exposures to SPEs included within All other, see Note 16.

(b) Primarily consists of margin loans to prime brokerage customers that are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm did not hold any reserves for credit impairment on these receivables.

(c) For further information regarding on-balance sheet credit concentrations by major product and/or geography, see Note 6 and Note 14. For information regarding concentrations of off-balance sheet lending-related financial instruments by major product, see Note 29.

(d) Represents lending-related financial instruments.

*JP Morgan breaks out lending commitments by line of business and maturity and provides a summary of provisions and reserves for lending commitments by major line of business*



## Recommendation 26c: Credit risk likely to arise from off-balance sheet commitments by type

Credit Quality of Financial Instruments neither Past Due nor Impaired

	Dec 31, 2014					
in € m. <sup>1</sup>	IAAA-IAA	IA	IBBB	IBB	IB	ICCC and below
Due from banks	17,220	896	1,161	727	48	4
Interest-earning deposits with banks	57,175	4,514	1,081	578	28	141
Central bank funds sold and securities purchased under resale agreements	854	13,564	1,553	1,414	332	79
Securities borrowed	18,705	5,200	1,114	727	88	0
Financial assets at fair value through profit or loss <sup>2</sup>	312,470	385,335	81,930	58,678	16,094	7,529
Trading assets	58,014	15,973	18,230	21,767	7,061	4,085
Positive market values from derivative financial instruments	208,057	348,179	46,675	20,062	5,120	1,865
Financial assets designated at fair value through profit or loss	46,399	21,183	17,025	16,848	3,914	1,578
thereof:	0	0	0	0	0	0
Securities purchased under resale agreement	17,213	13,820	12,432	14,219	1,529	1,259
Securities borrowed	17,110	3,266	20	7	0	0
Financial assets available for sale <sup>2,3</sup>	50,810	3,375	1,782	3,958	194	1,719
Loans <sup>4</sup>	47,554	56,865	112,106	130,438	39,181	10,313
thereof:						
IAS 39 reclassified loans	2,109	1,353	1,408	1,051	685	274
Other assets subject to credit risk	13,538	48,714	7,049	13,927	1,105	728
Financial guarantees and other credit related contingent liabilities <sup>5</sup>	6,281	17,696	20,190	11,640	4,929	1,352
Irrevocable lending commitments and other credit related commitments <sup>5</sup>	22,938	39,336	40,145	31,492	18,924	1,612
Total	547,546	575,494	268,110	253,577	80,924	23,477

<sup>1</sup> All amounts at carrying value unless otherwise indicated.<sup>2</sup> Excludes equities, other equity interests and commodities.<sup>3</sup> Includes past due instruments in order to be consistent with the Asset Quality section of this report.<sup>4</sup> Gross loans less deferred expense/unearned income before deductions of allowance for loan losses.<sup>5</sup> Figures are reflected at notional amounts.

Main credit exposure categories by geographical region

	Dec 31, 2014							
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments <sup>2</sup>	Contingent liabilities	OTC derivatives <sup>3</sup>	Traded Loans	Traded Bonds	Debt securities available for sale	Repo and repo-style transactions <sup>4</sup>
Germany	202,558	26,176	14,356	3,250	1,206	6,679	16,339	13,533
Western Europe (excluding Germany)	94,386	36,781	18,984	18,190	3,295	21,516	33,683	23,935
thereof:								
France	2,674	6,053	2,434	936	423	3,684	5,346	3,656
Luxembourg	14,156	3,835	754	1,766	552	2,028	6,240	190
Netherlands	10,630	5,548	2,548	5,257	436	2,726	7,751	348
United Kingdom	7,878	9,118	1,911	1,058	586	4,530	5,141	13,607
Eastern Europe	10,524	1,755	2,136	927	1,542	2,494	561	243
thereof:								
Poland	7,055	651	315	74	0	1,353	64	0
Russia	2,068	524	693	205	1,081	238	0	39
North America	55,540	83,400	14,291	14,338	7,531	52,898	5,736	71,306
thereof:								
Canada	880	2,237	932	1,087	240	1,309	278	1,325
Cayman Islands	2,571	1,982	61	542	322	2,256	124	12,660
U.S.	45,899	77,960	12,881	12,614	6,725	48,669	5,323	56,630
Central and South America	5,071	777	1,445	1,350	604	2,936	24	1,151
thereof:								
Brazil	1,787	210	781	241	175	1,558	0	656
Mexico	363	90	51	447	199	450	19	301
Asia/Pacific	40,081	4,774	10,062	8,643	2,226	20,677	2,467	13,818
thereof:								
China	9,372	331	950	523	180	1,698	0	1,320
Japan	866	489	397	3,398	173	2,371	90	4,250
South Korea	2,069	11	1,095	591	0	842	0	342
Africa	1,924	627	805	351	124	541	49	520
Other	640	156	7	29	126	67	273	0
Total	410,825	154,446	62,087	47,078	16,654	107,808	59,132	124,507

<sup>1</sup> Includes impaired loans amounting to € 9.3 billion as of December 31, 2014.<sup>2</sup> Includes irrevocable lending commitments related to consumer credit exposure of € 9.4 billion as of December 31, 2014.<sup>3</sup> Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.<sup>4</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

Main Credit Exposure Categories by Business Divisions

	Dec 31, 2014							
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments <sup>2</sup>	Contingent liabilities	OTC derivatives <sup>3</sup>	Traded Loans	Traded Bonds	Debt securities available for sale	Repo and repo-style transactions <sup>4</sup>
Corporate Banking & Securities	61,820	119,995	4,865	43,407	14,865	92,272	34,411	112,605
Private & Business Clients	214,688	11,687	1,735	464	0	2	16,665	8,714
Global Transaction Banking	77,334	17,121	51,663	595	614	87	184	3,159
Deutsche Asset & Wealth Management	38,676	4,158	2,681	839	12	7,940	3,403	11
Non-Core Operations Unit	18,049	954	1,072	1,760	1,163	7,509	4,358	17
Consolidation & Adjustments	258	530	71	13	0	0	111	0
Total	410,825	154,446	62,087	47,078	16,654	107,808	59,132	124,507

<sup>1</sup> Includes impaired loans amounting to € 9.3 billion as of December 31, 2014.<sup>2</sup> Includes irrevocable lending commitments related to consumer credit exposure of € 9.4 billion as of December 31, 2014.<sup>3</sup> Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.<sup>4</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.

Main Credit Exposure Categories by Industry Sectors

	Dec 31, 2014							
in € m.	Loans <sup>1</sup>	Irrevocable lending commitments <sup>2</sup>	Contingent liabilities	OTC derivatives <sup>3</sup>	Traded Loans	Traded Bonds	Debt securities available for sale	Repo and repo-style transactions <sup>4</sup>
Banks and insurance	24,179	23,701	14,368	18,967	4,291	34,856	19,227	110,112
Fund management activities	12,145	6,670	612	3,065	149	3,051	349	49
Manufacturing	25,633	40,483	18,205	2,292	1,604	2,312	204	0
Wholesale and retail trade	15,781	11,975	5,926	1,156	865	839	94	0
Households	197,853	11,203	2,192	739	183	2	0	35
Commercial real estate activities <sup>5</sup>	35,743	3,864	646	2,054	3,129	606	74	576
Public sector	16,790	1,696	231	7,416	446	55,181	34,846	615
Other	82,700 <sup>6</sup>	54,855	19,008	11,389	5,989	10,963	4,339	13,119
Total	410,825	154,446	62,087	47,078	16,654	107,808	59,132	124,507

<sup>1</sup> Includes impaired loans amounting to € 9.3 billion as of December 31, 2014.<sup>2</sup> Includes irrevocable lending commitments related to consumer credit exposure of € 9.4 billion as of December 31, 2014.<sup>3</sup> Includes the effect of netting agreements and cash collateral received where applicable. Excludes derivatives qualifying for hedge accounting.<sup>4</sup> Before reflection of collateral and limited to securities purchased under resale agreements and securities borrowed.<sup>5</sup> Commercial real estate activities are based on counterparty industry classification, irrespective of business unit attribution. The business units mostly involved are "Commercial Real Estate" (€ 17.2 billion) and "PBC Mortgages" (€ 11.2 billion).<sup>6</sup> Loan exposures for Other include lease financing.

*Deutsche Bank incorporates lending commitments and contingent liabilities within its consolidated credit risk tables with breakouts by credit quality, business division, geography, industry, etc.*

## Recommendation 27: Policies for identifying impaired or non-performing loans, including how the bank defines impaired or non-performing, restructured and returned-to-performing (cured) loans as well as explanations of loan forbearance policies (1 of 2)

### Consumer loans

Consumer loans represent loans and leases managed primarily by the *Global Consumer Banking* businesses and Citi Holdings.

### Consumer non-accrual and re-aging policies

As a general rule, interest accrual ceases for installment and real estate (both open- and closed-end) loans when payments are 90 days contractually past due. For credit cards and other unsecured revolving loans, however, Citi generally accrues interest until payments are 180 days past due. As a result of OCC guidance, home equity loans in regulated bank entities are classified as non-accrual if the related residential first mortgage is 90 days or more past due. Also as a result of OCC guidance, mortgage loans in regulated bank entities discharged through Chapter 7 bankruptcy, other than FHA-insured loans, are classified as non-accrual. Commercial market loans are placed on a cash (non-accrual) basis when it is determined, based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful or when interest or principal is 90 days past due.

Loans that have been modified to grant a concession to a borrower in financial difficulty may not be accruing interest at the time of the modification. The policy for returning such modified loans to accrual status varies by product and/or region. In most cases, a minimum number of payments (ranging from one to six) is required, while in other cases the loan is never returned to accrual status. For regulated bank entities, such modified loans are returned to accrual status if a credit evaluation at the time of, or subsequent to, the modification indicates the borrower is able to meet the restructured terms, and the borrower is current and has demonstrated a reasonable period of sustained payment performance (minimum six months of consecutive payments).

For U.S. consumer loans, generally one of the conditions to qualify for modification is that a minimum number of payments (typically ranging from one to three) must be made. Upon modification, the loan is re-aged to current status. However, re-aging practices for certain open-ended consumer loans, such as credit cards, are governed by Federal Financial Institutions Examination Council (FFIEC) guidelines. For open-ended consumer loans subject to FFIEC guidelines, one of the conditions for the loan to be re-aged to current status is that at least three consecutive minimum monthly payments, or the equivalent amount, must be received. In addition, under FFIEC guidelines, the number of times that such a loan can be re-aged is subject to limitations (generally once in 12 months and twice in five years). Furthermore, Federal Housing Administration (FHA) and Department of Veterans Affairs (VA) loans may only be modified under those respective agencies' guidelines and payments are not always required in order to re-age a modified loan to current.

### Consumer charge-off policies

Citi's charge-off policies follow the general guidelines below:

- Unsecured installment loans are charged off at 120 days contractually past due.
- Unsecured revolving loans and credit card loans are charged off at 180 days contractually past due.
- Loans secured with non-real estate collateral are written down to the estimated value of the collateral, less costs to sell, at 120 days contractually past due.
- Real estate-secured loans are written down to the estimated value of the property, less costs to sell, at 180 days contractually past due.
- Real estate-secured loans are charged off no later than 180 days contractually past due if a decision has been made not to foreclose on the loans.
- Non-bank real estate-secured loans are charged off at the earlier of 180 days contractually past due, if there have been no payments within the last six months, or 360 days contractually past due, if a decision has been made not to foreclose on the loans.
- Non-bank loans secured by real estate are written down to the estimated value of the property, less costs to sell, at the earlier of the receipt of title, the initiation of foreclosure (a process that must commence when payments are 120 days contractually past due), when the loan is 180 days contractually past due if there have been no payments within the past six months or 360 days contractually past due.
- Non-bank unsecured personal loans are charged off at the earlier of 180 days contractually past due if there have been no payments within the last six months, or 360 days contractually past due.
- Unsecured loans in bankruptcy are charged off within 60 days of notification of filing by the bankruptcy court or in accordance with Citi's charge-off policy, whichever occurs earlier.
- Consistent with OCC guidance, real estate-secured loans that were discharged through Chapter 7 bankruptcy, other than FHA-insured loans, are written down to the estimated value of the property, less costs to sell. Other real estate-secured loans in bankruptcy are written down to the estimated value of the property, less costs to sell, at the later of 60 days after notification or 60 days contractually past due.
- Non-bank loans secured by real estate that are discharged through Chapter 7 bankruptcy are written down to the estimated value of the property, less costs to sell, at 60 days contractually past due.
- Non-bank unsecured personal loans in bankruptcy are charged off when they are 30 days contractually past due.
- Commercial market loans are written down to the extent that principal is judged to be uncollectable.

### Impaired Consumer Loans

As a result of OCC guidance issued in the third quarter of 2012, mortgage loans to borrowers who have gone through Chapter 7 bankruptcy are classified as troubled debt restructurings (TDRs). These TDRs, other than FHA-insured loans, are written down to collateral value less cost to sell. FHA-insured loans are reserved based on a discounted cash flow model.

The following tables present information about total impaired consumer loans at and for the periods ended December 31, 2014 and 2013, respectively, and for the years ended December 31, 2014 and 2013 for interest income recognized on impaired consumer loans:

At and for the year ended December 31, 2014					
In millions of dollars	Recorded investment <sup>(1)(2)</sup>	Unpaid principal balance	Related specific allowance <sup>(3)</sup>	Average carrying value <sup>(4)</sup>	Interest income recognized <sup>(5)(6)</sup>
Mortgage and real estate					
Residential first mortgages	\$13,551	\$14,387	\$1,909	\$15,389	\$ 690
Home equity loans	2,029	2,674	599	2,075	74
Credit cards	2,407	2,447	849	2,732	196
Installment and other					
Individual installment and other	948	963	450	975	124
Commercial market loans	423	599	110	381	22
<b>Total</b>	<b>\$19,358</b>	<b>\$21,070</b>	<b>\$3,917</b>	<b>\$21,552</b>	<b>\$1,106</b>

(1) Recorded investment in a loan includes net deferred loan fees and costs, unamortized premium or discount and direct write-downs and includes accrued interest only on credit card loans.

(2) \$1,896 million of residential first mortgages, \$554 million of home equity loans and \$158 million of commercial market loans do not have a specific allowance.

(3) Included in the Allowance for loan losses.

(4) Average carrying value represents the average recorded investment ending balance for the last four quarters and does not include the related specific allowance.

(5) Includes amounts recognized on both an accrual and cash basis.

(6) Cash interest receipts on smaller-balance homogeneous loans are generally recorded as revenue. The interest recognition policy for commercial market loans is identical to that for corporate loans, as described below.

### Consumer Troubled Debt Restructurings

The following tables present consumer TDRs occurring during the years ended December 31, 2014 and 2013:

At and for the year ended December 31, 2014						
In millions of dollars except number of loans modified	Number of loans modified	Post-modification recorded investment <sup>(1)(2)</sup>	Deferred principal <sup>(3)</sup>	Contingent principal forgiveness <sup>(4)</sup>	Principal forgiveness <sup>(5)</sup>	Average interest rate reduction
<b>North America</b>						
Residential first mortgages	20,114	\$2,478	\$52	\$36	\$16	1%
Home equity loans	7,444	279	3	—	14	2
Credit cards	185,962	808	—	—	—	15
Installment and other revolving	46,838	351	—	—	—	7
Commercial markets <sup>(6)</sup>	191	35	—	—	1	—
<b>Total<sup>(7)</sup></b>	<b>260,549</b>	<b>\$3,951</b>	<b>\$55</b>	<b>\$36</b>	<b>\$31</b>	
<b>International</b>						
Residential first mortgages	3,150	\$ 103	\$—	\$—	\$ 1	1%
Home equity loans	67	11	—	—	—	—
Credit cards	139,128	447	—	—	9	13
Installment and other revolving	61,563	292	—	—	7	9
Commercial markets <sup>(6)</sup>	346	200	—	—	—	—
<b>Total<sup>(7)</sup></b>	<b>204,254</b>	<b>\$1,053</b>	<b>\$—</b>	<b>\$—</b>	<b>\$17</b>	



## Recommendation 27: Policies for identifying impaired or non-performing loans, including how the bank defines impaired or non-performing, restructured and returned-to-performing (cured) loans as well as explanations of loan forbearance policies (2 of 2)

### Corporate loans

Corporate loans represent loans and leases managed by ICG or, to a much lesser extent, Citi Holdings. Corporate loans are identified as impaired and placed on a cash (non-accrual) basis when it is determined, based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful or when interest or principal is 90 days past due, except when the loan is well collateralized and in the process of collection. Any interest accrued on impaired corporate loans and leases is reversed at 90 days and charged against current earnings, and interest is thereafter included in earnings only to the extent actually received in cash. When there is doubt regarding the ultimate collectability of principal, all cash receipts are thereafter applied to reduce the recorded investment in the loan.

Impaired corporate loans and leases are written down to the extent that principal is deemed to be uncollectable. Impaired collateral-dependent loans and leases, where repayment is expected to be provided solely by the sale of the underlying collateral and there are no other available and reliable sources of repayment, are written down to the lower of cost or collateral value. Cash-basis loans are returned to accrual status when all contractual principal and interest amounts are reasonably assured of repayment and there is a sustained period of repayment performance in accordance with the contractual terms.

Citigroup has a risk management process to monitor, evaluate and manage the principal risks associated with its corporate loan portfolio. As part of its risk management process, Citi assigns numeric risk ratings to its corporate loan facilities based on quantitative and qualitative assessments of the obligor and facility. These risk ratings are reviewed at least annually or more often if material events related to the obligor or facility warrant. Factors considered in assigning the risk ratings include financial condition of the obligor, qualitative assessment of management and strategy, amount and sources of repayment, amount and type of collateral and guarantee arrangements, amount and type of any contingencies associated with the obligor, and the obligor's industry and geography.

The obligor risk ratings are defined by ranges of default probabilities. The facility risk ratings are defined by ranges of loss norms, which are the product of the probability of default and the loss given default. The investment grade rating categories are similar to the category BBB-/Baa3 and above as defined by S&P and Moody's. Loans classified according to the bank regulatory definitions as special mention, substandard and doubtful will have risk ratings within the non-investment grade categories.

### Corporate Loan Delinquency and Non-Accrual Details at December 31, 2014

<i>In millions of dollars</i>	30-89 days past due and accruing <sup>(1)</sup>	≥ 90 days past due and accruing <sup>(1)</sup>	Total past due and accruing	Total non-accrual <sup>(2)</sup>	Total current <sup>(2)</sup>	Total loans <sup>(4)</sup>
Commercial and Industrial	\$ 50	\$—	\$ 50	\$ 575	\$109,764	\$110,389
Financial Institutions	2	—	2	250	67,580	67,832
Mortgage and real estate	86	—	86	252	38,135	38,473
Leases	—	—	—	51	2,062	2,113
Other	49	1	50	55	49,844	49,949
Loans at fair value						5,858
Purchased Distressed Loans						51
<b>Total</b>	<b>\$187</b>	<b>\$ 1</b>	<b>\$188</b>	<b>\$1,183</b>	<b>\$267,385</b>	<b>\$274,665</b>

(1) Corporate loans that are 90 days past due are generally classified as non-accrual. Corporate loans are considered past due when principal or interest is contractually due but unpaid.

(2) Citi generally does not manage corporate loans on a delinquency basis. Non-accrual loans generally include those loans that are ≥ 90 days past due or those loans for which Citi believes, based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful.

(3) Corporate loans are past due when principal or interest is contractually due but unpaid. Loans less than 30 days past due are presented as current.

(4) Total loans include loans at fair value, which are not included in the various delinquency columns.

### Non-Accrual Corporate Loans

At and for the year ended December 31, 2014					
<i>In millions of dollars</i>	Recorded Investment <sup>(1)</sup>	Unpaid principal balance	Related specific allowance	Average carrying value <sup>(2)</sup>	Interest income recognized <sup>(3)</sup>
Non-accrual corporate loans					
Commercial and Industrial	\$ 575	\$ 863	\$155	\$ 658	\$32
Financial Institutions	250	262	7	278	4
Mortgage and real estate	252	287	24	263	8
Lease financing	51	53	29	85	—
Other	55	68	21	60	3
<b>Total non-accrual corporate loans</b>	<b>\$1,183</b>	<b>\$1,533</b>	<b>\$236</b>	<b>\$1,344</b>	<b>\$47</b>

At and for the year ended December 31, 2013					
<i>In millions of dollars</i>	Recorded Investment <sup>(1)</sup>	Unpaid principal balance	Related specific allowance	Average carrying value <sup>(2)</sup>	Interest income recognized <sup>(3)</sup>
Non-accrual corporate loans					
Commercial and Industrial	\$ 769	\$1,074	\$ 79	\$ 967	\$30
Financial Institutions	365	382	3	378	9
Mortgage and real estate	515	651	35	585	3
Lease financing	189	190	131	189	—
Other	70	216	20	64	1
<b>Total non-accrual corporate loans</b>	<b>\$1,908</b>	<b>\$2,513</b>	<b>\$268</b>	<b>\$2,183</b>	<b>\$43</b>

(1) Recorded investment in a loan includes net deferred loan fees and costs, unamortized premium or discount, less any direct write-downs.

(2) Average carrying value represents the average recorded investment balance and does not include related specific allowance.

(3) Interest income recognized for the year ended December 31, 2012 was \$98 million.

N/A Not Applicable



## Recommendation 27: Policies for identifying impaired or non-performing loans, including how the bank defines impaired or non-performing, restructured and returned-to-performing (cured) loans as well as explanations of loan forbearance policies (1 of 2)

### Definition of impaired and past-due exposures

According to Bank of Italy regulations, as defined in circular 272 of July 30, 2008 and subsequent amendments, impaired exposures, those that present the characteristics listed in paragraphs 58-62 of IAS 39, are classified into the following categories:

- **non-performing loans** – formally impaired loans, being exposure to insolvent borrowers, even if the insolvency has not been recognized in a court of law, or borrowers in a similar situation. Measurement is generally on a loan-by-loan basis (coverage ratios statistically and automatically determined for some loan portfolios below a predefined threshold are also checked), for loans singularly not significant, on a portfolio basis for homogeneous categories of loans;
- **doubtful loans** – exposure to borrowers experiencing temporary difficulties, which the Group believes may be overcome within a reasonable period of time. Doubtful loans also include loans not classified as non-performing granted to borrowers other than government entities where the following conditions are met:
  - They have fallen due and remained unpaid for more than 270 days (or for more than 150 or 180 days for consumer credit exposure with an original term of less than 36 months, or 36 months or over, respectively);
  - The amount of the above exposure to the same borrower and other defaulted payments that are less than 270 days overdue, is at least 10% of the total exposure to that borrower. Doubtful loans are valued analytically when special elements make this advisable or by applying analytically flat percentages on a historical or stochastic basis in the remaining cases.
- **restructured loans** – exposure to borrowers with whom a rescheduling agreement has been entered into including renegotiated pricing at interest rates below market or the conversion of part of a loan into shares ("debt to equity swap") and/or any reduction of principal; measurement is on a loan-by-loan basis, including discounted cost due to renegotiation of the interest rate at a rate lower than the original contractual rate. Restructured exposures can be reclassified under unimpaired loans only after two years have passed from the date of signing of the restructuring agreement and a resolution has been adopted by the competent corporate bodies declaring that the debtor's full solvency has been restored and that there are no outstanding balances on all existing lines of credit. Loans under renegotiation involving a debt/equity swap are valued, pending swap finalization, on the basis of the conversion agreements entered into on the balance-sheet date. Any differences between the value of the loans and the fair value of the shares at the initial recognition are taken to profit and loss as write-downs;
- **past-due impaired loans** – total exposure to any borrower not included in the other categories, which at the balance-sheet date has expired facilities or unauthorized overdrafts that are more than 90 days past due and meet the requirements set out by supervisory regulations for their classification under the "past due exposures" category (TSA banks) or under the "defaulted exposures" category (IRB banks). Total exposure is recognized in this category if, at the balance-sheet date, either:
  - the expired or unauthorized borrowing;
  - or:
  - the average daily amount of expired or unauthorized borrowings during the last preceding quarter, is equal to or exceeds 5% of total exposure.

Overdue exposures are valued using a statistical approach based on historical data, applying where available the degree of risk as measured by the risk factor used for Regulation (EU) n. 575/2013 (CRR) on prudential requirements for credit institutions and investment firms reporting (LGD – Loss given default).

Collective assessment is used for groups of loans for which individually there are no indicators of impairment: to these portfolios a latent impairment can be attributed, according to the method described below, inter alia on the basis of the risk factors used under supervisory regulations CRR.

### Description of methodology applied to determine write-downs

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables are recognized on the date of contract signing, which normally coincides with the date of disbursement to the borrower.

These items include debt instruments with the above characteristics (included host contract of hybrid instruments from which an embedded derivative has been bifurcated) or those subject to portfolio reclassification in accordance with the rules of IAS 39 and the net value of finance leases of assets under construction or awaiting lease, provided the leases have the characteristics of contracts entailing the transfer of risk.

After initial recognition at fair value, which is usually the price paid including transaction costs and income directly attributable to the acquisition or issuance of the financial asset (even if not yet paid), a loan or receivable is measured at amortized cost, which can be adjusted to take account of any write-downs/write-backs resulting from the valuation process.

A gain or loss on loans and receivables is recognized in profit or loss:

- when a loan or receivable is derecognized: in item 100 (a) "Gains (losses) on disposal"; or:
- when a loan or receivable is impaired (or the impairment loss previously recognized is reversed): in item 130 (a) "Net losses/recoveries on impairment (a) loans and receivables".

Interest on loans and receivables is recognized in profit or loss on an accrual basis by using the effective interest rate method under item 10. "Interest income and similar revenue".

Delay interest is taken to the income statement on collection or receipt.

Loans and receivables are reviewed in order to identify those that, following events occurring after initial recognition, show objective evidence of possible impairment. These impaired loans are reviewed and analyzed periodically at least once a year.

A loan or receivable is deemed impaired when it is considered that it will probably not be possible to recover all the amounts due according to the contractual terms, or equivalent value.

Allowances for impairment of loans and receivables are based on the present value of expected cash flows of principal and interest; in determining the present value of future cash flows, the basic requirement is the identification of estimated collections, the timing of payments and the rate used.

The amount of the loss on impaired exposure classified as non-performing, doubtful or restructured according to the categories specified below, is the difference between the carrying value and the present value of estimated cash flows discounted at the original interest rate of the financial asset. If the original rate is not directly available, or if obtaining it is too burdensome, its best approximation will be applied.

For all fixed rate positions the interest rate so determined is kept constant also in subsequent financial years, while for floating rate positions the interest rate is updated with respect to the floating component used as a reference while keeping the spread originally set constant.

Recovery times are estimated on the basis of business plans or forecasts based on historical recovery experience observed for similar classes of loans, taking into account the segment of the customers, the type of loan, the type of security and any other factors considered relevant.

Any subsequent change vis-à-vis initial expectations of the amount or timing of expected cash flows of principal and interest causes a change in allowances for impairment and is recognized in profit or loss in item 130(a) "Impairment losses (a) loans and receivables".

Write-downs of impaired loans are classified as specific in the relevant income statement item even when the calculation is flat-rate or statistical, as indicated below.

When the reasons for the impairment no longer exist, and this assessment is objectively attributable to an event such as an improvement in the debtor's credit worthiness occurred after the impairment, a reversal is made in the same profit or loss item, within the amount of the amortized cost that there would have been if there had been no impairments.

Derecognition of a loan or receivable in its entirety (write-off) is made when the legal rights on the loan have failed or the loan or receivable is deemed to be irrecoverable or is written off. Write-offs are recognized directly in profit or loss under item 130(a) "Net losses/recoveries on impairment (a) loans and receivables" and reduce the amount of the principal of the loan or receivable. Reversals of all or part of amounts previously written off are recognized in the same item.

## Recommendation 27: Policies for identifying impaired or non-performing loans, including how the bank defines impaired or non-performing, restructured and returned-to-performing (cured) loans as well as explanations of loan forbearance policies (2 of 2)

### Disclosure related to Forborne exposures and new EBA definition of Non-Performing exposures

On July 24, 2014 the EBA published the "Final Draft Implementing Technical Standards on Supervisory reporting on forbearance and non-performing exposures" (EBA/ITS/2013/03/rev1 24/7/2014), approved by the European Commission on January 9, 2015, containing the implementing technical standards relating to consolidated harmonised supervisory statistical reporting (FINREP).

In addition to providing the required reporting, the EBA document explains the guidelines that govern the classification of an exposure as performing, non-performing or forborne.

Non-performing exposures are those that satisfy one or both of the following criteria:

- material exposures past-due by more than 90 days;
- exposures for which the bank considers it unlikely that the debtor can entirely fulfil its credit obligations, without proceeding with the enforcement and realisation of collateral, regardless of whether exposures are past due and/or over the limit and regardless of days past due.

According to the EBA guidelines this classification applies irrespective of the classification of an exposure as in default for regulatory purposes in accordance with Art. 178 of Regulation 575/2013 (CRR) or impaired for accounting purposes. With reference to December 31, 2014, the rules for classification of loans in risk categories for the purposes of the consolidated financial statements were unchanged compared to December 31, 2013 and reflect the regulations issued by the Bank of Italy in force at the time. In particular the volume in the financial statements of impaired assets determined according to the Bank of Italy instructions in force (Circular 272 of July 2008 as updated) is substantially in keeping with the perimeter of EBA NPE assets. In this regard we can note that for the purposes of classification in the different risk classes, the consolidated companies subject to Supervision by Authorities other than the Bank of Italy are bound to observe the legal and regulatory rules issued by the local Authorities. Therefore, for the purposes of preparing the Consolidated Financial Statements according to the instructions issued by the Italian Supervisory Authority, with reference to the Group's foreign Entities, in continuity with the previous periods, opportune measures were adopted with the aim of reconciling results attributable to risk classes, which are otherwise not altogether uniform.

The EBA guidelines themselves define Forborne as exposures to which tolerance (Forbearance) measures have been agreed. That is to say concessions have been granted to a debtor that has faced - or is about to face - difficulties in observing its financial commitments (financial difficulties).

Under the EBA standards, forbearance is defined as:

- a contractual modification favourable to the debtor, granted solely in view of its financial difficulties;
- refinancing, i.e. granting a new loan to a debtor in financial difficulties, to enable the fulfilment of the existing obligation.

The new definitions came into force for the purpose of consolidated harmonised supervisory statistical quarterly reporting (FINREP), with reference date September 30, 2014.

With effect from January 1, 2015, the criteria for classification of impaired financial assets were revised by the Bank of Italy, in order to align them to the new definitions of Non-Performing Exposures and Forbearance, introduced by the aforementioned EBA ITSs (see 7th update of Circular No. 272 of July 30, 2008 – "Accounts Matrix" issued by the Bank of Italy on January 20, 2015).

These regulatory developments imply in coming periods an adjustment of credit processes, which will allow full compliance with the new classification rules, monitoring of the dynamics of these exposures, as well as preparation of the required reports to the supervisory authority.

In order to implement the classification rules introduced by the EBA in the Group's management and accounting systems, the Group has launched the related implementing activities through two phases.

In the first phase the approach adopted was based on the best approximations obtainable from the existing management systems, for the purposes of producing FINREP reports. This was already used for the data at September 30 and December 31, 2014. Pending the necessary infrastructure changes (processes and related support applications), the database used to define the Forborne perimeter consists in this phase of information already available within the management and accounting systems. These systems already make it possible to place the exposures in the "restructured" risk class under the terms of the Bank of Italy classification. This classification, defines as "restructured loan"<sup>3</sup> a restructuring agreement which provides for a moratorium on loan payments and simultaneous renegotiation at below market interest rates, the conversion of part of the loans into shares and/or any reduction of the principal leading to a loss. In addition, the existing management and accounting systems enable the tracking of an exposure as a concession when:

- the loan has been renegotiated on the basis of collective agreements or through initiatives intended to support customers in the wake of calamitous events;
- the loan has been renegotiated through internal initiatives implemented by the single bank to support specific

In consideration of the use of an approach based on the best estimates possible, the volumes of exposures identified in this phase as Forborne and those identified as NPEs could differ from those corresponding to a precise application of the new definition when fully implemented. It is worth observing in particular that in this phase it was not practicable to identify refinanced loans precisely over the entire perimeter (even though these are included in the EBA definition of Forbearance). In the same way, the criteria for inclusion in and exclusion from the NPE category may be affected by the differences between what is required by the previous definitions and what is provided for in the new EBA rules.

We must stress that the perimeter of Forborne Non-Performing loans includes both exposures classified as "Restructured" and exposures classified in the other impaired loan categories.

As regards the assessments of Forborne exposures, the accounting policies follow the general criterion in line with the rules of IAS 39.

The above criteria were followed in identifying the Forborne performing and Forborne non-performing exposures at December 31, 2014. The final results are below (in millions of Euro).

	Amounts as at 12.31.2014								
	PERFORMING			NON PERFORMING			TOTAL		
	Gross exposure	Writedowns	Net exposure	Gross exposure	Writedowns	Net exposure	Gross exposure	Writedowns	Net exposure
General governments	11	0	11	59	13	46	70	13	57
Financial corporations	98	1	97	521	183	338	619	184	435
Non-financial corporations	3.322	89	3.233	12.739	4.777	7.962	16.061	4.866	11.195
Households	2.576	86	2.490	1.722	467	1.255	4.298	553	3.745
<b>Total</b>	<b>6.007</b>	<b>176</b>	<b>5.831</b>	<b>15.041</b>	<b>5.440</b>	<b>9.601</b>	<b>21.048</b>	<b>5.616</b>	<b>15.432</b>
of which:									
Italy	2.859	105	2.750	6.449	2.095	4.354	9.308	2.204	7.104
Germany	1.621	37	1.584	4.420	1.587	2.833	6.041	1.624	4.417
Austria	580	1	579	995	529	466	1.575	530	1.045
CEE	836	20	816	2.502	960	1.542	3.338	980	2.358
Poland	111	9	102	675	269	406	786	278	508
<b>Coverage ratio</b>			<b>2,9%</b>			<b>36,2%</b>			<b>26,7%</b>
<b>% Forborne on customer loans (1)</b>	<b>Performing =&gt;</b>		<b>1,30%</b>	<b>Non performing =&gt;</b>		<b>23,06%</b>	<b>Total =&gt;</b>		<b>3,14%</b>

(1) The exposures above refer to Banking Group as registered under Art. 64 of the consolidated Law on Banking and to the entities consolidated line by line or proportionately for regulatory purposes.

The second phase of the project, currently in progress, provides for gradual implementation in 2015 and overall process definition by the end of the year. In this phase, the use of objective criteria for recognition of the above exposures will be coupled with an analytical approach, which, in addition to the "Troubled Debt Test", will provide for the possibility to manually supplement/modify the results. The perimeter of exposures potentially subject to Forbearance measures will be further expanded, assessing the inclusion of further cases compared with the previous phase.



## Recommendation 27: Explanation of loan forbearance policies

### Troubled Debt Restructurings

The following tables summarize the MUFG Group's TDRs by class during the fiscal years ended March 31, 2013, 2014 and 2015:

	Fiscal years ended March 31,					
	2013		2014		2015	
	Troubled Debt Restructurings					
	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment
	(in millions)					
<b>Commercial<sup>(1)(3)</sup></b>						
Domestic	¥222,125	¥222,125	¥175,011	¥151,505	¥324,055	¥312,215
Manufacturing	131,105	131,105	93,968	70,462	239,793	227,953
Construction	3,921	3,921	3,435	3,435	5,053	5,053
Real estate	17,409	17,409	21,977	21,977	13,555	13,555
Services	12,564	12,564	13,149	13,149	16,024	16,024
Wholesale and retail	42,061	42,061	32,458	32,458	43,643	43,643
Banks and other financial institutions	889	889	1	1	12	12
Communication and information services	8,442	8,442	1,802	1,802	2,434	2,434
Other industries	1,927	1,927	4,414	4,414	2,005	2,005
Consumer	3,807	3,807	3,807	3,807	1,536	1,536
Foreign-excluding MUAH and Krungsri	10,142	10,142	20,175	20,175	3,090	2,927
Loans acquired with deteriorated credit quality	524	524	7,616	7,616	1,594	1,594
<b>Residential<sup>(1)(3)</sup></b>	50,005	50,005	32,777	32,777	26,073	26,073
<b>Card<sup>(2)(3)</sup></b>	26,409	26,055	17,141	16,869	19,275	19,015
<b>MUAH<sup>(2)(3)</sup></b>	30,091	27,832	29,945	29,403	18,624	18,258
<b>Krungsri<sup>(2)(3)</sup></b>	—	—	—	—	19,796	19,767
Total	¥339,296	¥336,683	¥282,665	¥258,345	¥412,507	¥399,849

#### Notes:

- (1) TDRs for the Commercial and Residential segments include accruing loans with concessions granted, and do not include nonaccrual loans with concessions granted.
- (2) TDRs for the Card, MUAH and Krungsri segments include accrual and nonaccrual loans. Included in the outstanding recorded investment balances as of March 31, 2014 and 2015 are nonaccrual TDRs as follows: ¥51,780 million and ¥46,044 million—Card; ¥23,697 million and ¥22,193 million—MUAH; and nil and ¥7,136 million—Krungsri, respectively.
- (3) For the Krungsri segment, the acquired loans were recorded at their fair values as of the acquisition date, and there were no indications that an allowance for credit loss was necessary for these loans for the fiscal year ended March 31, 2014. Therefore, no TDRs were stated at March 31, 2014 in the above table.

A modification of terms of a loan under a TDR mainly involves: (i) a reduction in the stated interest rate applicable to the loan, (ii) an extension of the stated maturity date of the loan, (iii) a partial forgiveness of the principal of the loan, or (iv) a combination of all of these. Those loans are also considered impaired loans, and hence the allowance for credit losses is separately established for each loan. As a result, the amount of allowance for credit losses increases in many cases upon classification as a TDR loan. The amount of pre-modification outstanding recorded investment and post-modification outstanding recorded investment may differ due to write-offs made as part of the concession. The impact of write-offs associated with TDRs on the MUFG Group's results of operations for the fiscal years ended March 31, 2013, 2014 and 2015 was not material.

TDRs for the Commercial and Residential segments in the above tables include accruing loans with concessions granted, and do not include nonaccrual loans with concessions granted. Once a loan is classified as a nonaccrual loan, a modification would have little likelihood of resulting in the recovery of the loan in view of the severity of the financial difficulty of the borrower. Therefore, even if a nonaccrual loan is modified, the loan continues to be classified as a nonaccrual loan. The vast majority of modifications to nonaccrual loans are temporary extensions of the maturity dates, typically for periods up to 90 days, and continually made as the borrower is unable to repay or refinance the loan at the extended maturity. Accordingly, the impact of such TDRs on the outstanding recorded investment is immaterial, and the vast majority of nonaccrual TDRs have subsequently defaulted.

TDRs that subsequently defaulted in the Commercial and Residential segments of the above table includes those accruing loans that became past due one month or more within the Commercial segment and six months or more within the Residential segment, and those accruing loans reclassified to nonaccrual loans due to financial difficulties even without delinquencies. This is because classification as a nonaccrual loan is regarded as default under the MUFG Group's credit policy. Also, the MUFG Group defines default as payment default for the purpose of the disclosure.

Regarding the Card, MUAH and Krungsri segments, the TDRs in the above table represent modified nonaccrual and accruing loans, and the defaulted loans in the above table represent nonaccruing and accruing loans that became past due one month or more within the Card segment, 60 days or more within the MUAH segment, and six months or more within the Krungsri segment.

Historical payment defaults are one of the factors considered when projecting future cash flows in determining the allowance for credit losses for each segment.

The MUFG Group provided commitments to extend credit to customers with TDRs. The amounts of such commitments were ¥44,116 million and ¥24,332 million at March 31, 2014 and 2015, respectively. See Note 24 for further discussion of commitments to extend credit.



## Recommendation 28a: Reconciliation of the opening and closing balances of non-performing or impaired loans in the period and the allowance for loan losses

### Changes in Gross Impaired Loans and Acceptances (GIL) <sup>(1)</sup>

(Canadian \$ in millions, except as noted) For the year ended October 31	2014	2013	2012
<b>GIL, beginning of year</b>	<b>2,544</b>	2,976	2,685
Classified as impaired during the year	<b>2,142</b>	2,449	3,101
Transferred to not impaired during the year	<b>(669)</b>	(728)	(968)
Net repayments	<b>(1,059)</b>	(1,058)	(517)
Amounts written-off	<b>(801)</b>	(939)	(1,179)
Disposals of loans	<b>(220)</b>	(343)	(197)
Foreign exchange and other movements	<b>111</b>	187	51
<b>GIL, end of year</b>	<b>2,048</b>	2,544	2,976
GIL as a % of gross loans and acceptances	<b>0.67</b>	0.91	1.17

(1) GIL excludes purchased credit impaired loans.

### Changes in Allowance for Credit Losses <sup>(1)</sup>

(Canadian \$ in millions, except as noted) For the year ended October 31	2014	2013	2012
<b>Specific ACL, beginning of year</b>	<b>485</b>	476	559
Specific PCL (charge to income statement)	<b>561</b>	597	761
Recoveries of amounts written off in previous years	<b>624</b>	772	846
Write-offs	<b>(1,149)</b>	(1,297)	(1,593)
Foreign exchange and other movements	<b>(97)</b>	(63)	(97)
<b>Specific ACL, end of year</b>	<b>424</b>	485	476
Collective ACL, beginning of year	<b>1,485</b>	1,460	1,452
Collective PCL (charge to income statement)	<b>-</b>	(10)	3
Foreign exchange and other movements	<b>57</b>	35	5
<b>Collective ACL, end of year</b>	<b>1,542</b>	1,485	1,460
<b>Total ACL</b>	<b>1,966</b>	1,970	1,936
Comprised of:			
Loans	<b>1,734</b>	1,665	1,706
Specific allowance for other credit instruments	<b>50</b>	41	29
Collective allowance for other credit instruments	<b>182</b>	264	201
ACL as a % of GIL <sup>(2)</sup>	<b>93.6</b>	75.8	64.1

(1) Includes allowances related to other credit instruments that are included in other liabilities.

(2) Ratio excludes specific allowances for other credit instruments that are included in other liabilities.

### Allowance for Credit Losses ("ACL")

(Canadian \$ in millions)	Residential mortgages <sup>(1)</sup>			Credit card, consumer instalment and other personal loans			Business and government loans			Customers' liability under acceptances			Total		
	2014	2013	2012	2014	2013	2012	2014	2013	2012	2014	2013	2012	2014	2013	2012
Gross loan balances at end of year <sup>(3)</sup>	<b>101,013</b>	96,392	84,211	<b>72,115</b>	71,510	69,250	<b>120,766</b>	104,585	94,072	<b>10,878</b>	8,472	8,019	<b>304,772</b>	280,959	255,552
Impairment Allowances															
(Specific ACL), beginning of year	<b>99</b>	76	74	<b>71</b>	62	59	<b>315</b>	338	426	-	-	-	<b>485</b>	476	559
Amounts written off	<b>(87)</b>	(104)	(173)	<b>(655)</b>	(750)	(882)	<b>(407)</b>	(443)	(538)	-	-	-	<b>(1,149)</b>	(1,297)	(1,593)
Recoveries of amounts written off in previous years	<b>40</b>	24	60	<b>161</b>	152	156	<b>423</b>	596	630	-	-	-	<b>624</b>	772	846
Charge to income statement (Specific PCL)	<b>77</b>	129	132	<b>519</b>	618	742	<b>(35)</b>	(150)	(113)	-	-	-	<b>561</b>	597	761
Foreign exchange and other movements	<b>(16)</b>	(26)	(17)	<b>(22)</b>	(11)	(13)	<b>(59)</b>	(26)	(67)	-	-	-	<b>(97)</b>	(63)	(97)
<b>Specific ACL, end of year</b>	<b>113</b>	99	76	<b>74</b>	71	62	<b>237</b>	315	338	-	-	-	<b>424</b>	485	476
Collective ACL, beginning of year	<b>88</b>	47	36	<b>622</b>	624	565	<b>756</b>	759	817	<b>19</b>	30	34	<b>1,485</b>	1,460	1,452
Charge to income statement (Collective PCL)	<b>(8)</b>	40	11	<b>50</b>	(4)	59	<b>(50)</b>	(35)	(63)	<b>8</b>	(11)	(4)	<b>-</b>	(10)	3
Foreign exchange and other movements	<b>3</b>	1	-	<b>6</b>	2	-	<b>48</b>	32	5	-	-	-	<b>57</b>	35	5
<b>Collective ACL, end of year</b>	<b>83</b>	88	47	<b>678</b>	622	624	<b>754</b>	756	759	<b>27</b>	19	30	<b>1,542</b>	1,485	1,460
<b>Total ACL</b>	<b>196</b>	187	123	<b>752</b>	693	686	<b>991</b>	1,071	1,097	<b>27</b>	19	30	<b>1,966</b>	1,970	1,936
Comprised of: Loans	<b>169</b>	167	113	<b>752</b>	693	686	<b>786</b>	786	877	<b>27</b>	19	30	<b>1,734</b>	1,665	1,706
Other credit instruments <sup>(2)</sup>	<b>27</b>	20	10	<b>-</b>	-	-	<b>205</b>	285	220	<b>-</b>	-	-	<b>232</b>	305	230
<b>Net loan balances at end of year</b>	<b>100,844</b>	96,225	84,098	<b>71,363</b>	70,817	68,564	<b>119,980</b>	103,799	93,195	<b>10,851</b>	8,453	7,989	<b>303,038</b>	279,294	253,846

(1) Included in the residential mortgages balance are Canadian government and corporate-insured mortgages of \$58 billion as at October 31, 2014 (\$52 billion in 2013).

(2) The total specific and collective allowances related to other credit instruments are included in other liabilities.

(3) Included in loans as at October 31, 2014 are \$95,269 million (\$81,069 million in 2013 and \$72,904 million in 2012) of loans denominated in U.S. dollars and \$1,039 million (\$947 million in 2013 and \$622 million in 2012) of loans denominated in other foreign currencies.

Certain comparative figures have been reclassified to conform with the current year's presentation and changes in accounting policies - see Note 1.

Loans, including customers' liability under acceptances and allowance for credit losses, by geographic region are as follows:

(Canadian \$ in millions)	Gross amount		Specific allowance <sup>(2)</sup>		Collective allowance <sup>(3)</sup>		Net amount	
	2014	2013	2014	2013	2014	2013	2014	2013
By geographic region <sup>(1)</sup> :								
Canada	<b>213,490</b>	203,496	<b>191</b>	244	<b>766</b>	726	<b>212,533</b>	202,526
United States	<b>80,135</b>	68,505	<b>182</b>	196	<b>594</b>	495	<b>79,359</b>	67,814
Other countries	<b>11,147</b>	8,958	<b>1</b>	4	<b>-</b>	-	<b>11,146</b>	8,954
<b>Total</b>	<b>304,772</b>	280,959	<b>374</b>	444	<b>1,360</b>	1,221	<b>303,038</b>	279,294

Impaired loans, including the related allowances, are as follows:

(Canadian \$ in millions)	Gross impaired amount		Specific allowance <sup>(3)</sup>		Net of specific allowance	
	2014	2013	2014	2013	2014	2013
Residential mortgages	<b>532</b>	595	<b>86</b>	79	<b>446</b>	516
Consumer instalment and other personal loans	<b>544</b>	455	<b>74</b>	71	<b>470</b>	384
Business and government loans	<b>972</b>	1,494	<b>214</b>	294	<b>758</b>	1,200
<b>Total <sup>(1)</sup></b>	<b>2,048</b>	2,544	<b>374</b>	444	<b>1,674</b>	2,100
By geographic region <sup>(2)</sup> :						
Canada	<b>742</b>	754	<b>191</b>	244	<b>551</b>	510
United States	<b>1,301</b>	1,783	<b>182</b>	196	<b>1,119</b>	1,587
Other countries	<b>5</b>	7	<b>1</b>	4	<b>4</b>	3
<b>Total</b>	<b>2,048</b>	2,544	<b>374</b>	444	<b>1,674</b>	2,100

(1) Excludes purchased credit impaired loans.

(2) Geographic region is based upon the country of ultimate risk.

(3) Excludes specific allowance of \$50 million for other credit instruments (\$41 million in 2013), which is included in other liabilities.

Fully secured loans with past due amounts between 90 and 180 days that we have not classified as impaired totalled \$134 million and \$256 million as at October 31, 2014 and 2013, respectively.

## Recommendation 28a: Reconciliation of the opening and closing balances of non-performing or impaired loans in the period and the allowance for loan losses

Table 33: Analysis of Changes in Nonaccrual Loans

(in millions)	Quarter ended				Year ended Dec 31,	
	Dec 31,	Sep 30,	Jun 30,	Mar 31,		
	2014	2014	2014	2014	2014	2013
<b>Commercial nonaccrual loans</b>						
Balance, beginning of period	\$ 2,494	2,798	3,027	3,475	3,475	5,824
Inflows	410	342	433	367	1,552	2,178
Outflows:						
Returned to accruing	(64)	(37)	(81)	(98)	(280)	(497)
Foreclosures	(45)	(18)	(32)	(79)	(174)	(321)
Charge-offs	(141)	(124)	(120)	(116)	(501)	(723)
Payments, sales and other (1)	(415)	(467)	(429)	(522)	(1,833)	(2,986)
Total outflows	(665)	(646)	(662)	(815)	(2,788)	(4,527)
Balance, end of period	2,239	2,494	2,798	3,027	2,239	3,475
<b>Consumer nonaccrual loans</b>						
Balance, beginning of period	10,871	11,174	11,623	12,193	12,193	14,662
Inflows	1,454	1,529	1,673	1,650	6,306	8,117
Outflows:						
Returned to accruing	(678)	(817)	(1,107)	(1,104)	(3,706)	(4,137)
Foreclosures	(114)	(148)	(132)	(146)	(540)	(597)
Charge-offs	(278)	(289)	(348)	(400)	(1,315)	(2,343)
Payments, sales and other (1)	(646)	(578)	(535)	(570)	(2,329)	(3,509)
Total outflows	(1,716)	(1,832)	(2,122)	(2,220)	(7,890)	(10,586)
Balance, end of period	10,609	10,871	11,174	11,623	10,609	12,193
Total nonaccrual loans	\$ 12,848	13,365	13,972	14,650	12,848	15,668

Table 37: Analysis of Changes in TDRs

(in millions)	Quarter ended				Year ended Dec. 31,	
	Dec 31,	Sep 30,	Jun 30,	Mar 31,		
	2014	2014	2014	2014	2014	2013
<b>Commercial TDRs</b>						
Balance, beginning of period	\$ 3,201	3,525	3,781	3,765	3,765	5,146
Inflows	232	208	276	442	1,158	1,794
Outflows						
Charge-offs	(62)	(42)	(28)	(23)	(155)	(132)
Foreclosure	(27)	(12)	(8)	(3)	(50)	(88)
Payments, sales and other (1)	(424)	(478)	(496)	(400)	(1,798)	(2,955)
Balance, end of period	2,920	3,201	3,525	3,781	2,920	3,765
<b>Consumer TDRs</b>						
Balance, beginning of period	21,841	22,082	22,698	22,696	22,696	21,768
Inflows	957	946	1,003	1,104	4,010	5,958
Outflows						
Charge-offs	(99)	(120)	(139)	(157)	(515)	(859)
Foreclosure	(252)	(303)	(283)	(325)	(1,163)	(1,290)
Payments, sales and other (1)	(797)	(768)	(1,073)	(563)	(3,201)	(2,826)
Net change in trial modifications (2)	(21)	4	(124)	(57)	(198)	(55)
Balance, end of period	21,629	21,841	22,082	22,698	21,629	22,696
Total TDRs	\$ 24,549	25,042	25,607	26,479	24,549	26,461

- (1) Other outflows include normal amortization/accretion of loan basis adjustments and loans transferred to held-for-sale. It also includes \$1 million of loans refinanced or restructured as new loans and removed from TDR classification for the quarter ended March 31, 2014. No loans were removed from TDR classification for the quarters ended December 31, September 30, and June 30, 2014, respectively. During 2013, \$84 million of loans were refinanced or restructured as new loans and removed from TDR classification.
- (2) Net change in trial modifications includes: inflows of new TDRs entering the trial payment period, net of outflows for modifications that either (i) successfully perform and enter into a permanent modification, or (ii) did not successfully perform according to the terms of the trial period plan and are subsequently charged-off, foreclosed upon or otherwise resolved. Our experience is that substantially all of the mortgages that enter a trial payment period program are successful in completing the program requirements.

### Allowance for Credit Losses

(in millions)	Year ended December 31,				
	2014	2013	2012	2011	2010
<b>Balance, beginning of year</b>	<b>\$ 14,971</b>	<b>17,477</b>	<b>19,668</b>	<b>23,463</b>	<b>25,031</b>
Provision for credit losses	1,395	2,309	7,217	7,899	15,753
Interest income on certain impaired loans (1)	(211)	(264)	(315)	(332)	(266)
Loan charge-offs:					
Commercial:					
Commercial and industrial	(627)	(739)	(1,404)	(1,681)	(2,820)
Real estate mortgage	(66)	(190)	(382)	(636)	(1,152)
Real estate construction	(9)	(28)	(191)	(351)	(1,189)
Lease financing	(15)	(34)	(24)	(41)	(124)
Total commercial	(717)	(991)	(2,001)	(2,709)	(5,285)
Consumer:					
Real estate 1-4 family first mortgage	(721)	(1,439)	(3,020)	(3,896)	(4,916)
Real estate 1-4 family junior lien mortgage	(864)	(1,579)	(3,437)	(3,765)	(4,936)
Credit card	(1,025)	(1,022)	(1,105)	(1,458)	(2,415)
Automobile	(729)	(625)	(651)	(797)	(1,295)
Other revolving credit and installment	(668)	(754)	(759)	(990)	(1,253)
Total consumer	(4,007)	(5,419)	(8,972)	(10,906)	(14,815)
Total loan charge-offs	(4,724)	(6,410)	(10,973)	(13,615)	(20,100)
Loan recoveries:					
Commercial:					
Commercial and industrial	369	396	472	426	442
Real estate mortgage	160	226	163	143	68
Real estate construction	136	137	124	146	110
Lease financing	8	17	20	25	21
Total commercial	673	776	779	740	641
Consumer:					
Real estate 1-4 family first mortgage	212	246	157	405	523
Real estate 1-4 family junior lien mortgage	238	269	260	218	211
Credit card	161	127	188	257	224
Automobile	349	322	364	449	509
Other revolving credit and installment	146	161	191	247	239
Total consumer	1,106	1,125	1,160	1,576	1,706
Total loan recoveries	1,779	1,901	1,939	2,316	2,347
Net loan charge-offs (2)	(2,945)	(4,509)	(9,034)	(11,299)	(17,753)
Allowances related to business combinations/other (3)	(41)	(42)	(59)	(63)	698
<b>Balance, end of year</b>	<b>\$ 13,169</b>	<b>14,971</b>	<b>17,477</b>	<b>19,668</b>	<b>23,463</b>
Components:					
Allowance for loan losses	\$ 12,319	14,502	17,060	19,372	23,022
Allowance for unfunded credit commitments	850	469	417	296	441
Allowance for credit losses (4)	\$ 13,169	14,971	17,477	19,668	23,463
Net loan charge-offs as a percentage of average total loans (2)	0.35%	0.56	1.17	1.49	2.30
Allowance for loan losses as a percentage of total loans (4)	1.43	1.76	2.13	2.52	3.04
Allowance for credit losses as a percentage of total loans (4)	1.53	1.82	2.19	2.56	3.10

- (1) Certain impaired loans with an allowance calculated by discounting expected cash flows using the loan's effective interest rate over the remaining life of the loan recognize reductions in the allowance as interest income.
- (2) For PCI loans, charge-offs are only recorded to the extent that losses exceed the purchase accounting estimates.
- (3) Includes \$693 million for the year ended December 31, 2010, related to the adoption of consolidation accounting guidance on January 1, 2010.
- (4) The allowance for credit losses includes \$11 million, \$30 million, \$117 million, \$231 million and \$298 million at December 31, 2014, 2013, 2012, 2011, and 2010, respectively, related to PCI loans acquired from Wachovia. Loans acquired from Wachovia are included in total loans net of related purchase accounting net write-downs.

## Recommendation 28b: Explanation of the effects of loan acquisitions on ratio trends as well as qualitative and quantitative information about restructured loans

### Forbearance

In July 2014, EBA has provided a final draft definition on forbearance and non-performing exposures, which was a further refinement of the draft definition published in 2013. ING Bank has followed up on the EBA recommendations, by updating and implementing its forbearance policy in 2014.

The definition of forbearance is: "Forbearance occurs when the client is considered to be unable to meet its financial commitments under the contract due to financial difficulties, and based on these difficulties ING decides to grant concessions towards the client by either loan modification or refinancing". Modification is defined as changing the terms and conditions of the contract to enable the client to service the debt. Refinancing relates to putting in place a new loan contract to ensure the total or partial repayment of an existing loan contract, of which the debtor is unable to comply with. Examples of forbearance measures are: postponement and/or reduction of loan principal and/or interest payments, extended payment terms, debt consolidations and deferral of foreclosures.

As a result of follow up on EBA and updating and implementing the changes in 2014, the forbore assets of 2014 are not comparable with 2013. The incomparability is mainly the result of the following:

- 1) EBA issued more stringent definitions on the type of assets that should classify as forbore and on the non-performing criteria. This resulted in new assets being classified as forbore in 2014 and new forbore assets being classified as non-performing, which ING did not classify as such in 2013.
- 2) The two- and one-year probation periods (the minimum reporting period for performing and non-performing forbore assets) were implemented in 2014. Compared to last year these probation periods will substantially diminish the outflow of the forbore assets, while inflow of new forbore assets will continue.
- 3) New portfolios came into scope for screening, such as clients with 'Early Warning Signals', the Commercial Banking portfolio under EUR 3 million (threshold of EUR 3 million was applicable in 2013) and the investment portfolio.

To identify the notion of forbearance, ING typically assesses clients with Early Warning Signals, Watch List, Restructuring and Recovery status. ING Bank reviews the performance of clients which were granted forbearance measures on at least a quarterly basis.

For corporate customers, ING Bank applies forbearance measures only to support clients that are experiencing temporary difficulties with fundamentally sound business models. The aim is to maximise the repayment opportunities of the clients, while applying a very strict policy with respect to (partial) debt forgiveness.

For retail clients, clear criteria to determine whether a client is eligible for a modification or refinancing have been established for all ING Bank retail unit that apply forbearance activities. Also, specific approval mandates are in place to approve the modifications and refinancing, as well as procedures to manage, monitor and report the forbearance activities. These criteria and mandates vary, based on the legal framework in place and market practices, but are in line with ING Bank policy.

Clients which are granted forbearance measures can have any risk rating (performing or non-performing), depending on their risk profile:

- ▶ Performing - If the contract is considered as performing prior to any forbearance measure, and also after granting the forbearance measure, the forbearance status for this client needs to be reported for a minimum of two years;
- ▶ Non-performing - If the contract is considered as non-performing prior to any forbearance measure, the client will retain its non-performing status for a period of minimum one year.

The rating of clients with forbearance measures can also change during the forbearance reporting period:

- ▶ From performing to non-performing - If the performing client, after forbearance measures have been granted, hits one of the general non-performing triggers defined by ING, becomes more than 30 days past due or receives additional forbearance measures during the reporting period, the client needs to be classified as non-performing.
- ▶ From non-performing to performing - The non-performing client, after forbearance measures have been granted, may be upgraded to a performing rating, only when 1) one year has passed since the forbearance measures were granted, 2) the granting of forbearance does not lead to the recognition of impairment or default, and 3) there is not any past-due amount or no concerns regarding the full repayment of the exposure according to the post-forbearance conditions. The total minimum reporting period of forbearance for any "cured" non-performing client will take three years: one year as non-performing and subsequently the "regular" two years as performing.

The forbearance classification on a client shall be discontinued, when all of the following conditions are met:

- ▶ The contract is considered as performing and has been reported as "performing forbearance" for a minimum of two years;
- ▶ Regular payments of significant aggregate amounts of principal or interest have been made during at least half of the forbearance reporting period;
- ▶ None of the exposure to the client is more than 30 days past-due at the end of the forbearance reporting period.

*ING provides notes that there were no significant acquisitions in 2014, but they do not quantify the impact that prior acquisitions have had on delinquency ratio trends*

### ING Bank

The total ING Bank forbore assets amounted to EUR 9.9 billion at 31 December 2014.

#### ING Bank: Summary Forbore assets <sup>(1)</sup>

	2014				2013			
	Forbore assets	Of which: Performing	Of which: Non-Performing	% of total portfolio	Forbore assets	Of which: Performing	Of which: Non-Performing	% of total portfolio
Commercial Banking	5,839	2,422	3,417	1.6%	4,664	928	3,736	1.1%
Retail Banking	4,097	1,568	2,529	1.4%	810	810		0.3%
Totals	9,936	3,989	5,947	1.5%	5,474	1,738	3,736	0.8%

(1) Commercial Banking includes Lending and Investments outstandings of the business portfolio, while Retail Banking includes Lending outstandings of the consumer portfolio.

In 2014, the forbore assets increased by EUR 4.5 billion, which was mainly driven by Retail Banking. The increase in Retail Banking was mainly visible in the non-performing book, due to a combination of reasons, e.g. more stringent definitions by EBA, implementing forbearance retrospectively in combination with the probation periods and the stricter non-performing criteria. For Commercial Banking the increase was visible in the performing book, mainly due to the extension of the screening scope.

### Commercial Banking

As per end 2014, Commercial Banking forbore assets amounted to a total of EUR 5.8 billion, which represents 1.6% of the total Commercial Banking portfolio.

#### Commercial Banking: Forbore assets by Geographical Region

	2014			2013		
Country	Forbore assets	Of which: Performing	Of which: Non-Performing	Forbore assets	Of which: Performing	Of which: Non-Performing
Netherlands	3,188	1,444	1,744	1,961	336	1,625
Belgium	577	212	365	236	18	218
Germany	62	36	26	85	0	85
Rest of Europe	1,764	698	1,066	1,604	254	1,350
Americas	165	18	147	232	13	219
Asia/Pacific	74	6	68	537	298	239
Rest of World	9	9		9	9	0
Total	5,839	2,422	3,417	4,664	928	3,736

#### Commercial Banking: Forbore assets by Industry

	2014			2013		
	Forbore assets	Of which: Performing	Of which: Non-Performing	Forbore assets	Of which: Performing	Of which: Non-Performing
Real Estate	1,906	993	913	1,676	343	1,333
Builders & Contractors	650	265	385	400	45	355
General Industries	510	144	366	331	37	293
Transportation & Logistics	508	214	294	547	203	344
Food, Beverages & Personal Care	464	204	260	384	21	363
Natural Resources	429	102	327	239	0	239
Services	388	153	235	281	183	98
Utilities	255	60	195			
Retail	214	72	142	169	8	160
Media	103	60	43	120	4	116
Telecom	64	1	63	146	3	142
Other	348	154	194	372	79	293
Total	5,839	2,422	3,417	4,664	928	3,736

The forbore assets in the performing portfolio increased by EUR 1.5 billion. The increases were visible in almost all regions, but mainly in the Netherlands and Rest of Europe. Also the industries Real Estate and Builders & Contractors were mostly impacted. Performing forbore assets in Asia/Pacific declined during the year.



## Recommendation 28b: Explanation of the effects of loan acquisitions on ratio trends as well as qualitative and quantitative information about restructured loans

### Renegotiated and forborne loans

In certain circumstances, the Group may renegotiate client loans.

Loans that are renegotiated for commercial reasons, such as when a client had a credit rating upgrade, are not included as part of renegotiated and forborne loans because they are not indicative of any credit stress.

Loans that are renegotiated primarily to grant extended tenor to a client who is facing some difficulties but who we do not believe is impaired are reported as 'Other renegotiated loans'. Loans that are renegotiated on terms that are not consistent with those readily available in the market and/or where we have granted a concession compared to the original terms of the loans, are considered to be subject to forbearance strategies and are disclosed as 'Loans subject to forbearance', which is a subset of impaired loans.

Forbearance strategies assist clients who are temporarily in financial distress and are unable to meet their original contractual repayment terms. Forbearance can be initiated by the client, the bank or a third party (including government sponsored programmes or a conglomerate of credit institutions) and includes debt restructuring, such as a new repayment schedule, payment deferrals, tenor extensions and interest only payments.

Once a loan is subject to forbearance or is renegotiated, the loan continues to be reported as such, until the loan matures or is otherwise derecognised.

### Retail Clients

For Retail Clients, all loans subject to forbearance (in addition to other renegotiated loans) are managed within a separate portfolio. If such loans subsequently become past due, charge-off and IIP is accelerated to 90 days past due for unsecured loans and automobile finance or 120 days past due for secured loans. The accelerated loss rates applied to this portfolio are derived from experience with other renegotiated loans, rather than the Retail Clients portfolio as a whole, to recognise the greater degree of inherent risk.

### Renegotiated and forborne loans

The table below shows an analysis of renegotiated and forborne loans by region:

2014									
	Greater China \$million	North East Asia \$million	South Asia \$million	ASEAN \$million	MENAP \$million	Africa \$million	Americas \$million	Europe \$million	Total \$million
Other renegotiated loans	321	85	18	579	258	42	–	3,430	4,733
Loans subject to forbearance	212	114	75	417	550	75	–	534	1,977
<b>Total renegotiated and forborne loans</b>	<b>533</b>	<b>199</b>	<b>93</b>	<b>996</b>	<b>808</b>	<b>117</b>	<b>–</b>	<b>3,964</b>	<b>6,710</b>

2013									
	Greater China \$million	North East Asia \$million	South Asia \$million	ASEAN \$million	MENAP \$million	Africa \$million	Americas \$million	Europe \$million	Total \$million
Other renegotiated loans	161	139	74	1,512	404	45	–	2,870	5,205
Loans subject to forbearance	296	225	58	315	688	42	–	324	1,948
<b>Total renegotiated and forborne loans</b>	<b>457</b>	<b>364</b>	<b>132</b>	<b>1,827</b>	<b>1,092</b>	<b>87</b>	<b>–</b>	<b>3,194</b>	<b>7,153</b>

### Corporate & Institutional and Commercial and Private Banking Clients

Forbearance and other renegotiations are applied on a case-by-case basis and are not subject to business-wide programmes. In some cases, a new loan is granted as part of the restructure, in others, the contractual terms and repayment of the existing loans are changed or extended (for example, interest-only for a period).

Loans classified as subject to forbearance are managed by GSAM and are kept under close review to assess the client's ability to adhere to the restructured repayment strategy and to identify any events that could result in a deterioration in the client's ability to repay.

If the terms of the renegotiation are such that, where the present value of the new cash flows is lower than the present value of the original cash flows, the loan would be considered to be impaired and, at a minimum, a discount provision would be raised and shown under loans subject to forbearance. These accounts are monitored as described on page 109.

Renegotiated and forborne loans are disclosed by client segments on page 77.

## Recommendation 29: Quantitative and qualitative analysis of the bank's counterparty credit risk that arises from its derivatives transactions

### Notional amounts

The notional amounts are not recorded as assets or liabilities, as they represent the face amount of the contract to which a rate or price is applied to determine the amount of cash flows to be exchanged. In most cases, notional amounts do not represent the potential gain or loss associated with market or credit risk of such instruments.

The following table presents the notional amounts of derivative instruments:

\$ millions, as at October 31										2014	2013
	Residual term to contractual maturity				Trading	ALM	Trading	ALM			
	Less than 1 year	1 to 5 years	Over 5 years	Total notional amounts							
<b>Interest rate derivatives</b>											
Over-the-counter											
Forward rate agreements	\$ 8,900	\$ 620	\$ –	\$ 9,520	\$ 6,072	\$ 3,448	\$ 8,252	\$ 3,819			
Centrally cleared forward rate agreements	143,945	13,828	–	157,773	157,773	–	160,776	–			
Swap contracts	124,194	239,932	85,580	449,706	331,657	118,049	472,967	135,721			
Centrally cleared swap contracts	183,721	347,071	95,753	626,545	510,420	116,125	560,072	89,602			
Purchased options	800	2,528	2,664	5,992	4,367	1,625	5,260	1,049			
Written options	2,727	1,923	429	5,079	4,754	325	4,328	100			
	464,287	605,902	184,426	1,254,615	1,015,043	239,572	1,211,655	230,291			
Exchange-traded											
Futures contracts	50,269	9,075	–	59,344	58,260	1,084	62,424	1,168			
Purchased options	7,100	564	–	7,664	–	–	13,755	–			
Written options	11,496	1,127	–	12,623	12,623	–	12,921	–			
	68,865	10,766	–	79,631	78,547	1,084	89,100	1,168			
<b>Total interest rate derivatives</b>	533,152	616,668	184,426	1,334,246	1,093,590	240,656	1,300,755	231,459			
<b>Foreign exchange derivatives</b>											
Over-the-counter											
Forward contracts	196,290	6,941	740	203,971	189,014	14,957	147,788	13,231			
Swap contracts	100,935	42,695	13,339	156,969	128,094	28,875	116,805	26,934			
Purchased options	25,909	572	27	26,508	26,492	16	8,377	–			
Written options	28,041	393	56	28,490	28,308	182	12,123	261			
	351,175	50,601	14,162	415,938	371,908	44,030	285,093	40,426			
Exchange-traded											
Futures contracts	–	–	–	–	–	–	3	–			
<b>Total foreign exchange derivatives</b>	351,175	50,601	14,162	415,938	371,908	44,030	285,096	40,426			
<b>Credit derivatives</b>											
Over-the-counter											
Total return swap contracts – protection sold	871	345	–	1,216	1,216	–	2,245	–			
Credit default swap contracts – protection purchased	1,721	6,569	20	8,310	7,910	400	10,284	–			
Centrally cleared credit default swap contracts – protection purchased	–	7,334	3,015	10,349	10,349	–	1,385	–			
Credit default swap contracts – protection sold	348	4,526	244	5,118	5,118	–	5,506	–			
Centrally cleared credit default swap contracts – protection sold	–	7,334	1,426	8,760	8,760	–	1,093	–			
<b>Total credit derivatives</b>	2,940	26,108	4,705	33,753	33,353	400	20,513	–			
<b>Equity derivatives</b>											
Over-the-counter	37,193	2,953	116	40,262	39,341	921	33,745	714			
Exchange-traded	13,338	2,954	40	16,332	16,332	–	8,317	–			
<b>Total equity derivatives</b>	50,531	5,907	156	56,594	55,673	921	42,062	714			
<b>Precious metal derivatives</b>											
Over-the-counter	831	6	–	837	837	–	1,258	–			
Exchange-traded	2,664	86	–	2,750	2,750	–	651	–			
<b>Total precious metal derivatives</b>	3,495	92	–	3,587	3,587	–	1,909	–			
<b>Other commodity derivatives</b>											
Over-the-counter	9,447	9,900	264	19,611	19,611	–	19,871	–			
Centrally cleared commodity derivatives	24	18	–	42	42	–	–	–			
Exchange-traded	14,582	7,176	74	21,832	21,832	–	17,104	–			
<b>Total other commodity derivatives</b>	24,053	17,094	338	41,485	41,485	–	36,975	–			
<b>Total notional amount of which:</b>	\$ 965,346	\$ 716,470	\$ 203,787	\$ 1,885,603	\$ 1,599,596	\$ 286,007	\$ 1,687,310	\$ 272,599			
Over-the-counter	865,897	695,488	203,673	1,765,058	1,480,135	284,923	1,572,135	271,431			
Exchange-traded	99,449	20,982	114	120,545	119,461	1,084	115,175	1,168			

(1) For OTC derivatives that are not centrally cleared, \$816 billion (2013: \$866 billion) are with counterparties that have two-way collateral posting arrangements, \$20 billion (2013: \$26 billion) are with counterparties that have one-way collateral posting arrangements, and \$126 billion (2013: \$139 billion) are with counterparties that have no collateral posting arrangements. All counterparties with whom we have one-way collateral posting arrangements are sovereign entities.

\$ millions, as at October 31										2014	2013
	Current replacement cost			Credit equivalent amount <sup>(1)</sup>	Risk-weighted amount	Current replacement cost			Credit equivalent amount <sup>(1)</sup>	Risk-weighted amount	
	Trading	ALM	Total			Trading	ALM	Total			
<b>Interest rate derivatives</b>											
Over-the-counter											
Forward rate agreements	\$ 82	\$ –	\$ 82	\$ 48	\$ 4	\$ 66	\$ –	\$ 66	\$ 37	\$ 2	
Swap contracts	9,850	900	10,750	3,291	637	12,356	1,175	13,531	4,125	1,174	
Purchased options	153	4	157	22	10	166	1	167	29	17	
	10,085	904	10,989	3,361	651	12,588	1,176	13,764	4,191	1,193	
Exchange-traded	5	–	5	92	2	–	–	–	–	123	2
	10,090	904	10,994	3,453	653	12,588	1,176	13,764	4,314	1,195	
<b>Foreign exchange derivatives</b>											
Over-the-counter											
Forward contracts	2,045	103	2,148	2,040	528	1,116	61	1,177	1,424	398	
Swap contracts	3,833	1,519	5,352	2,730	497	2,764	756	3,520	3,397	1,059	
Purchased options	322	–	322	295	108	115	–	115	144	42	
	6,200	1,622	7,822	5,065	1,133	3,995	817	4,812	4,965	1,499	
<b>Credit derivatives</b>											
Over-the-counter											
Credit default swap contracts											
– protection purchased	203	–	203	1,346	46	261	33	294	131	101	
– protection sold	194	–	194	876	18	–	–	–	–	–	
	397	–	397	2,222	64	261	33	294	131	101	
<b>Equity derivatives</b>											
Over-the-counter	367	32	399	1,343	141	283	60	343	901	94	
Exchange-traded	320	–	320	558	16	129	–	129	269	5	
	687	32	719	1,901	157	412	60	472	1,170	99	
<b>Precious metal derivatives</b>											
Over-the-counter	16	–	16	6	2	28	–	28	13	4	
Exchange-traded	80	–	80	12	1	–	–	–	30	1	
	96	–	96	18	3	28	–	28	43	5	
<b>Other commodity derivatives</b>											
Over-the-counter	438	–	438	1,236	438	460	–	460	1,430	596	
Exchange-traded	214	–	214	1,826	44	117	–	117	1,464	29	
	652	–	652	3,062	482	577	–	577	2,894	625	
<b>Non-trade exposure related to central counterparties</b>					281					293	
<b>CET 1 CVA charge</b>					1,392					n/a	
<b>Total derivatives before netting</b>	18,122	2,558	20,680	15,721	4,165	17,861	2,086	19,947	13,517	3,817	
Less: effect of netting			(14,549)					(14,551)			
<b>Total derivatives</b>			\$ 6,131	\$ 15,721	\$ 4,165			\$ 5,396	\$ 13,517	\$ 3,817	

(1) Sum of current replacement cost and potential future exposure, adjusted for the master netting agreements and the impact of collateral amounting to \$2,721 million (2013: \$2,792 million). The collateral comprises cash of \$1,919 million (2013: \$2,151 million) and government securities of \$802 million (2013: \$641 million).

*CIBC provides more information than specifically requested in this recommendation by providing residual term to contractual maturity for derivatives*

## Recommendation 29: Quantitative and qualitative analysis of the bank's counterparty credit risk that arises from its derivatives transactions

### Credit Exposure from Derivatives

Exchange-traded derivative transactions (i.e., futures and options) are regularly settled through a central counterparty, the rules and regulations of which provide for daily margining of all current and future credit risk positions emerging out of such transactions. To the extent possible, we also use central counterparty clearing services for OTC derivative transactions ("OTC clearing"); we thereby benefit from the credit risk mitigation achieved through the central counterparty's settlement system.

The Dodd-Frank Wall Street Reform and Consumer Protection Act ("DFA") introduced mandatory OTC clearing for certain standardized OTC derivative transactions in 2013, and margin requirements for uncleared OTC derivatives transactions are expected to be phased in from December 2015. The European Regulation (EU) No 648/2012 on OTC Derivatives, Central Counterparties and Trade Repositories ("EMIR") introduced a number of risk mitigation techniques for non-centrally cleared OTC derivatives in 2013 and the reporting of OTC and exchange traded derivatives in 2014. Mandatory clearing for certain standardized OTC derivatives transactions is expected to start in the second half of 2015, and margin requirements for uncleared OTC derivative transactions are expected to be phased in from December 2015.

#### Notional amounts and gross market values of derivative transactions

in € m.	Notional amount maturity distribution				Positive market value	Negative market value	Net market value
	Within 1 year	> 1 and ≤ 5 years	After 5 years	Total			
<b>Interest rate related:</b>							
OTC	16,193,068	13,319,460	8,081,916	37,594,443	439,519	413,696	25,823
Exchange-traded	3,253,648	841,043	714	4,095,406	152	152	(1)
<b>Total Interest rate related</b>	<b>19,446,716</b>	<b>14,160,503</b>	<b>8,082,630</b>	<b>41,689,849</b>	<b>439,671</b>	<b>413,849</b>	<b>25,822</b>
<b>Currency related:</b>							
OTC	4,783,759	1,307,251	609,549	6,700,559	130,775	134,567	(3,792)
Exchange-traded	12,428	103	0	12,531	55	106	(51)
<b>Total Currency related</b>	<b>4,796,187</b>	<b>1,307,354</b>	<b>609,549</b>	<b>6,713,090</b>	<b>130,829</b>	<b>134,673</b>	<b>(3,844)</b>
<b>Equity/index related:</b>							
OTC	1,203,958	203,328	35,678	1,442,964	27,404	31,949	(4,545)
Exchange-traded	499,899	71,213	4,240	575,353	7,406	7,230	176
<b>Total Equity/index related</b>	<b>1,703,857</b>	<b>274,542</b>	<b>39,919</b>	<b>2,018,317</b>	<b>34,810</b>	<b>39,179</b>	<b>(4,369)</b>
<b>Credit derivatives</b>	<b>337,245</b>	<b>935,967</b>	<b>119,549</b>	<b>1,392,760</b>	<b>25,370</b>	<b>23,074</b>	<b>2,296</b>
<b>Commodity related:</b>							
OTC	13,708	2,549	7,115	23,371	2,030	1,804	226
Exchange-traded	89,656	22,218	66	111,939	605	697	(92)
<b>Total Commodity related</b>	<b>103,364</b>	<b>24,766</b>	<b>7,181</b>	<b>135,311</b>	<b>2,635</b>	<b>2,501</b>	<b>134</b>
<b>Other:</b>							
OTC	34,340	8,945	0	43,285	1,017	1,929	(912)
Exchange-traded	9,186	1,037	0	10,223	28	60	(32)
<b>Total Other</b>	<b>43,526</b>	<b>9,982</b>	<b>0</b>	<b>53,509</b>	<b>1,045</b>	<b>1,989</b>	<b>(944)</b>
<b>Total OTC business</b>	<b>22,566,078</b>	<b>15,777,500</b>	<b>8,853,806</b>	<b>47,197,384</b>	<b>626,115</b>	<b>607,019</b>	<b>19,096</b>
<b>Total exchange-traded business</b>	<b>3,864,818</b>	<b>935,614</b>	<b>5,021</b>	<b>4,805,453</b>	<b>8,246</b>	<b>8,246</b>	<b>0</b>
<b>Total</b>	<b>26,430,896</b>	<b>16,713,114</b>	<b>8,858,826</b>	<b>52,002,836</b>	<b>634,361</b>	<b>615,265</b>	<b>19,096</b>
<b>Positive market values after netting and cash collateral received</b>					<b>49,416</b>		

in € m.	Notional amount maturity distribution				Positive market value	Negative market value	Net market value <sup>1</sup>
	Within 1 year	> 1 and ≤ 5 years	After 5 years	Total			
<b>Interest rate related:</b>							
OTC	13,773,939	16,401,710	10,438,348	40,613,997	333,660	305,152	28,508
Exchange-traded	2,770,393	1,568,462	8,838	4,347,694	387	379	8
<b>Total Interest rate related</b>	<b>16,544,331</b>	<b>17,970,173</b>	<b>10,447,186</b>	<b>44,961,690</b>	<b>334,047</b>	<b>305,531</b>	<b>28,517</b>
<b>Currency related:</b>							
OTC	4,000,994	1,433,173	628,773	6,062,940	96,805	99,182	(2,376)
Exchange-traded	27,390	350	0	27,739	42	60	(18)
<b>Total Currency related</b>	<b>4,028,383</b>	<b>1,433,523</b>	<b>628,773</b>	<b>6,090,679</b>	<b>96,848</b>	<b>99,242</b>	<b>(2,394)</b>
<b>Equity/index related:</b>							
OTC	300,884	237,554	69,688	608,126	26,462	30,534	(4,072)
Exchange-traded	443,280	69,573	3,009	515,862	8,435	5,812	2,623
<b>Total Equity/index related</b>	<b>744,164</b>	<b>307,127</b>	<b>72,697</b>	<b>1,123,988</b>	<b>34,897</b>	<b>36,346</b>	<b>(1,449)</b>
<b>Credit derivatives</b>	<b>363,890</b>	<b>1,599,773</b>	<b>148,388</b>	<b>2,112,051</b>	<b>33,461</b>	<b>32,727</b>	<b>735</b>
<b>Commodity related:</b>							
OTC	39,179	48,227	5,016	92,422	5,615	6,262	(647)
Exchange-traded	149,053	73,469	1,067	223,589	1,993	1,712	280
<b>Total Commodity related</b>	<b>188,233</b>	<b>121,696</b>	<b>6,083</b>	<b>316,012</b>	<b>7,607</b>	<b>7,974</b>	<b>(367)</b>
<b>Other:</b>							
OTC	24,935	12,571	35	37,541	1,727	2,183	(455)
Exchange-traded	8,896	1,226	0	10,122	14	42	(28)
<b>Total Other</b>	<b>33,831</b>	<b>13,797</b>	<b>35</b>	<b>47,663</b>	<b>1,741</b>	<b>2,225</b>	<b>(484)</b>
<b>Total OTC business</b>	<b>18,503,821</b>	<b>19,733,008</b>	<b>11,290,248</b>	<b>49,527,077</b>	<b>497,730</b>	<b>476,038</b>	<b>21,692</b>
<b>Total exchange-traded business</b>	<b>3,399,012</b>	<b>1,713,080</b>	<b>12,914</b>	<b>5,125,006</b>	<b>10,871</b>	<b>8,006</b>	<b>2,866</b>
<b>Total</b>	<b>21,902,833</b>	<b>21,446,088</b>	<b>11,303,162</b>	<b>54,652,083</b>	<b>508,602</b>	<b>484,044</b>	<b>24,557</b>
<b>Positive market values after netting and cash collateral received</b>					<b>50,504</b>		

<sup>1</sup> In 2014, figures for 2013 have been restated by € 3.0 billion (total) erroneously included in prior disclosure.

The following table shows a breakdown of notional amounts of OTC derivative assets and liabilities on the basis of clearing channel.

#### Notional amounts of OTC derivatives on basis of clearing channel and type of derivative

in € m.	Bilateral		CCP		Total
	Nominal	in %	Nominal	in %	
<b>Interest rate related</b>	<b>15,829,914</b>	<b>63 %</b>	<b>21,764,529</b>	<b>98 %</b>	<b>37,594,443</b>
<b>Currency related</b>	<b>6,677,149</b>	<b>27 %</b>	<b>23,410</b>	<b>0 %</b>	<b>6,700,559</b>
<b>Equity/index related</b>	<b>1,442,964</b>	<b>6 %</b>	<b>0</b>	<b>0 %</b>	<b>1,442,964</b>
<b>Credit derivatives</b>	<b>1,069,035</b>	<b>4 %</b>	<b>323,725</b>	<b>1 %</b>	<b>1,392,760</b>
<b>Commodity related</b>	<b>23,352</b>	<b>0 %</b>	<b>19</b>	<b>0 %</b>	<b>23,371</b>
<b>Other</b>	<b>43,285</b>	<b>0 %</b>	<b>0</b>	<b>0 %</b>	<b>43,285</b>
<b>Total</b>	<b>25,085,700</b>	<b>100 %</b>	<b>22,111,683</b>	<b>100 %</b>	<b>47,197,384</b>

<sup>1</sup> Due to the first time disclosure of this table resulting from EDTF recommendations, no prior year information is included in the 2014 reporting.

The notional amount of OTC derivative assets settled through central counterparties amounted to € 12.5 trillion as of December 31, 2013.



## Recommendation 29: Quantitative and qualitative analysis of the bank's counterparty credit risk that arises from its derivatives transactions

**Fair Value and Notional of Derivative Instruments.** The following tables summarize the fair value of derivative instruments designated as accounting hedges and the fair value of derivative instruments not designated as accounting hedges by type of derivative contract and the platform on which these instruments are traded or cleared on a gross basis. Fair values of derivative contracts in an asset position are included in Trading assets, and fair values of derivative contracts in a liability position are reflected in Trading liabilities in the Company's consolidated statements of financial condition (see Note 4):

	Derivative Assets at December 31, 2014							
	Fair Value				Notional			
	Bilateral OTC	Cleared OTC(1)	Exchange Traded	Total	Bilateral OTC	Cleared OTC(1)	Exchange Traded	Total
	(dollars in millions)							
Derivatives designated as accounting hedges:								
Interest rate contracts	\$ 3,947	\$ 1,053	\$ —	\$ 5,000	\$ 44,324	\$ 27,692	\$ —	\$ 72,016
Foreign exchange contracts	498	6	—	504	9,362	261	—	9,623
Total derivatives designated as accounting hedges	4,445	1,059	—	5,504	53,686	27,953	—	81,639
Derivatives not designated as accounting hedges(2):								
Interest rate contracts	281,214	211,552	407	493,173	4,854,953	9,187,454	1,467,056	15,509,463
Credit contracts	27,776	4,406	—	32,182	806,441	167,390	—	973,831
Foreign exchange contracts	72,362	152	83	72,597	1,955,343	11,538	9,663	1,976,544
Equity contracts	23,208	—	24,916	48,124	299,363	—	271,164	570,527
Commodity contracts	17,698	—	6,717	24,415	115,792	—	156,440	272,232
Other	376	—	—	376	5,179	—	—	5,179
Total derivatives not designated as accounting hedges	422,634	216,110	32,123	670,867	8,037,071	9,366,382	1,904,323	19,307,776
Total derivatives	\$ 427,079	\$ 217,169	\$ 32,123	\$ 676,371	\$ 8,090,757	\$ 9,394,335	\$ 1,904,323	\$ 19,389,415
Cash collateral netting	(58,541)	(4,654)	—	(63,195)	—	—	—	—
Counterparty netting	(338,041)	(210,922)	(27,819)	(576,782)	—	—	—	—
Total derivative assets	\$ 30,497	\$ 1,593	\$ 4,304	\$ 36,394	\$ 8,090,757	\$ 9,394,335	\$ 1,904,323	\$ 19,389,415

### Credit Exposure—Derivatives.

The Company incurs credit risk as a dealer in over-the-counter ("OTC") derivatives. Credit risk with respect to derivative instruments arises from the failure of a counterparty to perform according to the terms of the contract. In connection with its OTC derivative activities, the Company generally enters into master netting agreements and collateral arrangements with counterparties. These agreements provide the Company with the ability to demand collateral as well as to liquidate collateral and offset receivables and payables covered under the same master netting agreement in the event of counterparty default. The Company manages its trading positions by employing a variety of risk mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). For credit exposure information on the Company's OTC derivative products, see Note 12 to the Company's consolidated financial statements in Item 8.

	Derivative Liabilities at December 31, 2014							
	Fair Value				Notional			
	Bilateral OTC	Cleared OTC(1)	Exchange Traded	Total	Bilateral OTC	Cleared OTC(1)	Exchange Traded	Total
	(dollars in millions)							
Derivatives designated as accounting hedges:								
Interest rate contracts	\$ 125	\$ 99	\$ —	\$ 224	\$ 2,024	\$ 7,588	\$ —	\$ 9,612
Foreign exchange contracts	5	1	—	6	1,491	121	—	1,612
Total derivatives designated as accounting hedges	130	100	—	230	3,515	7,709	—	11,224
Derivatives not designated as accounting hedges(2):								
Interest rate contracts	264,579	207,482	293	472,354	4,615,886	9,138,417	1,714,021	15,468,324
Credit contracts	28,165	3,944	—	32,109	714,181	154,054	—	868,235
Foreign exchange contracts	72,156	169	21	72,346	1,947,178	11,477	1,761	1,960,416
Equity contracts	30,061	—	25,511	55,572	339,884	—	302,205	642,089
Commodity contracts	14,740	—	6,783	21,523	93,019	—	132,136	225,155
Other	172	—	—	172	5,478	—	—	5,478
Total derivatives not designated as accounting hedges	409,873	211,595	32,608	654,076	7,715,626	9,303,948	2,150,123	19,169,697
Total derivatives	\$ 410,003	\$ 211,695	\$ 32,608	\$ 654,306	\$ 7,719,141	\$ 9,311,657	\$ 2,150,123	\$ 19,180,921
Cash collateral netting	(37,054)	(258)	—	(37,312)	—	—	—	—
Counterparty netting	(338,041)	(210,922)	(27,819)	(576,782)	—	—	—	—
Total derivative liabilities	\$ 34,908	\$ 515	\$ 4,789	\$ 40,212	\$ 7,719,141	\$ 9,311,657	\$ 2,150,123	\$ 19,180,921

(1) Amounts include OTC derivatives that are centrally cleared in accordance with certain regulatory requirements.

(2) Notional amounts include gross notionals related to open long and short futures contracts of \$685 billion and \$1,122 billion, respectively. The unsettled fair value on these futures contracts (excluded from the table above) of \$472 million and \$21 million is included in Customer and other receivables and Customer and other payables, respectively, in the Company's consolidated statements of financial condition.

**Risk Mitigation.** The Company may seek to mitigate credit risk from its lending and trading activities in multiple ways, including collateral provisions, guarantees and hedges. At the transaction level, the Company seeks to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. The Company actively hedges its lending and derivatives exposure through various financial instruments that may include single-name, portfolio and structured credit derivatives. Additionally, the Company may sell, assign or syndicate funded loans and lending commitments to other financial institutions in the primary and secondary loan market. In connection with its derivatives trading activities, the Company generally enters into master netting agreements and collateral arrangements with counterparties. These agreements provide the Company with the ability to demand collateral, as well as to liquidate collateral and offset receivables and payables covered under the same master agreement in the event of a counterparty default.

## Recommendation 29: Quantitative and qualitative analysis of the bank's counterparty credit risk that arises from its derivatives transactions

### Derivatives

#### Summary and uncollateralised exposures

The table below analyses derivatives by type of contract. The master netting agreements and collateral shown below do not result in a net presentation on the balance sheet under IFRS.

	2014					2013					2012				
	Notional (1)					Notional (1)					Notional (1)				
	GBP £bn	USD \$bn	Euro €bn	Other £bn	Total £bn	Assets £m	Liabilities £m	Assets £m	Liabilities £m	Assets £m	Liabilities £m	Assets £m	Liabilities £m	Assets £m	Liabilities £m
Interest rate (2)	5,335	9,829	7,822	4,345	27,331	269,912	259,971	35,589	218,041	208,698	33,483	363,454	345,565		
Exchange rate	319	2,110	667	1,579	4,675	78,707	83,781	4,555	61,923	65,749	4,698	63,067	70,481		
Credit	2	66	36	21	125	2,254	2,615	253	5,306	5,388	553	11,005	10,353		
Equity and commodity	21	22	24	11	78	3,119	3,582	81	2,770	5,692	111	4,392	7,941		
						353,992	349,949	288,040	265,527		441,918	434,340			
Counterparty mark-to-market netting						(295,315)	(295,315)	(241,265)	(241,265)		(374,887)	(374,887)			
Cash collateral						(33,272)	(30,203)	(24,423)	(25,302)		(34,291)	(31,863)			
Securities collateral						(7,013)	(14,437)	(5,990)	(8,257)		(5,644)	(11,702)			
Net exposure						18,392	9,994	16,362	10,703		27,096	15,888			
Net exposure by sector															
Banks						1,875	1,534	1,524	1,574						
Other financial institutions						4,035	3,721	4,619	4,484						
Corporate						11,186	4,382	9,351	4,217						
Government						1,296	357	868	428						
						18,392	9,994	16,362	10,703						
Net exposure by region of counterparty															
UK						9,037	3,233	8,937	3,681						
Europe						5,628	3,521	4,497	3,717						
US						1,544	1,280	1,441	1,806						
RoW						2,183	1,960	1,487	1,499						
						18,392	9,994	16,362	10,703						

#### Settlement basis and central counterparties

The table below analyses the derivative notional and fair value by trading and settlement method.

	Notional				Asset				Liability			
	Traded over the counter				Traded over the counter				Traded over the counter			
	Traded on recognised exchanges £bn	Settled by central counterparties £bn	Not settled by central counterparties £bn	Total £bn	Traded on recognised exchanges £m	Traded over the counter £m	Total £m	Traded on recognised exchanges £m	Traded over the counter £m	Total £m	Traded on recognised exchanges £m	Traded over the counter £m
2014												
Interest rate	2,383	18,452	6,496	27,331	5	269,908	269,913	5	269,908	269,913	5	269,908
Exchange rate	53	—	4,622	4,675	—	78,706	78,706	—	78,706	78,706	—	78,706
Credit	—	22	103	125	—	2,254	2,254	—	2,254	2,254	—	2,254
Equity and commodity	—	—	78	78	3	3,116	3,119	114	3,116	3,119	114	3,116
2013												
Interest rate	2,203	22,565	10,821	35,589	65	217,976	217,976	79	217,976	217,976	79	217,976
Exchange rate	94	2	4,459	4,555	—	61,923	61,923	—	61,923	61,923	—	61,923
Credit	—	30	223	253	—	5,306	5,306	—	5,306	5,306	—	5,306
Equity and commodity	—	1	80	81	4	2,766	2,766	220	2,766	2,766	220	2,766
2012												
Interest rate	2,388	15,864	15,231	33,483	13	363,441	363,441	55	363,441	363,441	55	363,441
Exchange rate	108	—	4,590	4,698	—	63,067	63,067	—	63,067	63,067	—	63,067
Credit	—	—	553	553	—	11,005	11,005	—	11,005	11,005	—	11,005
Equity and commodity	1	—	110	111	28	4,364	4,364	200	4,364	4,364	200	4,364

#### Mitigation of counterparty credit risk

	2014 £bn	2013 £bn	2012 £bn
Reverse repurchase agreements	64.7	76.5	104.8
Securities received as collateral (1,2)	(64.7)	(76.4)	(104.7)
Derivative assets gross exposure	354.0	288.0	441.9
Counterparty netting	(295.3)	(241.3)	(374.9)
Cash collateral held (2)	(33.3)	(24.4)	(34.3)
Securities received as collateral (2)	(7.0)	(6.0)	(5.6)

Notes:  
(1) In accordance with normal market practice, at 31 December 2014 £60.2 billion (2013 - £63.7 billion; 2012 - £100.7 billion) had been resold or re-pledged as collateral for RBS's own transactions.  
(2) At fair value.

### Counterparty credit risk

RBS mitigates counterparty credit risk arising from both derivatives and repurchase agreements through the use of netting, collateral and market standard documentation.

Amounts owed by RBS to a counterparty are netted against amounts the same counterparty owes it, in accordance with relevant regulatory and internal policies. However, generally, this is only done if a netting and collateral agreement is in place as well as a legal opinion to the effect that the agreement is enforceable in the relevant jurisdictions.

Collateral may consist of either cash or securities. In the case of derivatives, collateral generally takes the form of cash. In the case of securities financing transactions, collateral usually takes the form of debt and, to a much lesser extent, equity securities at the outset. However, if the value of collateral falls relative to that of the obligation, RBS may require additional collateral in the form of cash (variation margin). The vast majority of agreements are subject to daily collateral calls with collateral valued using RBS's internal valuation methodologies.

### Balance sheet analysis continued

#### Key points

- Interest rate contracts: notional balances were £8.3 trillion lower due to increased participation in trade compression cycles in 2014. The fair value increased due to significant downward shifts in major yields following further rate cuts by the European Central Bank, European instability including Germany as well as concerns over falling oil prices. This was partially offset by the impact of strengthening of sterling against the euro and participation in tear ups.
- Foreign exchange contracts: the increase in fair value is driven by the strengthening of the US dollar against the Japanese yen as the portfolio was materially positioned long US dollar and short Japanese yen.
- Credit derivatives: notional and fair value decreased reflecting participation in trade compression cycles and reduction in the US Agency business within CIB. Tightening of credit spreads in Europe and long dated spreads in the US also contributed to decrease in fair values.
- Uncollateralised derivatives predominantly comprise:
  - Corporates: predominantly large corporates with whom RBS may have netting arrangements in place, but operational capability does not support collateral posting. Transactions include foreign exchange hedges and interest rate swaps.
  - Banks: transactions with certain counterparties with whom RBS has netting arrangements but collateral is not posted on a daily basis; certain transactions with specific terms that may not fall within netting and collateral arrangements; derivative positions in certain jurisdictions for example China which are either uncollateralised or the collateral agreements are not deemed to be legally enforceable.
  - Other financial institutions: transactions with securitisation structured purpose entities and funds where collateral posting is contingent on RBS's external rating.
  - Government: sovereigns and supranational entities with one way collateral agreements in their favour.

### Credit derivatives

RBS trades credit derivatives to meet client needs and to mitigate its own credit risk. Credit derivative exposures relating to proprietary trading are minimal. The table below analyses bought and sold protection.

	2014				2013				2012			
	Notional		Fair value		Notional		Fair value		Notional		Fair value	
By type	Bought £bn	Sold £bn	Bought £bn	Sold £bn	Bought £bn	Sold £bn	Bought £bn	Sold £bn	Bought £bn	Sold £bn	Bought £bn	Sold £bn
Client-led trading/residual risk (1)	52.1	50.0	0.9	1.3	124.7	111.7	1.2	1.5	250.7	240.7	3.4	3.1
Credit hedging - banking book (2)	1.8	—	0.1	—	2.3	0.2	0.2	—	5.4	0.4	0.1	—
Credit hedging - trading book												
- rates	14.1	6.1	0.2	0.3	5.1	4.0	0.1	0.1	9.4	5.8	0.1	0.1
- credit and mortgage markets	0.4	—	0.2	—	2.2	1.3	0.5	0.3	22.4	16.0	0.9	0.7
- other	0.5	—	—	—	0.8	0.1	—	—	1.4	0.6	—	—
	68.9	56.1	1.4	1.6	135.1	117.3	2.0	1.9	289.3	263.5	4.5	3.9
	2014				2013				2012			
	Notional £bn		Net exposure £bn		Notional £bn		Net exposure £bn		Notional £bn		Net exposure £bn	
of which:												
Monoline insurers (3)	0.1		1.6		0.1		4.6		0.4		0.4	
CDPCs (3)	15.2		18.8		0.1		21.0		0.2		0.2	

#### Notes:

(1) Residual risk relates to legacy positions in RCR in 2014 and in Non-Core in 2013 and 2012.  
(2) Credit hedging in the banking book principally relates to portfolio management in RCR and Non-Core.  
(3) Credit valuation relating to monoline insurers and credit derivative product companies (CDPCs) were £47 million (2013 - £99 million; 2012 - £506 million).



## Recommendation 30: Provide qualitative information on credit risk mitigation, including collateral held for all sources of credit risk and quantitative information where meaningful (1 of 2)

### Credit risk mitigation

ING Bank's lending and investment businesses are subject to credit risk. As such, the creditworthiness of our customers and investments is continually monitored for their ability to meet their financial obligations to ING Bank. In addition to determining the credit quality and creditworthiness of the customer, ING Bank uses various credit risk mitigation techniques and instruments to mitigate the credit risk associated with an exposure and to reduce the losses incurred subsequent to an event of default on an obligation a customer may have towards ING Bank. The most common terminology used in ING Bank for credit risk protection is "a cover".

While a cover can be an important mitigant of credit risk and an alternative source of repayment, generally it is ING Bank's practice to lend on the basis of the customer's creditability rather than exclusively relying on the value of the cover.

Within ING Bank, there are two distinct forms of covers: assets and third party obligations.

### Assets

The asset that has been pledged to ING Bank as collateral or security gives ING Bank the right to liquidate it in cases where the customer is unable to fulfil its financial obligation. As such, the proceeds can be applied towards full or partial compensation of the customer's outstanding exposure. An asset can be tangible (such as cash, securities, receivables, inventory, plant & machinery and mortgages on real estate properties) or intangible (such as patents, trademarks, contract rights and licenses).

### Third party obligation

Third Party Obligation, indemnification or undertaking (either by contract and/or by law) is a legally binding declaration by a third party that gives ING Bank the right to expect and claim from that third party to pay an amount, if the customer fails on its obligations to ING Bank. The most common examples are guarantees (such as parent guarantees and export credit insurances) and letters of comfort.

### General guidelines on cover valuation

General guidelines for cover valuation are established to ensure consistency of the application within ING Bank. These general guidelines also require that the value of the cover needs to be monitored on regular basis, in principle at least annually. Covers shall be revalued accordingly and whenever there is reason to believe that the market is subject to significant changes in conditions. The frequency of monitoring and revaluation depends on the type of covers.

The valuation method also depends on the type of covers. For asset collateral, the valuation sources can be the customer's balance sheet (e.g. inventory, machinery, and equipment), nominal value (e.g. cash, receivables), market value (e.g. securities and commodities), independent valuer (commercial real estate) and market indices (residential real estate). For third party obligations, the valuation is based on the value which is attributed to the contract between ING Bank and that third party.

### Cover values by risk category

This section provides insight on the type of covers and to which extent a loan is collateralised. The cover disclosures are presented by risk category: Lending, Investment, Money-Market and Pre-settlement. For each risk category, the cover amounts are presented by the most relevant collateral forms, being mortgages and financial collateral (including cash), and the most relevant third party obligation being guarantees. ING Bank obtains covers which are compliant to the Capital Requirements Directive IV (CRDIV) and the related Capital Requirements Regulation (CRR) requirements, as well as those that are not compliant.

The cover values are presented for the total portfolio of ING Bank. In the last year's disclosure, only the AIRB portfolio was presented with covers in detail while in this year's disclosure, the covers of both AIRB and SA portfolios are presented in detail reflecting the complete ING Bank's portfolio. Next to that, detailed information is provided on the cover coverage for the performing and non-performing portfolio. The non-performing loan definition is explained in detail in the section "Credit Restructuring". To increase the understanding of the reader on the nature of the collateralised loans, insight is given in the industry and geography breakdown of the ING Bank portfolio as well. Another improvement is that in addition to the lending risk category, the cover valuation tables now also give insight in the risk categories of Investment, Money Market and Pre-settlement. For comparability reasons with previous tables, outstandings are used to show the ING Bank's portfolio.

Exposures are categorised into different Value to Loan (VTL) buckets that give insight in the level of collateralisation of ING Bank's portfolio. VTL is calculated as the cover value divided by the outstandings at the balance sheet date. The cover values are pre-haircut and indexed values and exclude any cost of liquidation. Covers can either be valid for all limits, sub-limits or a particular outstanding of a borrower, the latter being the most common. To prevent erroneous inflation of the level of collateralisation, the coverage of all outstanding is capped at 100% if there is over-collateralisation on a certain outstanding. As a result, the coverage levels disclosed are conservative. Each limit is subsequently assigned to one of the six defined VTL buckets: no cover/data not available, >0% - 25%, >25% to 50%, >50% to 75%, >75% to <100%, and ≥ 100%. As the nature of the Pre-settlement portfolio determines that collateral is netted, these VTL buckets are not shown for the Pre-settlement portfolio.

The first two tables give a comprehensive overview of the collateralisation of the total portfolio of ING Bank.

### Total Bank

#### Cover values including guarantees received – Total ING Bank – 2014 <sup>(1)(2)</sup>

	Cover type					Value to Loan			
	Outstandings	Mortgages	Eligible Financial Collateral	Other CRR/CRD IV eligible	Guarantees	Non CRR/CRD IV eligible	No Cover/Data not available	Partially covered	Fully covered
<b>Consumer Lending</b>	296,451	445,855	2,976	512	30,240	31,628	5.0%	22.9%	72.1%
Commercial Banking	22	6	0	0	0	77	15.0%	7.6%	77.4%
Retail Banking Benelux	148,299	210,581	2,467	512	22,739	18,492	3.2%	27.1%	69.7%
Retail Banking International	122,568	202,279	27	0	0	9,959	8.2%	15.7%	76.1%
Westland/Utrecht Bank	25,562	32,989	482	0	7,501	3,100	0.0%	32.8%	67.1%
<b>Business Lending</b>	262,415	112,817	17,680	83,916	56,835	110,661	33.7%	30.5%	35.8%
Commercial Banking	180,126	54,483	14,687	61,205	45,399	93,261	34.0%	29.9%	36.1%
Corporate Line Bank	270	0	0	0	0	0	100.0%	0.0%	0.0%
Retail Banking Benelux	60,297	48,374	2,657	20,725	10,119	12,664	24.7%	35.4%	39.8%
Retail Banking International	20,278	7,684	334	1,986	1,266	4,722	58.5%	19.8%	21.8%
Westland/Utrecht Bank	1,445	2,277	2	0	51	14	1.1%	64.4%	34.4%
<b>Investment and Money Market</b>	118,198	0	16	298	1,476	1,993	97.2%	1.1%	1.7%
Commercial Banking	46,157	0	10	298	80	27	99.2%	0.7%	0.1%
Corporate Line Bank	6,870	0	0	0	0	0	100.0%	0.0%	0.0%
Retail Banking Benelux	2,656	0	6	0	5	55	97.8%	0.4%	1.8%
Retail Banking International	62,515	0	0	0	1,392	1,911	95.5%	1.6%	2.9%
<b>Total Lending, Investment and Money Market</b>	<b>677,065</b>	<b>558,673</b>	<b>20,673</b>	<b>84,726</b>	<b>88,552</b>	<b>144,282</b>	<b>32.2%</b>	<b>22.0%</b>	<b>45.7%</b>
<b>Pre-settlement (3)</b>	51,602								
Commercial Banking	49,143								
Corporate Line Bank	1,807								
Retail Banking Benelux	134								
Retail Banking International	519								
<b>Total Bank</b>	<b>728,667</b>	<b>558,673</b>	<b>20,673</b>	<b>84,726</b>	<b>88,552</b>	<b>144,282</b>	<b>32.2%</b>	<b>22.0%</b>	<b>45.7%</b>

(1) Including loans to ING Group and NN Group.

(2) Excluding intercompany positions

(3) More information on the credit risk mitigants of the Pre-settlement exposure can be found in the Pre-settlement section.

Over the year, the collateralisation level of the total ING Bank portfolio improved. Excluding the pre-settlement portfolio for which covers are netted to derive the outstandings at risk, 45.7% of the total ING Bank's outstandings (from 42.0% as of 2013) are fully collateralised in 2014.

The lending portfolio grew over the year, partially due to the appreciation of the USD (6.0 billion) and the AUD (2.0 billion) against the Euro. The fully covered ratio showed an improvement over the year, both in the consumer and business portfolios, with the fully covered outstandings increasing from 50.2% to 55.1%. The consumer lending portfolio overall showed an improvement in the fully covered ratio thanks to improved VTL's in the residential mortgages, which are by far the largest constituent of the portfolio. While the Business Lending portfolio benefitted from de-risking activities and growths in sectors which show high levels of collateralisation.

Investment outstandings increased over the year, mainly due to increased placements with European sovereigns due to the new regulatory liquidity regime. However, since investments traditionally have no covers, the no-covers ratio showed a small increase in 2014. This was also due to reduction in covers seen in Investments in the German portfolio where a more conservative method for recognition of government guarantees was implemented (where government support was considered implicit and not explicit). Also, as a part of the ING One Bank initiatives, the investment portfolio in the Spanish market was overhauled, which further led to reductions in the covers for investments.

*ING provides additional details on credit risk mitigation for consumer, business and capital markets lending by geography and by industry in a subsequent section. Consumer and Business lending are shown on the following page*



## Recommendation 30: Provide qualitative information on credit risk mitigation, including collateral held for all sources of credit risk and quantitative information where meaningful (2 of 2)

### Consumer lending portfolio

The Consumer Lending portfolio includes Residential Mortgage loans (93.7% in 2014) and Other Consumer Lending loans, which mainly comprise credit cards, term loans and revolving to consumers. As a result, most of the collateral consists of mortgages. The mortgage values are maintained in the ING Bank's central database (Vortex) and in most cases external data is used to index the market value. On a quarterly or annual basis, the mortgages value is updated in Vortex using the relevant house price index (the NVM Index in the Netherlands, Level Housing Index in Australia, CRI Real Estate Appraisal Company in Italy, Ministerio de Fomento in Spain and Stadin in Belgium).

A significant part (49.3%) of the ING Bank's Residential Mortgage portfolio relates to mortgage loans provided in the Netherlands, followed by other main markets such as Germany (22.5%), and Belgium (10.6%). Given the size of the Dutch mortgages portfolio, below the valuation methodology employed to determine the cover values for the Dutch Residential Mortgages is provided.

### Dutch mortgages valuation

When a mortgage loan is granted, the policy maximum loan to market value (LTMV) for an existing property and for construction property financing is 104%. The cover values are captured in the local systems which then are fed into a central data system (Vortex). All valuations are performed by certified valuers that are registered at one of the ING Bank-accepted organisations. In addition, the valuator must be a member of the NVM (Nederlandse Vereniging van Makelaars – Dutch Association of Real Estate Agents), VBO (Vereniging Bemiddeling Onroerend Goed – Association of Real Estate Brokers), VastgoedPRO (Association of Real Estate Professionals) or NVR (Nederlandse Vereniging van Rentmeesters).

The below tables show the values of different covers and the VTL split between performing and non-performing loans.

### Consumer Lending

#### Cover values including guarantees received – Total ING Bank – 2014 <sup>(102)</sup>

	Cover type					Value to Loan					
	Out-standings	Mort-gages	Eligible Financial Collateral	Other CRR/CRD IV eligible	Guaran-tees	Non CRR/CRD IV eligible	No Cover/ Data not available	>0% – 25%	>25% – 50%	>50% – 75%	>75% – 100%
<b>Performing</b>											
Residential Mortgages	269,974	430,794	2,593	207	29,266	24,900	0.3%	0.1%	0.2%	1.6%	75.9%
Other Consumer Lending	20,282	8,879	337	276	371	6,153	65.4%	0.3%	0.2%	0.5%	30.8%
<b>Total Performing</b>	<b>290,256</b>	<b>439,672</b>	<b>2,930</b>	<b>483</b>	<b>29,637</b>	<b>31,054</b>	<b>4.8%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>1.5%</b>	<b>72.7%</b>
<b>Non-performing</b>											
Residential Mortgages	5,307	5,849	43	9	583	457	2.9%	0.3%	1.0%	7.8%	47.9%
Other Consumer Lending	887	334	3	20	21	118	70.9%	0.3%	0.4%	0.8%	22.8%
<b>Total Non-performing</b>	<b>6,195</b>	<b>6,183</b>	<b>46</b>	<b>30</b>	<b>604</b>	<b>574</b>	<b>12.7%</b>	<b>0.3%</b>	<b>0.9%</b>	<b>6.8%</b>	<b>44.3%</b>
<b>Total Consumer Lending</b>	<b>296,451</b>	<b>445,855</b>	<b>2,976</b>	<b>512</b>	<b>30,240</b>	<b>31,628</b>	<b>5.0%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>1.6%</b>	<b>72.1%</b>

### Business Lending portfolio

Business Lending is an important business of ING Bank, accounting for 36.0% of the total ING Bank's outstandings. In line with our objective to give stakeholders insight into the portfolio, we present the Business Lending portfolio per industry breakdown in accordance with the NAICS definition and per Region and main market. Business Lending presented in this section does not include Pre-settlement and Investment & Money Market exposures, which are separately exhibited in the next sections.

The table below provides the ING Bank's portfolio broken down per NAICS Industry code. This table cannot be directly compared with ING Bank's Real Estate Finance portfolio as the scope and definition are differently determined.

ING Bank aims to be more selective in the financing of Real Estate. As this sector has proven to be significantly impacted during the crisis, the value of collaterals for this portfolio is of specific importance. The REF portfolio, which mostly focuses on the business whereby ING Bank finances or refinances income producing real estate in office, retail, residential and industrial (logistics) segments or a mix of commercial properties, presents approximately 56.4% of the Real Estate sector's outstanding.

### Cover valuation for REF portfolio

The cover valuation policy and governance within ING Bank ensures that the cover values reflect the current fair value on the date of the valuation. All commercial properties financed by ING Bank need to be (re)-valued within three years' period or more frequently if market conditions or the risk profile deteriorates. Non-performing loans and high risk Watch-list REF files are re-valued at least annually.

The valuation of financed properties at origination of a REF deal or the revaluation is always performed by a real estate appraiser. For commercial properties located in the Netherlands, an internal real estate appraiser (80% of the assets) or an external real estate appraiser (20% of the assets) performs the (re)valuation while for properties outside the Netherlands, the (re)-valuation is always performed through an external real estate appraiser.

For properties located in the Netherlands, if the risk profile remains stable or improves during this three year cycle, an annual indexation is performed. The indices used are from ROZ/IPD (Vereniging Raad voor Onroerende Zaken – Association of Real Estate Council/Investment Property Databank). If the risk profile deteriorates, a revaluation is required.

The assessment of risk profile is performed based on certain defined factors, such as external drivers including macro developments (GDP, unemployment rate, Consumer confidence rate, Interest rate) and meso indicators (Real Estate quarterly data from Real Estate institution) and internal drivers including micro deteriorations (vacancy, WALE – weighted average lease expiry, EBITDA) and individual deteriorations (being Watch Listed, Credit event, suspension of payments, bankruptcy of a major tenant, actual or expected increase in vacancy level).

For financing properties outside the Netherlands, the revaluation cycle is also set to three years. In case the agreed LTV covenants are not met, an annual or bi-annual revaluation will take place.

The outcome of the re-valuation or indexed value is updated accordingly in the cover REF database.

### Business Lending per economic sector

#### Cover values including guarantees received – Business Lending portfolio – 2014 <sup>(102)</sup>

Industry	Cover type					Value to Loan					
	Out-standings	Mort-gages	Eligible Financial Collateral	Other CRR/CRD IV eligible	Guaran-tees	Non CRR/CRD IV eligible	No Cover/ Data not available	>0% – 25%	>25% – 50%	>50% – 75%	>75% – 100%
<b>Real Estate</b>	<b>40,592</b>	<b>60,158</b>	<b>1,218</b>	<b>1,084</b>	<b>5,659</b>	<b>6,120</b>	<b>7.0%</b>	<b>1.0%</b>	<b>1.9%</b>	<b>10.3%</b>	<b>60.5%</b>
<i>of which Non-performing</i>	<i>3,279</i>	<i>3,194</i>	<i>100</i>	<i>93</i>	<i>894</i>	<i>361</i>	<i>10.6%</i>	<i>1.9%</i>	<i>10.2%</i>	<i>27.5%</i>	<i>31.5%</i>
<b>Natural Resources</b>	<b>38,653</b>	<b>3,888</b>	<b>3,266</b>	<b>19,457</b>	<b>15,311</b>	<b>19,963</b>	<b>20.4%</b>	<b>9.1%</b>	<b>14.0%</b>	<b>13.8%</b>	<b>28.5%</b>
<i>of which Non-performing</i>	<i>929</i>	<i>56</i>	<i>150</i>	<i>621</i>	<i>642</i>	<i>1,146</i>	<i>21.3%</i>	<i>0.6%</i>	<i>5.2%</i>	<i>7.2%</i>	<i>38.0%</i>
<b>Commercial Banks</b>	<b>21,845</b>	<b>66</b>	<b>168</b>	<b>168</b>	<b>637</b>	<b>579</b>	<b>90.0%</b>	<b>3.4%</b>	<b>2.3%</b>	<b>0.8%</b>	<b>2.6%</b>
<i>of which Non-performing</i>	<i>662</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>7</i>	<i>7</i>	<i>98.8%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>
<b>Transportation &amp; Logistics</b>	<b>21,431</b>	<b>3,844</b>	<b>647</b>	<b>19,579</b>	<b>5,309</b>	<b>6,687</b>	<b>18.2%</b>	<b>3.4%</b>	<b>3.5%</b>	<b>7.1%</b>	<b>55.8%</b>
<i>of which Non-performing</i>	<i>794</i>	<i>317</i>	<i>11</i>	<i>488</i>	<i>187</i>	<i>281</i>	<i>27.7%</i>	<i>1.7%</i>	<i>8.5%</i>	<i>10.4%</i>	<i>26.9%</i>
<b>General Industries</b>	<b>15,912</b>	<b>4,611</b>	<b>723</b>	<b>6,481</b>	<b>4,080</b>	<b>10,539</b>	<b>32.6%</b>	<b>4.8%</b>	<b>7.9%</b>	<b>10.2%</b>	<b>34.5%</b>
<i>of which Non-performing</i>	<i>776</i>	<i>343</i>	<i>58</i>	<i>375</i>	<i>280</i>	<i>298</i>	<i>22.9%</i>	<i>8.8%</i>	<i>7.7%</i>	<i>5.8%</i>	<i>45.3%</i>
<b>Services</b>	<b>15,744</b>	<b>7,851</b>	<b>1,036</b>	<b>4,306</b>	<b>3,941</b>	<b>7,635</b>	<b>30.8%</b>	<b>3.8%</b>	<b>5.5%</b>	<b>7.5%</b>	<b>41.9%</b>
<i>of which Non-performing</i>	<i>694</i>	<i>402</i>	<i>10</i>	<i>210</i>	<i>220</i>	<i>166</i>	<i>22.7%</i>	<i>5.4%</i>	<i>6.0%</i>	<i>6.4%</i>	<i>51.7%</i>
<b>Food, Beverages &amp; Personal Care</b>	<b>15,376</b>	<b>6,114</b>	<b>954</b>	<b>7,983</b>	<b>3,067</b>	<b>15,524</b>	<b>28.1%</b>	<b>4.5%</b>	<b>7.5%</b>	<b>12.6%</b>	<b>32.6%</b>
<i>of which Non-performing</i>	<i>695</i>	<i>347</i>	<i>1</i>	<i>225</i>	<i>128</i>	<i>220</i>	<i>22.4%</i>	<i>7.6%</i>	<i>22.6%</i>	<i>16.7%</i>	<i>22.9%</i>
<b>Non-Bank Financial Institutions</b>	<b>13,741</b>	<b>2,064</b>	<b>5,921</b>	<b>2,409</b>	<b>3,415</b>	<b>5,987</b>	<b>34.9%</b>	<b>7.6%</b>	<b>2.6%</b>	<b>12.2%</b>	<b>34.8%</b>
<i>of which Non-performing</i>	<i>107</i>	<i>67</i>	<i>1</i>	<i>26</i>	<i>25</i>	<i>35</i>	<i>14.1%</i>	<i>10.9%</i>	<i>5.0%</i>	<i>10.1%</i>	<i>49.2%</i>
<b>Builders &amp; Contractors</b>	<b>12,394</b>	<b>6,641</b>	<b>306</b>	<b>4,271</b>	<b>2,878</b>	<b>9,401</b>	<b>29.6%</b>	<b>6.2%</b>	<b>5.6%</b>	<b>9.6%</b>	<b>38.8%</b>
<i>of which Non-performing</i>	<i>1,016</i>	<i>711</i>	<i>5</i>	<i>358</i>	<i>390</i>	<i>695</i>	<i>29.6%</i>	<i>2.1%</i>	<i>8.2%</i>	<i>7.2%</i>	<i>40.7%</i>
<b>Chemicals, Health &amp; Pharmaceuticals</b>	<b>11,914</b>	<b>6,610</b>	<b>351</b>	<b>4,291</b>	<b>1,892</b>	<b>4,945</b>	<b>32.7%</b>	<b>5.0%</b>	<b>7.5%</b>	<b>10.6%</b>	<b>31.7%</b>
<i>of which Non-performing</i>	<i>247</i>	<i>115</i>	<i>2</i>	<i>100</i>	<i>52</i>	<i>129</i>	<i>29.0%</i>	<i>0.8%</i>	<i>5.2%</i>	<i>8.8%</i>	<i>36.9%</i>
<b>Others <sup>(1)</sup></b>	<b>54,815</b>	<b>10,972</b>	<b>3,089</b>	<b>13,886</b>	<b>10,646</b>	<b>23,281</b>	<b>49.9%</b>	<b>3.5%</b>	<b>3.0%</b>	<b>6.5%</b>	<b>28.0%</b>
<i>of which Non-performing</i>	<i>1,385</i>	<i>517</i>	<i>107</i>	<i>625</i>	<i>390</i>	<i>514</i>	<i>26.4%</i>	<i>5.6%</i>	<i>3.9%</i>	<i>8.0%</i>	<i>40.8%</i>
<b>Total Business Lending</b>	<b>262,415</b>	<b>112,817</b>	<b>17,680</b>	<b>83,916</b>	<b>56,835</b>	<b>110,661</b>	<b>33.7%</b>	<b>4.5%</b>	<b>5.5%</b>	<b>9.0%</b>	<b>35.8%</b>
<b>of which Total Non-performing</b>	<b>10,584</b>	<b>6,067</b>	<b>446</b>	<b>3,120</b>	<b>3,216</b>	<b>3,852</b>	<b>25.2%</b>	<b>3.3%</b>	<b>8.2%</b>	<b>13.9%</b>	<b>33.9%</b>

### Business Lending per region

#### Cover values including guarantees received – Business Lending Portfolio – 2014 <sup>(102)</sup>

Region	Cover type					Value to Loan					
	Out-standings	Mort-gages	Eligible Financial Collateral	Other CRR/CRD IV eligible	Guaran-tees	Non CRR/CRD IV eligible	No Cover/ Data not available	>0% – 25%	>25% – 50%	>50% – 75%	>75% – 100%
<b>Africa</b>	<b>2,221</b>	<b>24</b>	<b>177</b>	<b>822</b>	<b>1,010</b>	<b>717</b>	<b>21.1%</b>	<b>2.8%</b>	<b>24.7%</b>	<b>6.4%</b>	<b>23.9%</b>
<i>of which Non-performing</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>95.3%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>4.7%</i>
<b>America</b>	<b>28,163</b>	<b>3,369</b>	<b>6,763</b>	<b>19,588</b>	<b>5,353</b>	<b>19,484</b>	<b>25.8%</b>	<b>3.8%</b>	<b>6.3%</b>	<b>9.2%</b>	<b>38.8%</b>
<i>of which Non-performing</i>	<i>296</i>	<i>112</i>	<i>0</i>	<i>129</i>	<i>23</i>	<i>123</i>	<i>4.0%</i>	<i>0.0%</i>	<i>21.0%</i>	<i>4.6%</i>	<i>38.1%</i>
<b>Asia</b>	<b>32,416</b>	<b>907</b>	<b>1,381</b>	<b>8,265</b>	<b>9,308</b>	<b>6,553</b>	<b>46.5%</b>	<b>8.1%</b>	<b>4.3%</b>	<b>10.0%</b>	<b>24.3%</b>
<i>of which Non-performing</i>	<i>150</i>	<i>0</i>	<i>7</i>	<i>49</i>	<i>29</i>	<i>12</i>	<i>19.3%</i>	<i>11.1%</i>	<i>0.0%</i>	<i>37.9%</i>	<i>12.7%</i>
<b>Australia</b>	<b>3,447</b>	<b>2,531</b>	<b>148</b>	<b>1,470</b>	<b>583</b>	<b>546</b>	<b>17.6%</b>	<b>15.6%</b>	<b>1.6%</b>	<b>2.5%</b>	<b>8.7%</b>
<i>of which Non-performing</i>	<i>50</i>	<i>6</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>92.8%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>0.0%</i>	<i>7.2%</i>
<b>Europe</b>											
<b>Belgium</b>	<b>41,189</b>	<b>28,369</b>	<b>1,249</b>	<b>6,513</b>	<b>10,882</b>	<b>22,251</b>	<b>33.5%</b>	<b>2.2%</b>	<b>3.1%</b>	<b>4.3%</b>	<b>50.3%</b>
<i>of which Non-performing</i>	<i>1,289</i>	<i>1,253</i>	<i>16</i>	<i>634</i>	<i>534</i>	<i>808</i>	<i>11.2%</i>	<i>1.7%</i>	<i>2.6%</i>	<i>4.8%</i>	<i>69.4%</i>
<b>Germany</b>	<b>8,599</b>	<b>1,766</b>	<b>166</b>	<b>392</b>	<b>597</b>	<b>1,552</b>	<b>66.9%</b>	<b>2.5%</b>	<b>3.5%</b>	<b>2.8%</b>	<b>22.1%</b>
<i>of which Non-performing</i>	<i>80</i>	<i>72</i>	<i>4</i>	<i>8</i>	<i>1</i>	<i>0</i>	<i>53.6%</i>	<i>1.8%</i>	<i>7.2%</i>	<i>0.0%</i>	<i>37.1%</i>
<b>Netherlands</b>	<b>62,063</b>	<b>46,710</b>	<b>2,681</b>	<b>24,917</b>	<b>6,820</b>	<b>14,695</b>	<b>23.6%</b>	<b>2.9%</b>	<b>5.6%</b>	<b>15.9%</b>	<b>31.3%</b>
<i>of which Non-performing</i>	<i>4,377</i>	<i>2,075</i>	<i>140</i>	<i>1,449</i>	<i>321</i>	<i>343</i>	<i>29.5%</i>	<i>4.7%</i>	<i>12.8%</i>	<i>22.4%</i>	<i>14.7%</i>
<b>Rest of Europe</b>	<b>84,318</b>	<b>29,143</b>	<b>5,114</b>	<b>21,950</b>	<b>22,283</b>	<b>44,864</b>	<b>36.5%</b>	<b>5.4%</b>	<b>6.5%</b>	<b>6.8%</b>	<b>36.4%</b>
<i>of which Non-performing</i>	<i>4,342</i>	<i>2,549</i>	<i>278</i>	<i>850</i>	<i>2,309</i>	<i>2,566</i>	<i>25.4%</i>	<i>2.5%</i>	<i>4.7%</i>	<i>8.3%</i>	<i>42.5%</i>
<b>Total Business Lending</b>	<b>262,415</b>	<b>112,817</b>	<b>17,680</b>	<b>83,916</b>	<b>56,835</b>	<b>110,661</b>	<b>33.7%</b>	<b>4.5%</b>	<b>5.5%</b>	<b>9.0%</b>	<b>35.8%</b>
<b>of which Non-performing</b>	<b>10,584</b>	<b>6,067</b>	<b>446</b>	<b>3,120</b>	<b>3,216</b>	<b>3,852</b>	<b>25.2%</b>	<b>3.3%</b>	<b>8.2%</b>	<b>13.9%</b>	<b>33.9%</b>

## Recommendation 30: Provide qualitative information on credit risk mitigation, including collateral held for all sources of credit risk and quantitative information where meaningful

### 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 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. See page 109 for our overall approach to credit risk mitigation.

### Collateral

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

As a result of reinforcing our collateralisation requirements, the fair value of collateral held has increased by 4 per cent since the end of 2013.

The collateral values in the table on page 71 are adjusted where appropriate in accordance with our risk mitigation policy and for the effect of over-collateralisation. Exposures for 53 per cent of the clients that have placed collateral with the Group are over-collateralised. The average amount of over-collateralisation is 42 per cent.

The unadjusted market value of collateral, in respect of Corporate & Institutional Clients and Commercial Clients, without adjusting for over-collateralisation, was \$212 billion (31 December 2013: \$190 billion).

We have remained conservative in the way we assess the value of collateral, which is calibrated to a severe downturn and backtested against our prior experience. On average across all types of collateral, the value ascribed is approximately half of its current market value.

### Corporate & Institutional Clients and Commercial Clients

Collateral held against Corporate & Institutional Clients and Commercial Clients exposures amounted to \$70 billion (2013: \$68 billion).

Our underwriting standards encourage taking specific charges on assets and we consistently seek high-quality,

The decrease of commodities from 6 per cent to 3 per cent of collateral balances is a direct result of our overall reduction in commodity-related exposure. The increase of reverse repurchase (repo) and securities collateral from 27 per cent to 36 per cent represents an increase in the deployment of liquidity by Asset and Liability Management (ALM) to Corporate & Institutional Clients and Commercial Clients.

The average loan-to-value (LTV) ratio of the commercial real estate portfolio has remained relatively stable at 39.9 per cent, compared with 41.1 per cent in 2013. The proportion of loans with an LTV greater than 80 per cent has remained below 1 per cent during the same period.

In the Retail Clients and Private Banking Clients 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 Clients have remained stable compared to 2013.

For Retail Clients, all secured loans are considered fully secured if the fair value of the collateral is equal to or greater than the loan at the time of origination. In total, 19 per cent of the Group's retail product exposures are unsecured, compared to 21 per cent in 2013.

➔ See details on page 72, which presents an analysis of loans to individuals by product, split between fully secured, partially secured and unsecured

For 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 on our mortgage portfolio is less than 50 per cent – relatively unchanged since the end of 2013.

collateral is considered when determining probability of default and other credit related factors.

Collateral taken for longer-term and non-investment grade loans continues to be high at 59 per cent (63 per cent in 2013).

Collateral is also held against off-balance sheet exposures, including undrawn commitments and trade-related instruments.

	2014 \$million	2013 \$million
Property	16,438	18,490
Plant, machinery and other stock	5,498	6,059
Cash	12,594	13,444
Reverse repo and securities	25,641	18,353
AAA	4	45
AA- to AA+	17,188	9,651
BBB- to BBB+	3,062	2,758
Lower than BBB-	997	865
Unrated	4,390	5,034
Commodities	2,426	4,038
Ships and aircraft	7,780	7,522
Total value of collateral	70,377	67,906

### Mortgage LTV ratios by geography

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

	2014								
	Greater China %	North East Asia %	South Asia %	ASEAN %	MENAP %	Africa %	Americas %	Europe %	Total %
Less than 50 per cent	65.6	46.3	68.6	32.7	28.9	32.1	–	33.1	52.0
50 per cent to 59 per cent	12.3	22.0	13.0	21.0	18.7	13.5	–	40.3	17.0
60 per cent to 69 per cent	10.5	24.5	11.3	20.1	19.8	21.7	–	23.2	16.2
70 per cent to 79 per cent	7.1	4.7	5.6	17.7	17.7	23.3	–	3.4	9.5
80 per cent to 89 per cent	4.1	1.5	1.2	7.3	7.2	8.9	–	–	4.4
90 per cent to 99 per cent	0.4	0.6	0.1	1.0	3.6	0.2	–	–	0.6
100 per cent and greater	–	0.4	0.2	0.2	4.1	0.3	–	–	0.3
Average portfolio loan-to-value	44.0	50.0	38.7	56.4	61.4	58.2	–	51.5	49.3
Loans to individuals – Mortgages (\$million)	34,381	12,918	2,366	20,724	1,853	345	–	1,320	73,907

	2013								
	Greater China %	North East Asia %	South Asia %	ASEAN %	MENAP %	Africa %	Americas %	Europe %	Total %
Less than 50 per cent	62.9	48.8	65.8	32.3	31.0	27.0	–	20.6	50.6
50 per cent to 59 per cent	14.7	22.7	13.5	22.0	16.3	13.6	–	32.2	18.5
60 per cent to 69 per cent	9.6	19.1	10.7	20.3	19.5	21.3	–	22.7	14.8
70 per cent to 79 per cent	6.4	5.6	7.1	18.5	16.1	22.4	–	24.6	10.0
80 per cent to 89 per cent	4.0	2.2	2.4	5.4	7.4	15.1	–	–	4.1
90 per cent to 99 per cent	2.3	1.1	0.4	1.1	3.4	0.2	–	–	1.7
100 per cent and greater	–	0.5	–	0.4	6.3	0.4	–	–	0.4
Average portfolio loan-to-value	45.6	49.3	40.5	56.0	62.1	64.3	–	57.8	49.9
Loans to individuals – Mortgages (\$million)	32,940	12,821	2,298	21,636	1,753	293	–	1,355	73,096

### CRE

The Group has lending to CRE counterparties of \$16.1 billion (2013: \$16.9 billion). Of this, \$6.8 billion 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 lending comprises working capital loans to real estate corporates, loans with non-property

collateral, unsecured loans and loans to real estate entities of diversified conglomerates.

### Retail Clients and Private Banking Clients loan portfolio

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

	2014				2013			
	Fully secured \$million	Partially secured \$million	Unsecured \$million	Total <sup>1</sup> \$million	Fully secured \$million	Partially secured \$million	Unsecured \$million	Total <sup>1</sup> \$million
Loans to individuals								
Mortgages	73,907	–	–	73,907	73,096	–	–	73,096
Credit cards and personal loans	4	–	20,485	20,489	5	–	23,803	23,808
Auto	1,016	–	–	1,016	1,284	–	–	1,284
Secured Wealth Products	15,255	–	–	15,255	12,850	–	–	12,850
Other	2,783	1,494	1,363	5,640	4,729	1,462	448	6,639
	92,965	1,494	21,848	116,307	91,964	1,462	24,251	117,677
Percentage of total loans	80	1	19		78	1	21	

1. Amounts net of individual impairment provision

Members of the User Group found this table to be a particularly useful measure of collateral quality for the securities portfolio

## Section 7

# Other risks



## Recommendation 31: Describe ‘other risk’ types based on management’s classifications and discuss how each one is identified, governed, measured and managed

### Reputational risk

Reputational risk is the risk that stakeholders may lose confidence in Commerzbank or that its reputation may be damaged as a result of negative events in its business activities. Commerzbank’s stakeholder groups include in particular the public and the media, non-governmental organisations and its customers. In the present-day competitive environment, a company’s reputation is becoming more and more important. One of the factors determining it is the Bank’s handling of sustainability considerations in its core business (intrinsic reputational risks). Companies are judged not only on the basis of people’s personal experiences of them, but also of reports reaching the public, especially through the media. Therefore reputational risk goes hand in hand with communication risk.

#### Strategy and organisation

The segments and significant subsidiaries bear direct responsibility for reputational risk resulting from their particular business activity. The Reputational Risk Management department is part of the central Group Communications division of Commerzbank Group and focuses on intrinsic reputational risk that may directly lead to reputational damage for stakeholder groups. As such, Reputational Risk Management is the responsibility of the Chairman of the Board of Managing Directors and maintains close links with the relevant market units. It is a component of Commerzbank’s overall risk strategy and is subject to internal and external reviews. Its task is to identify, evaluate and address intrinsic reputational risk in systematic processes at an early stage and suggest or implement appropriate measures (early warning function).

#### Risk management

Managing intrinsic reputational risk means identifying potential environmental, social and ethical risks at an early stage and reacting to them in order to reduce any potential communication risk or even preventing it completely. Intrinsic reputational risk is managed by means of a qualitative approach. As part of a structured process, transactions, products and customer relationships in connection with sensitive areas are assessed with reference to environmental, social and ethical risks on a qualitative five-point scale. Depending on the outcome they may be assessed unfavourably or have conditions imposed on them or even be rejected outright.

The sensitive areas regularly and comprehensively analysed in Reputational Risk Management include e.g. export trades in the armaments industry and products and customer relationships relating to power generation and commodities extraction. Commerzbank’s attitude towards these areas is laid down in positions and guidelines that are binding for all employees. Commerzbank’s Reputational Risk Management department regularly observes and analyses new environmental, ethical and social issues and forwards them to the relevant parts of the Bank. The reputational risks identified and addressed by the department are incorporated into the quarterly report on non-quantifiable risks prepared for the Supervisory Board’s Risk Committee.

### Compliance risk

Compliance means conforming to the provisions of the law and to regulatory requirements as well as maintaining other, largely ethical, standards and commitments. The risk that may arise from the failure to adhere to key legal regulations and requirements is referred to as compliance risk.

The confidence of our customers, shareholders and business partners that Commerzbank acts properly and legitimately forms the foundation of our business activities. The aim is therefore to ensure that key legal regulations and requirements are adhered to by having an appropriate and effectively structured compliance management system in place. Compliance risks may be either quantifiable or non-quantifiable risks. They therefore cannot be fully subsumed either under operational risks or under reputational risks. According to the business targets, Group Compliance is responsible for the overall management of compliance risk.

In our overarching and Group-wide approach to risk management, we aim to detect at an early stage any risks that could undermine the integrity and therefore the success of Commerzbank, and to manage these risks appropriately.

Compliance risk is managed in line with the three lines of defence model.

The segments as well as the management and service units form the first line of defence in accordance with their operational responsibility. They are directly responsible for identifying and managing compliance risk in their areas of responsibility and provide effective and prompt risk management, complying with the prescribed risk standards and policies. Group Compliance forms the second line of defence for the overarching management of compliance risks. Internal control bodies, e.g. internal auditing, are the third line of defence. They examine the effectiveness of the first and second lines’ actions.

We are constantly developing our compliance risk management system in order to meet our responsibilities and cope with the growing complexity and increasing regulatory requirements, thereby enabling us to ensure long-term business success. In this context, the Board of Managing Directors has started with a Group-wide project to optimise compliance measures. The project particularly aims at the implementation of a framework to define and operationalise the risk appetite for compliance risks. Besides the risk-bearing capacity, which monitors the ability to absorb risks up to a certain level, the risk appetite defines the willingness to take risks in the business areas considering the regulatory requirements relating to compliance risks.

### IT risk

IT risk is a form of operational risk. Our own definition of IT risk includes risks to the security of information processed in our systems in terms of meeting the four IT protection targets set out below:

**Confidentiality:** Information is confidential if it is not accessible to, or capable of being reconstructed by, unauthorised persons, business processes or IT systems.

**Integrity:** Information possesses integrity if it has not been modified or destroyed by any unauthorised means. An information-processing system (an IT system) possesses integrity if it can perform its intended functions without hindrance and free of unauthorised manipulations, whether deliberate or accidental.

**Traceability:** Actions and technologies applied to information are traceable if they themselves and their source can be traced back without any ambiguity.

**Availability:** Information is available if it is always capable of being used to a predefined extent by authorised persons, business processes and IT systems when it is required.

Commerzbank attaches great importance to the protection and security of its own information, of that entrusted to it by customers, and of the business processes and systems used to process it. They form a permanent core element in our IT strategy. The processing of information is based increasingly on information technologies. Correspondingly, our requirements on IT-security are essential when managing information security. Information security requirements are based on the IT protection targets referred to above and are set down in policies and procedural instructions.

IT risks are identified, evaluated and regularly reviewed as part of IT governance processes. IT risk is covered in the quarterly IT risk report. Information security is also established as a principal objective for our Internal Control System.

In addition, the most important IT risks are being evaluated in the framework of operational risk management through risk scenarios and considered in the Bank’s RWA calculation. This includes the risk of a breakdown of critical IT, the risk of external attacks on the systems or data of the Bank (cyber crime), the theft of corporate data or the default of service providers and vendors.

Given the major importance of IT security to Commerzbank, it is continually further developed and improved by means of strategic projects about which the Board is kept informed on a regular basis. In this context, a uniform IT risk management process has been established in 2014. In addition, the department IT Risk Management as part of GS-IT was newly-created to strengthen the IT risk management.

Further tightening-up of the existing information security control structure is planned for 2015.

### Human resources risk

Human resources risk falls within the definition of operational risk in section 269 (1) SolvV. The internal management interpretation of this definition at Commerzbank includes the following elements in human resources risk:

**Adjustment risk:** We offer selected internal and external training, continuing education and change programmes to ensure that the level of employee qualifications keeps pace with the current state of developments, structural changes are supported accordingly and our employees can fulfil their duties and responsibilities.

**Motivation risk:** Employee surveys enable us to respond as quickly as possible to potential changes in our employees’ level of corporate loyalty and to initiate adequate measures.

**Departure risk:** We take great care to ensure that the absence or departure of employees does not result in long-term disruptions to our operations. We also regularly monitor both quantitative and qualitative measures of staff turnover.

**Supply risk:** Our quantitative and qualitative staffing aims to ensure that the internal operating requirements, business activities, and Commerzbank’s strategy can be implemented.

Employees are a key resource for Commerzbank. Our success is based on the specialist knowledge, skills, abilities and motivation of our employees. Human resources risk is systematically managed by Group Human Resources with the aim of identifying risks as early as possible and assessing and managing them by applying selected personnel tools, for instance. The Board of Managing Directors is regularly being informed about human resources risk. In addition, the implementation of a second pilot scheme for systematic and strategic personnel planning is helping to put the management of medium- and long-term human resources risks on a more professional footing.

#### Business strategy risk

Business strategy risk is the medium to long-term risk of negative influences on the achievement of Commerzbank’s strategic goals, for example, as a result of changes in market conditions, or the inadequate implementation of the Group strategy.

Group strategy is developed further in a process that takes into account both external and internal factors. On the basis of these factors, the Board of Managing Directors sets out a sustainable business strategy describing the major business activities and steps required to meet the targets. To ensure proper implementation of the Group strategy to achieve the business targets, strategic controls are carried out through regular monitoring of quantitative and qualitative targets in the Group and the segments.

Responsibility for strategic corporate management lies with the Board of Managing Directors. Specific business policy decisions (acquisition and sale of equity holdings representing >1% of equity capital) also require the authorisation of the Risk Committee of the Supervisory Board. All major investments are subject to careful review by the Board of Managing Directors.



## Recommendation 31: Describe ‘other risk’ types based on management’s classifications and discuss how each one is identified, governed, measured and managed

### OPERATIONAL RISK

#### Definition

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

The aim of operational risk management is to manage operational risks in line with defined appetites, and to protect both customers and the Group whilst delivering sustainable growth. The Group Operational Risk framework is the method by which operational risks are managed in terms of setting risk appetite, evaluating key exposures, measuring risk, mitigating risk, and monitoring risks on an ongoing basis, as set out below.

#### Risk appetite

The Group's Operational risk appetite is designed to safeguard the interests of customers, internal and external stakeholders, and shareholders. Appetite is expressed through six high level statements summarised below, each of which are defined with limits and triggers approved by the Board, and are regularly monitored by executive and Board risk committees:

- Customer: The Group builds trust and does not expect its customers to be impacted negatively.
- Reputation: The Group manages its external profile effectively. The Group will manage and mitigate any prominent negative sentiment.
- Financial loss: The Group does not expect to experience cumulative fraud or operational losses above a defined level of budgeted Group income, or individual losses above a defined amount.
- Management time and resources: The Group does not expect internal events that divert excessive senior management time from running the business or have extensive impact on colleague time and/or morale.
- Cyber: The Group minimises the impact from cyber attacks and information breaches that result in a significant loss of customer confidence or undermine the financial stability of the Group.
- Risk culture: All colleagues are responsible for risk within their individual roles. The Group sets a strong tone from the top and embraces a risk culture across the business which is aligned to its strategy, vision, values and codes of responsibility. The Group encourages an open dialogue and rapid escalation of potential threats and events.

For further information on risk appetite refer to page 112.

#### Exposures

The principal operational risks to the Group are:

- The risk that the Group is unable to provide services to customers as a result of an IT systems failure;
- Cyber risks associated with malicious attacks on the confidentiality or integrity of electronic data, or the availability of systems;
- External fraud arising from an act of deception or omission;
- Risks arising from inadequate delivery of services to customers;
- The risk associated with the ongoing provision of services to TSB and other organisations.

The risks below also have potential to negatively impact customers and the Group's future results:

- Terrorist acts, other acts of war or hostility, geopolitical, pandemic or other such events and responses to those acts/events may create economic and political uncertainties, which could have a material adverse effect on UK and international macroeconomic conditions generally, and more specifically on the Group's results of operations, financial condition or prospects in ways that cannot necessarily be predicted.
- Systems and procedures are implemented and maintained by the Group to comply with increasingly complex and detailed anti-money laundering and anti-terrorism laws and regulations. However, these may not always be fully effective in preventing third parties from using the Group as a conduit for money laundering and other illegal or prohibited activities. Should the Group be associated with money laundering or breaches of financial crime regulations and prohibitions, its reputation could suffer and/or it could become subject to fines, sanctions and legal enforcement; any one of which could have a material adverse effect upon operating results, financial condition and prospects.

#### Measurement

Operational risk is managed within a Board approved framework and risk appetite, as set out above. A variety of measures are used such as: scoring of potential risks, using impact and likelihood, with impact thresholds aligned to the risk appetite statements above; assessment of the effectiveness of controls; monitoring of events and losses by size, business unit and internal risk categories.

In 2014, the highest frequency of events occurred in external fraud (63.17 per cent) and execution, delivery and process management (20.70 per cent). Clients, products and business practices accounted for 75.86 per cent of losses by value driven by legacy issues where impacts materialised in 2014 (excluding PPI).

The table overleaf shows high level loss and event trends for the Group using Basel II categories.

### Strategic report

#### Risk overview continued

The most significant risks faced by the Group which could impact on the success of delivering against the Group's strategic objectives together with key mitigating actions are outlined below.

#### ► PRINCIPAL RISKS

##### Credit risk

Any adverse changes in the economic and market environment we operate in, or the credit quality and/or behaviour of our borrowers and counterparties would reduce the value of our assets and potentially increase our write-downs and allowances for impairment losses, adversely impacting profitability.

##### Conduct risk

We face significant potential conduct risk, including selling products to customers which do not meet their needs; failing to deal with customers' complaints effectively; not meeting customers' expectations; and exhibiting behaviours which do not meet market or regulatory standards.

##### Market risk

Key market risks include interest rate risk across the Banking and Insurance businesses. However, our most significant market risk is from the Defined Benefit Pension Schemes (DBPS) where asset and liability movements impact on our capital position.

##### Operational risk

We face significant operational risks which may result in financial loss, disruption or damage to the reputation of the Group. These include the availability, resilience and security of our core IT systems and the potential for failings in our customer processes.

##### Funding and liquidity risk

Our funding and liquidity position is supported by a significant and stable customer deposit base. A deterioration in either our or the UK's credit rating, or a sudden and significant withdrawal of customer deposits would adversely impact our funding and liquidity position.

##### Capital risk

Our future capital position is potentially at risk from a worsening macroeconomic environment. This could lead to adverse financial performance for the Group, which could deplete capital resources and/or increase capital requirements due to a deterioration in customers' creditworthiness.

##### Regulatory risk

We are subject to industry wide investigations and reviews into a perceived lack of competition in UK banking and financial services. The outcomes of the UK General Election in May 2015 and the investigations by the CMA and FCA are presently unclear and their impact therefore remains uncertain. Other initiatives under review include the ring-fencing proposals in the Banking Reform Act 2013, the new FCA Consumer Credit regime and CRD IV.

##### People risk

Key people risks include the risk that the Group fails to lead responsibly in an increasing competitive marketplace, particularly with the introduction of the Senior Managers' Regime and Certification Regime which will come into force in 2015. This may dissuade capable individuals from taking up senior positions within our Group.

#### ► KEY MITIGATING ACTIONS

- Credit policy incorporating prudent lending criteria aligned with the Board approved risk appetite to effectively manage credit risk.
- Clearly defined levels of authority ensure we lend appropriately and responsibly with separation of origination and sanctioning activities.
- Robust credit processes and controls including well-established governance to ensure distressed and impaired loans are identified, considered and controlled with independent credit risk assurance.
- Customer focused conduct strategy implemented to ensure customers are at the heart of everything we do.
- Product approval, review processes and outcome testing supported by conduct management information.
- Clear customer accountabilities for colleagues, with rewards driven off customer-centric metrics.
- Learning from past mistakes, including root cause analysis.
- A structural hedge programme has been implemented to manage liability margins and margin compression.
- Board approved pensions risk appetite covering interest rate, credit spreads and equity risks. Credit assets are being purchased and equity holdings reduced in the pension schemes.
- Stress and scenario testing of risk exposures.
- Continually review IT system architecture to ensure that our systems are resilient and that the confidentiality, integrity and availability of our critical systems and information assets are protected against cyber attacks.
- Continue to implement the actions from the 2013 independent IT Resilience Review to enhance the resilience of systems supporting the processes most critical to our customers.
- At 31 December 2014 the Group had £109.3 billion of unencumbered primary liquid assets and the Group maintains a further large pool of secondary assets that can be used to access Central Bank liquidity facilities.
- Daily monitoring against a number of market and Group specific early warning indicators and regular stress tests.
- Contingency funding plan to identify liquidity concerns earlier.
- Close monitoring of capital and leverage ratios to ensure we meet our current and future regulatory requirements.
- Comprehensive stress testing analysis to evidence sufficient levels of capital adequacy for the Group under various adverse scenarios.
- In addition to accumulating retained profits we can raise additional capital in a variety of ways.
- The Legal, Regulatory and Mandatory Change Committee ensures we develop plans for regulatory changes and tracks their progress.
- Continued investment in our people, processes and IT systems is enabling us to meet our regulatory commitments.
- Continued engagement with government and regulatory authorities on forthcoming regulatory changes and market investigations and reviews.
- Work collaboratively with regulators to implement the new Individual Accountability Regime in 2015, ensuring burden of proof and attestation requirements are effectively implemented.
- Maintain competitive working practices to attract, retain and engage high quality people.
- Create a work environment which listens and acts on colleague feedback, making the Group the best bank for colleagues.

## Recommendation 32: Discuss risk events, including impact on businesses and bank response where material or potentially material loss events have occurred with focus on changes to risk processes

### HIGHLIGHTS OF 2014

#### Group Compliance

The organisation of the Compliance function underwent major changes in 2014. It was decided in the second half to make it an integrated function and to strengthen the means at its disposal.

In the United States, a "Financial Security" team was created to strengthen the system designed to ensure compliance with embargoes and sanctions across the Group as a whole, and the New York and Paris teams were assigned permanent responsibility for control in respect of "Financial Security" issues. The number of staff working in the Group Compliance function increased significantly to 2,051 full-time equivalents (FTE), an increase of 24.3% compared with 2013 (excluding staff dedicated to the supervision of permanent control/operational risk). The Compliance function will supervise the implementation of the "remediation plan" requested by the US authorities, representing the translation of commitments made by BNP Paribas to improve the control of activities carried out in US dollars. Several other projects are underway to better adapt the organisation to the many challenges faced by Compliance (new regulatory requirements, complex transactions, etc.), particularly in the areas of financial security (anti-money laundering, corruption and the financing of terrorism, international financial sanctions) and market integrity, and to improve the system designed to protect customers.

The work of the Compliance Function in 2014 may be summarised notably as follows:

- the corpus of Group standards was enhanced by several important documents defining the Group's rules and standards. In particular:
  - in the field of financial security, reinforcement of rules governing knowledge of customers ("Know Your Customer", KYC), and other counterparties and partners, and establishment, continuing in 2015 in conjunction with the relevant authorities, of a mechanism to ensure compliance with international financial sanctions, particularly American. In this same area, reinforcement of the many policies and procedures related to compliance with new international sanctions or changes thereto; on a broader level, review of all policies and procedures relating to compliance with international sanctions, with changes made whenever necessary;
  - updating of the whistleblowing procedure;
  - distribution of generic permanent control programmes for the protection of personal data, which is becoming increasingly critical with the growing digitalisation of the economy, and for the protection of customers' interests;
  - compensation policy when it is potentially the source of conflicts of interest.

In training, a major effort was undertaken across the entire Group, using multiple channels (online training, mandatory for employees exposed to risk in this area, distribution of a guide, etc.), to raise awareness among all employees involved of the importance of international financial sanctions and their main features.

Various projects will be pursued and finalised in 2015:

- establishment of a completely new organisation for the Compliance function, in addition to a further increase in its human and technical resources;
- introduction of new financial safety mechanisms across the Group in the field of international financial sanctions.

#### Permanent operational control

The BNP Paribas Group's permanent control and operational risk management system is built on two pillars: significant accountability of operational staff in the management of operational risk, and second-level control of this management by separate functions. Several significant steps are worthy of particular mention:

- the Group's various businesses and functions have enriched and/or updated their generic processes, adding risks and controls that must be shared by the different actors in permanent control to achieve greater uniformity of the system between the various units;
- the governance system has been adapted to changes made by the Executive Management, notably under the responsibilities of the Country Heads;
- several reports designed to inform management have been standardised, and the means for performing them reinforced at Group level and within the various units;
- works to improve analysis of each unit's risk profile has gathered pace.

#### Periodic control

General Inspection completed the deployment of its new UNIK tool across geographic platforms. Efforts will continue in 2015, in conjunction with the central ITP function and the software company selected to improve its functionality and to introduce new modules.

Targeted monitoring of the consistency of findings under the new audit methodology was pursued by the Review Committee established in 2013 to assist in its proper application by all hubs.

The new audit methodology published in 2013 was the subject of several amendments based on the lessons drawn from its concrete application; a framework for the preparation of the audit plan was issued in October.

Also with a view to continuous improvement in the quality of periodic inspection work, the Quality Assurance Review (QAR) programme continued, with six new assignments completed in 2014. Since its launch in November 2006, this programme has enabled the practices of all audit teams to be benchmarked against professional standards and the reference framework defined by the function.

Investments in training continued, with 11,500 days dedicated to this process for the function as a whole. Special emphasis was placed this year on financial security and the use of the UNIK tool.

At the end of October 2014, there were 199 certified audit staff, bringing the ratio of certified staff to total staff to 20.9%, a slight increase compared with 2013.

#### INTERNAL CONTROL STAFF

At the end of 2014, the various internal control functions had the following workforce (in full-time equivalent staff – FTEs):

	2008	2009 (excluding Fortis)	2009 (including Fortis)	2010	2011	2012	2013	2014	Change 2014/2013
Compliance (excluding Permanent Control/20PC)	864	904	1,125	1,369	1,567	1,577	1,650	2,051 <sup>(1)</sup>	+24.3%
Oversight of Permanent Control/Operational risk (20PC)	562	637	760	315 <sup>(2)</sup>	381	361	331	371	+12.1%
Group Risk Management	954	950	2,940 <sup>(3)</sup>	1,801	1,971	1,965	1,920	2,080	+8.3%
Periodic Control	828	824	1,016	1,014 <sup>(4)</sup>	1,107	1,030	962	965	+0.3%
<b>TOTAL</b>	<b>3,208</b>	<b>3,315</b>	<b>5,841</b>	<b>4,499</b>	<b>5,026</b>	<b>4,933</b>	<b>4,807</b>	<b>5,471</b>	<b>+13.8%</b>

(1) No. of staff estimated at the end of the period.

(2) After re-classifying staff (see explanation below).

(3) Before re-classifying Fortis staff.

(4) Including staff from TEB (Türk Ekonomi Bankası).

#### Second-level permanent control

With 2,051 FTEs estimated at the end of 2014, the number of Compliance staff (excluding Permanent Control 20PC) was up by 24.3% compared with 2013. The ratio of Compliance employees (excluding 20PC) to the Group's total workforce was 1.09% based on an estimate of the workforce managed by the Group at the end of 2014, up from 0.89% based on the actual number in 2013.

The repositioning of the permanent control and operational risk oversight function decided upon in 2010 has led to a reallocation to the operational entities of part of the workforce (400 FTEs) previously counted as part of permanent operational control. With effect from 2010, only staff that can clearly be assigned to second-level controls/second line of defence functions have been counted. The figures for 2010 are not comparable with those for previous years. In 2014, the scope of employees assigned to the second level was reviewed in the Investment Partners and the International Retail Banking businesses.

The size of the Risk function's headcount was stable, the difference between 2013 and 2014 being attributable to a change in scope (transfer of Belgian staff from "business" positions to the Risk function, such as BNP Paribas Fortis credit analysts).

#### Periodic control

There were 965 FTEs in General Inspection at 31 December 2014, including 904 FTEs covering audit (excluding support staff), compared with 962 (902 FTEs excluding support staff) at 31 December 2013.

*BNP Paribas outlines the specific changes made in response to the comprehensive settlement with US authorities*



## Recommendation 32: Discuss risk events, including impact on businesses and bank response where material or potentially material loss events have occurred with focus on changes to risk processes

### Operational risk

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

As operational risk arises from all activities carried out within the Group, the potential for operational risk events occurring across a large and complex international organisation is a constant challenge. To address this we aim to achieve 'industrial strength' process and control design standards for all activities and benchmark practices against peers, other industries and regulatory requirements.

A summary of our current policies and practices regarding operational risk management is provided in Risk management approach on page 115.

### 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 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.

#### Distribution of operational losses by Basel business line

	% Loss	
	2014	2013
Agency services	0.1	0.3
Commercial banking	28.8 <sup>1</sup>	3.6
Corporate finance	1.3	0.1
Corporate items	44.8 <sup>2</sup>	3.0
Payment and settlements	19.3	36.9
Retail banking	4.5	47.9
Retail brokerage	0.2	1.1
Trading and sales	1.0	7.1

### Operational risk events and losses (unaudited)

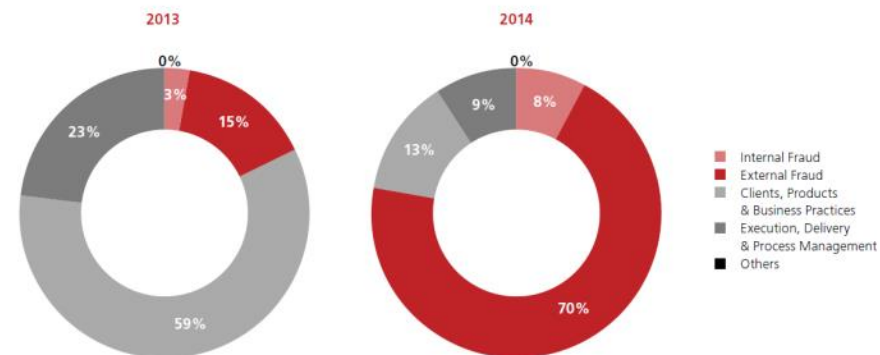
The most significant losses reviewed by Group committees during the year were:

- Execution delivery and process management: the terms of the Group's settlement with the New York Department of Financial Services (NYDFS) include a \$300 million civil monetary penalty, which was the highest operational risk loss during the year. The settlement includes various business restrictions with a range of deadlines, which are being complied with. In addition, the Group has initiated a number of change programmes, which include significant design typologies and system enhancements to improve its defences against financial crime
- External fraud: the Group has recorded an operational risk event of \$193 million in relation to a warehouse fraud in Qinghai in China. The root cause analysis identified the main cause as collusive fraud, which is inherently difficult to detect. Fraud detection controls are being enhanced and include increased frequency of inspections and periodically moving inventory

The Group's profile of operational loss events in 2013 and 2014 is summarised in the table below. It shows by Basel business line the percentage distribution of gross operational losses.

### 8.2 Operational Risk in 2014

The total value of operational risk losses in 2014 was 0.13% of the DBS' total operating income, compared to 0.20% in 2013. The loss profile (net loss greater than SGD 10,000 and based on the date of detection of the operational risk event), was mainly categorised into the following four Basel risk event categories: (i) internal fraud; (ii) external fraud; (iii) clients, products and business practices and (iv) execution, delivery and process management.



Note: Others include: (v) employment practices and workplace safety; (vi) damage to physical assets and (vii) business disruption, system failure

Save for an isolated incident, external fraud losses comprised mainly credit card fraud, in particular, Card Not Present (CNP) fraud which accounted for approximately 70% of the losses in this category. This is in line with industry trend that CNP fraud is the fastest growing area due to the meteoric growth of e-commerce in the Asia-Pacific region. CNP fraud losses are generally recoverable subject to card association rules. We have continued to increase our vigilance and implemented mitigating measures such as adjustment of fraud parameters, random generation of card numbers and review of the setting of alert thresholds for sending short messaging system (SMS).

In addition, reduction in losses was also noted for execution, delivery and process management due to continuing efforts to manage and mitigate operational risk including automating manual processes, enhancing risk and control training and established internal deals governance and control framework/controls. We also embarked on a transition from control self assessment to risk and control self assessment to help the units better identify and manage operational risk.

Many institutions noted that they had not experienced significant operational risk loss events during the year and/or the largest incidents were contained within broader operational risk loss categories. In such cases, the User Group has recognized banks for quantifying overall operational risk loss experience and for providing information about operational risk management initiatives undertaken to reduce future losses. Standard Chartered and DBS are shown here