Operational risk

The risk of loss to the firm from inadequate or failed processes or systems, human factors or due to external events (for example fraud) where the root cause is not due to credit or market risks.

Overview

The management of operational risk has two key objectives:

§ minimise the impact of losses suffered, both in the normal course of business (small losses) and from extreme events (large losses)

§ improve the effective management of the Group and strengthen its brand and external reputation.

The Group is committed to the management and measurement of operational risk and was granted a waiver by the FSA (now the PRA) to operate an Advanced Measurement Approach (AMA) for operational risk, which commenced in January 2008. The majority of the Group calculates regulatory capital requirements using AMA (94% of capital requirements), except for small parts of the organisation acquired since the original permission (6% of capital requirements) using the Basic Indicator Approach (BIA). The Group works to benchmark its internal operational risk management and measurement practices with peer banks and to drive the further development of advanced techniques.

The Group is committed to operating within a strong system of internal controls that enables business to be transacted and risk taken without exposing the Group to unacceptable potential losses or reputational damages. The Group has an overarching framework that sets out the approach to internal governance. This guide establishes the mechanisms and processes by which the Board directs the organisation, through setting the tone and expectations from the top, delegating authority and monitoring compliance.

Organisation and structure

Operational Risk comprises a number of specific risks defined as follow:

§ **external supplier:** inadequate selection and ongoing management of external suppliers

§ **financial reporting:** reporting misstatement or omission within external financial or regulatory reporting

§ **fraud:** dishonest behaviour with the intent to make a gain or cause a loss to others

§ **information:** inadequate protection of the Group's information in accordance with its value and sensitivity

§ **payments process:** failure in operation of payments processes

§ **people:** inadequate people capabilities, and/or performance/reward structures, and/or inappropriate behaviours

§ **premises and security:** unavailability of premises (to meet business demand) and/or safe working environments, and inadequate protection of physical assets, employees and customers against external threats

§ **taxation:** failure to comply with tax laws and practice which could lead to financial penalties, additional tax charges or reputational damages

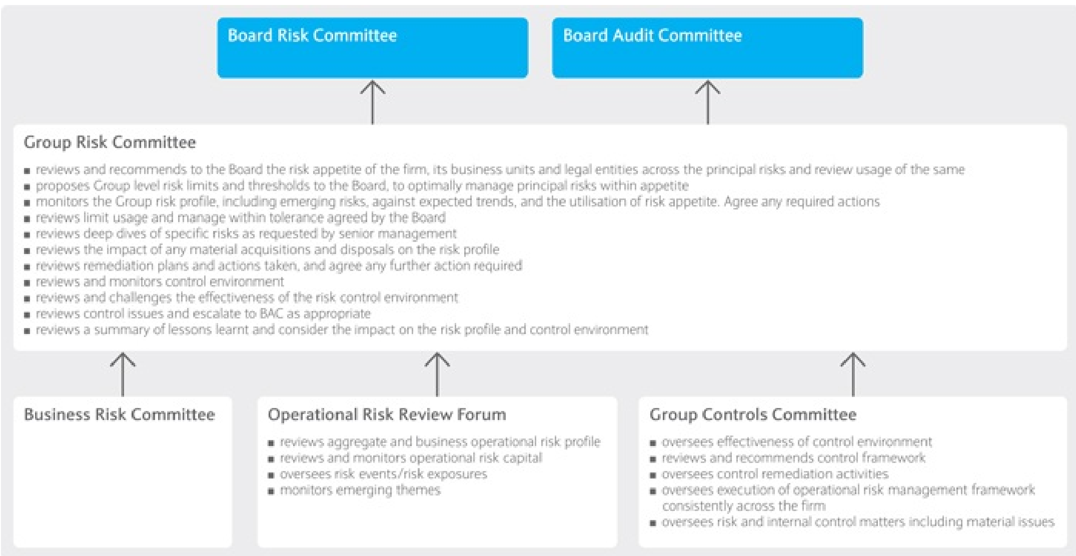
§ **technology (including cyber security):** failure to develop and deploy secure, stable and reliable technology solutions which includes risk of loss or detriment to the Group's business and customers as a result of actions committed or facilitated through the use of networked information systems

§ **transaction operations:** failure in the management of critical transaction processes.

In order to ensure complete coverage of the potential adverse impacts on the Group arising from operational risk, the operational risk taxonomy extends beyond the operational risks listed above to cover areas included within conduct risk. For more information on conduct risk please see page 112.

These risks may result in financial and/or non-financial impacts including legal/regulatory breaches or reputational damages.

Organisation and structure



Roles and responsibilities

The prime responsibility for the management of operational risk and the compliance with control requirements rests with the business and functional units where the risk arises. The operational risk profile and control environment is reviewed by business management through specific meetings which cover governance, risk and control. Businesses are required to report their operational risks on both a regular and an event-driven basis. The reports include a profile of the material risks that may threaten the achievement of their objectives and the effectiveness of key controls, operational risk events and a review of scenarios.

The Group Head of Operational Risk is responsible for establishing, owning and maintaining an appropriate Group-wide Operational Risk Framework and for overseeing the portfolio of operational risk across the Group.

Operational risk management acts in a Second Line of Defence capacity, and is responsible for implementation of the framework and monitoring operational risk events and risk exposures. Key indicators (KIs) allow the Group to monitor its operational risk profile and alert management when risk levels exceed acceptable ranges or risk appetite levels and drive timely decision making and actions. Through attendance at business GRC meetings, operational risk management provides specific risk input into the issues highlighted and the overall risk profile of the business. Operational risk issues escalated from these meetings are considered through the Second Line of Defence review meetings. Depending on their nature, the outputs of these meetings are presented to the BRC or the BAC.

Risk and control self-assessments

The Group identifies and assesses all material risks within each business and evaluates the key controls in place to mitigate those risks. Managers in the businesses use self-assessment techniques to identify risks, evaluate the effectiveness of key controls in place and assess whether the risks are being effectively managed. The businesses are then able to make decisions on what action, if any, is required to reduce the level of risk to the Group. These risk assessments are monitored on a regular basis to ensure that each business continually understands the risks it faces.

Model risk management

Model risk

The risk of the potential adverse consequences from financial assessment or decisions based on incorrect or misused model outputs and reports.

Overview

Barclays uses models to support a broad range of activities, including informing business decisions and strategies, measuring and limiting risk, valuing exposures, conducting stress testing, assessing capital adequacy, managing client assets, and meeting reporting requirements.

Because models are imperfect and incomplete representations of reality, they may be subject to errors affecting the accuracy of their output.

Model errors can result in inappropriate business decisions being made, financial loss, regulatory risk, reputational risk and/or inadequate capital reporting.

Models may also be misused, for instance applied to products that they were not intended for, or not adjusted, where fundamental changes to their environment would justify re-evaluating their core assumptions.

Errors and misuse are the primary sources of model risk.

Robust model risk management is crucial to ensuring that model risk is assessed and managed within a defined risk appetite. Strong model risk culture, appropriate technology environment, and adequate focus on understanding and resolving model limitations are crucial components.

Organisation and structure

Barclays allocates substantial resources to identify and record models and their usage, document and monitor the performance of models, validate models and ensure that model limitations are adequately addressed.

Barclays has a dedicated Model Risk Management (MRM) function that consists of two main units: the Independent Validation Unit (IVU), responsible for model validation and approval, and Model Governance and Controls (MGC), covering model risk governance, controls and reporting, including ownership of model risk policy.

The model risk policy prescribes Group-wide, end to end requirements for the identification, measurement and management of model risk, covering model documentation, development, implementation, monitoring, annual review, independent validation and approval, change and reporting processes. The Policy is supported by global Standards covering model inventory, documentation, validation, complexity and materiality, testing and monitoring, overlays, as well as vendor models and CCAR benchmarking.

Barclays is continuously enhancing model risk management. MRM reports to the Group Chief Risk Officer and operates a global framework. Implementation of best practice standards is a central objective of the Group. Large new model development programmes are currently in motion to implement the model requirements of UK structural reform, CCAR, FRTB and IFRS9.

Roles and responsibilities

The key model risk management activities include:

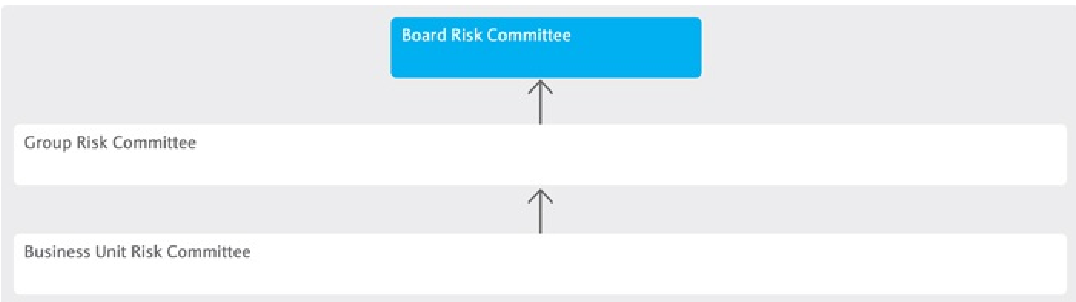
§ ensuring that models are correctly identified across all relevant areas of the firm, and recorded in the Group Models Database (GMD), the Group-wide model inventory. The heads of the relevant areas (typically, the Business Chief Risk Officers, Business Chief Executive Officers, the Treasurer, the Chief Financial Officer) annually attest to the completeness and accuracy of the model inventory. MGC undertakes regular conformance reviews on the model inventory. These activities are detailed in the Model Inventory, Workflow and Taxonomy Standard

§ ensuring that every model has a model owner who is accountable for the model. The model owner must sign off models prior to submission to IVU for validation. The model owner works with the relevant technical teams (model developers, implementation, monitoring, data services, regulatory) to ensure that the model presented to IVU is and remains fit for purpose, in accordance with the Model Documentation Standard, and the Model Testing, Monitoring and Annual Review Standard

§ ensuring that every model is subject to validation and approval by IVU, prior to being implemented and on a continual basis, in accordance with the Model Validation and Approval Standard. The level of review and challenge applied by IVU is tailored to the materiality and complexity of each model. Validation includes a review of the model assumptions, conceptual soundness, data, design, performance testing, compliance with external requirements if applicable, as well as any limitations, proposed remediation and overlays with supporting rationale. Material model changes are subject to prioritised validation and approval

§ specific Standards cover model risk management activities relating to CCAR benchmarking and challenger modelling, model overlays, vendor models, and model complexity and materiality.

Organisation and structure



Conduct risk management

Conduct risk

The risk of detriment to customers, clients, market integrity, competition or Barclays from the inappropriate supply of financial services, including instances of wilful or negligent misconduct.

Overview

The Group defines, manages and mitigates conduct risk with the goals of providing positive customer and client outcomes and protecting market integrity. This includes taking reasonable steps to ensure our culture and strategy are appropriately aligned to these goals; our products and services are reasonably designed and delivered to meet the needs of our customers and clients as well as promoting the fair and orderly operation of the markets in which we do business.

As part of the Enterprise Risk Management Framework (ERMF) refresh (page 98), Reputation risk has been designated as a Principal Risk and Financial Crime has been designated as a Risk Category under Conduct Risk.

Organisation and structure

The Group Risk Committee (GRC) is the most senior Executive body responsible for reviewing and monitoring the effectiveness of Barclays' management of Conduct risk.

Roles and responsibilities

The Conduct Risk Principal Risk Framework (PRF) comprises a number of elements that allow the Group to manage and measure its conduct risk profile.

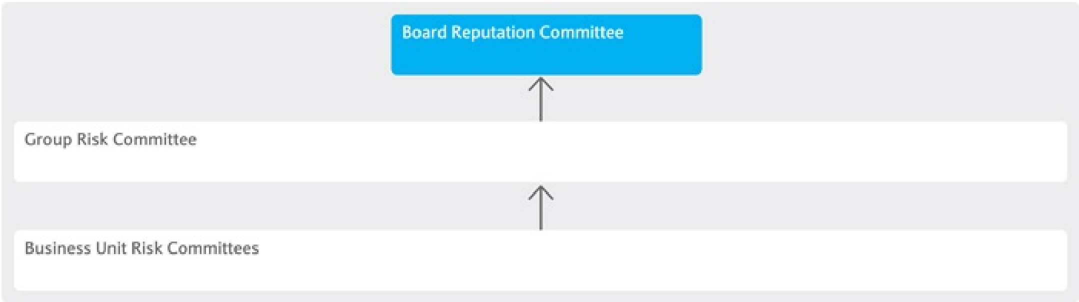
The PRF is implemented vertically across the Group through an organisational structure that requires all businesses to implement and operate their own conduct risk frameworks that meet the requirements within the ERMF.

The primary responsibility for managing conduct risk and compliance with control requirements sits with the business where the risk arises. The Conduct Risk Accountable Executive for each business is responsible for ensuring the implementation of, and adherence to the PRF.

The Group Chief Compliance Officer is responsible for owning and maintaining an appropriate Group-wide Conduct Risk PRF and for overseeing Group-wide conduct risk management.

Businesses are required to report their conduct risks on both a quarterly and an event-driven basis. The quarterly reports detail the conduct risks inherent within the business strategy and include forward looking horizon scanning analysis as well as backward looking evidence-based indicators from both internal and external sources. For details please refer to the Risk Review, Conduct Risk Performance section of this report on page 180.

Organisation and structure



Reputation risk management

Reputation risk

The risk that an action, transaction, investment or event will reduce trust in the firm's integrity and competence by clients, counterparties, investors, regulators, employees or the public.

Overview

A reduction of trust in Barclays' integrity and competence may reduce the attractiveness of Barclays to stakeholders and could lead to negative publicity, loss of revenue, regulatory or legislative action, loss of existing and potential client business, reduced workforce morale and difficulties in recruiting talent. Ultimately it may destroy shareholder value.

With effect from 2017, Reputation risk has been redesignated as a Principal Risk within the Enterprise Risk Management Framework.

Organisation and structure

The Group Risk Committee (GRC) is the most senior Executive body responsible for reviewing and monitoring the effectiveness of Barclays' management of Reputation risk.

Roles and responsibilities

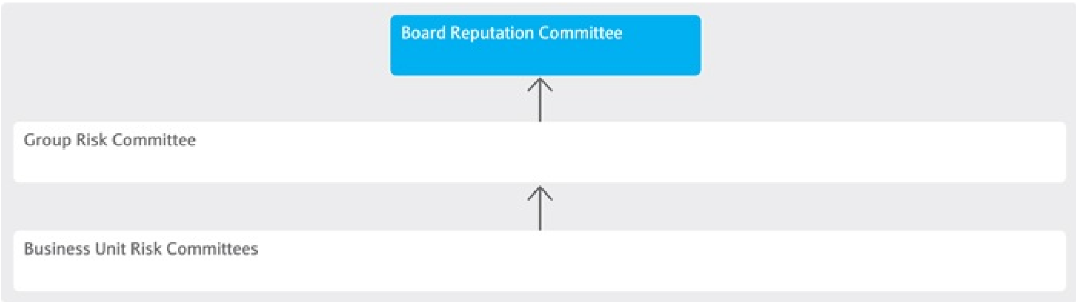
The Chief Compliance Officer is accountable for ensuring that a Reputation Principal Risk Framework and policies are developed and that they are subject to limits, monitored, reported on and escalated, as required.

Reputation risk is by nature pervasive and can be difficult to quantify, requiring more subjective judgement than many other risks. The Reputation Principal Risk Framework sets out what is required to ensure Reputation risk is managed effectively and consistently across the bank.

The primary responsibility for identifying and managing Reputation risk and adherence to the control requirements sits with the business and support functions where the risk arises.

Each business is required to operate within established Reputation risk appetite and to submit quarterly reports to the Group Reputation Management team, highlighting their most significant current and potential Reputation risks and issues and how they are being managed. These reports are a key internal source of information for the quarterly Reputation risk reports which are prepared for the Group Risk Committee and the Board Reputation Committee.

Organisation and structure



Legal risk

The risk of loss or imposition of penalties, damages or fines from the failure of the firm to meet its legal obligations including regulatory or contractual requirements.

Overview

With effect from 2017, Legal risk, which was previously a Key Risk under operational risk, has been re-designated as a Principal Risk within the Enterprise Risk Management Framework.

The Legal Risk Framework prescribes Group-wide requirements for the identification, measurement and management of Legal risk, covering assessment, risk appetite, key indicators and governance. The Group General Counsel (GCC) is the Legal Principal Risk Officer and owns the Legal Risk Framework and the associated legal policies.

Legal risk is defined by the five respective Legal Policies:

- **Contractual arrangements** – failure to have enforceable contracts in place or for contracts to be enforceable as intended
- **Litigation management** – failure to adequately manage litigation involving Barclays as either claimant or defendant
- **Intellectual property (IP)** – failure to protect the Group's IP assets or Barclays infringing IP rights of third parties
- **Competition/antitrust law** – failure to follow competition/antitrust law or failure to manage relationships with competition and antitrust authorities
- **Use of law firms** – failure to control instruction of an external law firm.

Group-wide and Business/Function specific Standards may be put in place to support the implementation of the legal policies. The standards are aligned to one of the policies and are implemented by Businesses/ Functions.

Organisation and structure

The Group Risk Committee (GRC) is the most senior executive body responsible for reviewing and monitoring the effectiveness of Barclays' management of Legal risk. Escalation paths from this forum exist to the Board of Barclays PLC.

Roles and responsibilities

The Legal Risk Framework sets out what is required to ensure Legal risk is managed effectively and consistently across the bank.

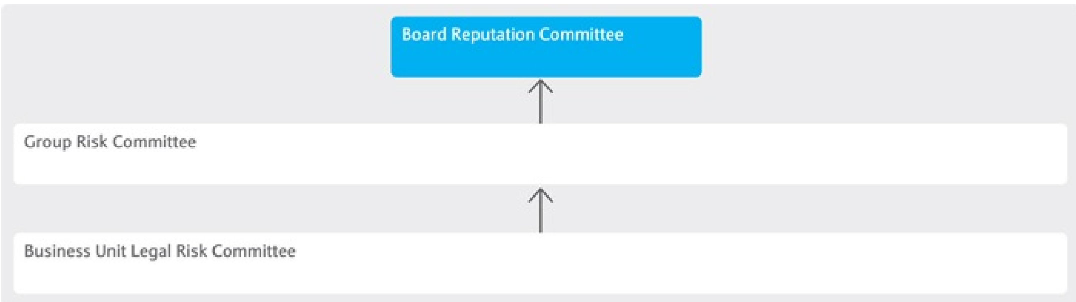
The primary responsibility for managing Legal risk and adherence to the control requirements sits with the business where the risk arises.

On behalf of the businesses, the aligned General Counsel or Legal Senior Management, will undertake Legal risk appetite assessments and provide advice and guidance on Legal risk management. The Legal risk assessment includes both quantitative and qualitative criteria including:

- Knowledge of Legal risk material control issues or weaknesses
- Emerging risks resulting from upcoming changes in the control environment, systems, or internal organisational structures
- Potential implications on Barclays of forthcoming changes in the external legal and regulatory environment and/or prevailing decisions from courts and enforcing authorities as they relate to defined legal risks.

The Legal Principal Risk Officer is responsible for owning and maintaining an appropriate Legal Risk Framework and for overseeing Group-wide legal risk management.

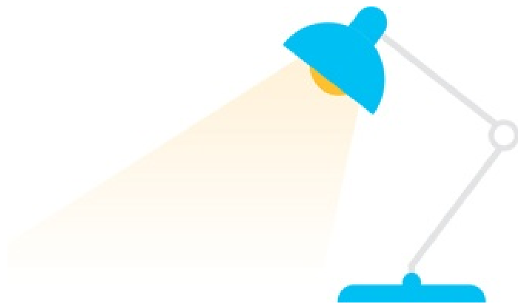
Organisation and structure



Maintaining our risk profile at an acceptable and appropriate level is essential to ensure our continued performance. This section provides a review of the performance of the Group in 2016 for each of the five Principal Risks in operation throughout the year, which are credit, market, funding, operational, and conduct risk.

Please refer to the Risk Management section (pages 97 to 114) for an overview of the changes to Barclays' Principal Risk taxonomy in December 2016.

For a more comprehensive breakdown on our Risk review and Risk management contents please see pages 86 to 87.



Analysis of credit risk

Credit risk is the risk of the Group suffering financial loss should any of its customers, clients, or market counterparties fail to fulfil their contractual obligations to the Group.

This section details the Group's credit risk profile and provides information on the Group's exposure to loans and advances to customer and banks, maximum exposures with collateral held and net impairment charges raised in the year. It provides information on balances that are categorised as credit risk loans, balances in forbearance, as well as exposure to and performance metrics for specific portfolios and asset types.

Key metrics

Credit impairment charges in 2016 were 35% higher than 2015:

+£608m Group

Loan impairment increased reflecting a higher charge following the management review of the UK and US cards portfolio impairment modelling and a number of single name exposures.

+£555m Retail Core

Increased charges primarily due to a charge following the review of UK and US cards portfolio impairment modelling.
Underlying performance across key portfolios has remained stable and broadly within expectations

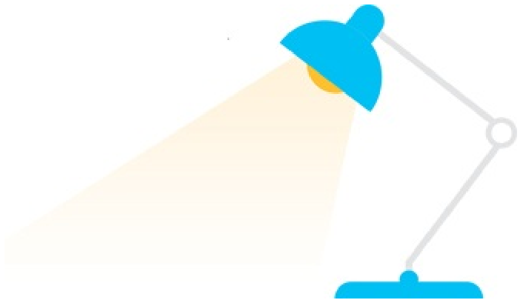
+£63m Wholesale Core

Increased charges reflecting limited range of single name exposures.

-£10m Non-Core

Decreased charges reflecting lower charges in European businesses.

- Net Loans and advances to customers and banks decreased by 2% in 2016
- The loan loss rate rose to 53bps



Summary of Contents

Page

Credit risk represents a significant risk to the Group and mainly arises from exposure to wholesale and retail loans and advances together with the counterparty credit risk arising from derivative contracts entered into with clients.

This section provides a macro view of the Group's credit exposures.

The Group reviews and monitors risk concentrations in a variety of ways to ensure the continuation of a diversified portfolio operating within agreed appetites.

This sections outlines performance against key concentration risks at a macro Group level.

In addition to Group-wide concentrations, Credit Risk monitors exposure performance across a range of specific portfolios where the risk profile is considered to be heightened.

This section provides a more detailed analysis of these exposures and notes on how certain aspects of the risk profile are mitigated on an ongoing basis.

The Group monitors exposures to assets where there is a heightened likelihood of default and assets where an actual default has occurred.

This section outlines the exposure to assets that have been classified as impaired analysing the exposures between business units and by key product types.

The Group, from time to time, agrees to the suspension of certain aspects of customer/client credit agreements, generally during temporary periods of financial difficulties where the Group is confident that the customer/client will be able to remedy the suspension.

During this time, customer/client assets are separately monitored to ensure that remedies are completed.

This section outlines the Group's current exposure to assets with this treatment.

The Group holds impairment provisions on the balance sheet as a result of the raising of a charge against profit for incurred losses in the lending book. An impairment allowance may either be identified or unidentified and individual or collective.

This section outlines the movements in allowance for impairment by asset class exposure, material management adjustments to model output, analysis of debt securities and derivatives.

Credit risk

Credit risk is the risk of the Group suffering financial loss if any of its customers, clients or market counterparties fails to fulfil their contractual obligations to the Group.

All disclosures in this section (pages 118 to 120) are unaudited unless otherwise stated. Disclosures for 2016 exclude BAGL balances which are now recognised as held for sale, comparative tables for 2015 include BAGL balances unless otherwise stated.

Overview

Credit risk represents a significant risk to the Group and mainly arises from exposure to wholesale and retail loans and advances together with the counterparty credit risk arising from derivative contracts entered into with clients. A summary of performance may be found below.

This section provides an analysis of areas of particular interest or potentially of higher risk, including: i) balance sheet, including the maximum exposure, and collateral, and loans and advances; ii) areas of concentration; iii) exposure to and performance metrics for specific portfolios and assets types, including home loans, credit cards and UK commercial real estate; iv) exposure and performance of loans on concession programmes, including forbearance; v) problem loans, including credit risk loans (CRLs); and vi) impairment, including impairment stock and management adjustments to model outputs.

Please see risk management section on pages 101 to 102 for details of governance, policies and procedures.

Summary of performance in the period

Credit impairment charges increased £0.6bn to £2.4bn including a £0.3bn charge in Q316 following the management review of the UK and US cards portfolio impairment modelling. Overall, this resulted in an 11bps increase in the loan loss rate to 53bps.

Credit Risk Loans (CRLs) remained stable at £6.5bn (2015: £6.4bn) with the Group's CRL coverage ratio increasing to 71% (2015: 65%) mainly within retail portfolios.

Total loans and advances net of impairment decreased by £11.4bn to £449.5bn driven by a £31bn decrease due to the reclassification of BAGL balances to held for sale and £9bn from the exit of other assets in Non-Core. This was offset by lending growth of £20bn and a net £9bn increase in settlement and cash collateral balances.

Analysis of the Balance Sheet

Group's maximum exposure and collateral and other credit enhancements held

Basis of preparation

The following tables present a reconciliation between the Group's maximum exposure and its net exposure to credit risk; reflecting the financial effects of collateral, credit enhancements and other actions taken to mitigate the Group's exposure.

For financial assets recognised on the balance sheet, maximum exposure to credit risk represents the balance sheet carrying value after allowance for impairment. For off-balance sheet guarantees, the maximum exposure is the maximum amount that the Group would have to pay if the guarantees were to be called upon. For loan commitments and other credit related commitments that are irrevocable over the life of the respective facilities, the maximum exposure is the full amount of the committed facilities.

This and subsequent analyses of credit risk include only financial assets subject to credit risk. They exclude other financial assets not subject to credit risk, mainly equity securities held for trading, as available for sale or designated at fair value, and traded commodities. Assets designated at fair value in respect of linked liabilities to customers under investment contracts have also not been included as the Group is not exposed to credit risk on these assets. Credit losses in these portfolios, if any, would lead to a reduction in the linked liabilities and not result in a loss to the Group. For off-balance sheet exposures certain contingent liabilities not subject to credit risk such as performance guarantees are excluded.

Both on- and off-balance sheet exposures for 2016 exclude BAGL balances now held for sale. Comparative tables for 2015 include BAGL balances unless stated otherwise.

The Group mitigates the credit risk to which it is exposed through netting and set-off, collateral and risk transfer. Further detail on the Group's policies to each of these forms of credit enhancement is presented in the Barclays Pillar 3 Report.

Overview

As at 31 December 2016, the Group's net exposure to credit risk after taking into account netting and set-off, collateral and risk transfer increased 6% to £740.7bn, reflecting an increase in maximum exposure of 3% and an increase in level of mitigation held of 1%. Overall, the extent to which the Group holds mitigation against its total exposure remained stable at 47% (2015: 48%).

Of the remaining exposure left unmitigated, a significant portion relates to cash held at central banks, financial investment debt securities issued by governments, cash collateral and settlement balances, all of which are considered lower risk. Trading portfolio liability positions, which to a significant extent economically hedge trading portfolio assets but which are not held specifically for risk management purposes, are excluded from the analysis. The credit quality of counterparties to derivative, financial investments and wholesale loan assets are predominantly investment grade. Further analysis on the credit quality of assets is presented on pages 121 to 122.

Where collateral has been obtained in the event of default, the Group does not, as a rule, use such assets for its own operations and they are usually sold on a timely basis. The carrying value of assets held by the Group as at 31 December 2016, as a result of the enforcement of collateral, was £16m (2015: £69m).