Barclays PLC
Pillar 3 Report 2012

Note on forward-looking statements

This document contains certain forward-looking statements within the meaning of Section 21E of the US Securities Exchange Act of 1934, as amended, and Section 27A of the US Securities Act of 1933, as amended, with respect to certain of the Barclays Group (the "**Group**")'s plans and its current goals and expectations relating to its future financial condition and performance. Barclays cautions readers that no forward-looking statement is a guarantee of future performance and that actual results could differ materially from those contained in the forward-looking statements. These forward-looking statements can be identified by the fact that they do not relate only to historical or current facts. Forward-looking statements sometimes use words such as "may", "will", "seek", "continue", "aim", "anticipate", "target", "projected", "expect", "estimate", "intend", "plan", "goal", "believe", "achieve" or other words of similar meaning. Examples of forward-looking statements include, among others, statements regarding the Group's future financial position, income growth, assets, impairment charges, business strategy, capital ratios, leverage, payment of dividends, projected levels of growth in the banking and financial markets, projected costs, commitments in connection with the TRANSFORM programme, estimates of capital expenditures and plans and objectives for future operations and other statements that are not historical fact. By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances, including, but not limited to, UK domestic, Eurozone and global macroeconomic and business conditions, the effects of continued volatility in credit markets, market related risks such as changes in interest rates and foreign exchange rates, effects of changes in valuation of credit market exposures, changes in valuation of issued notes, the policies and actions of governmental and regulatory authorities (including requirements regarding capital and Group structures and the potential for one or more countries exiting the Eurozone), changes in legislation, the further development of standards and interpretations under International Financing Reporting Standards ("**IFRS**") and prudential capital rules applicable to past, current and future periods, evolving practices with regard to the interpretation and application of standards under IFRS, the outcome of current and future legal proceedings, the success of future acquisitions and other strategic transactions and the impact of competition, a number of such factors being beyond the Group's control. As a result, the Group's actual future results may differ materially from the plans, goals, and expectations set forth in the Group's forward-looking statements.

Any forward-looking statements made herein speak only as of the date they are made. Except as required by the UK Financial Services Authority, the London Stock Exchange plc (the "**LSE**") or applicable law, Barclays expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in Barclays expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. The reader should, however, consult any additional disclosures that Barclays has made or may make in documents it has published or may publish via the Regulatory News Service of the LSE and/or has filed or may file with the US Securities and Exchange Commission.

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A glossary of terms and remuneration disclosures[1] can be found at:

www.barclays.com/annualreport

[1] Pages 72 to 103 of the Annual Report (which is available at www.barclays.com/annualreport) include information required to be disclosed on remuneration in accordance with the FSA's BIPRU regulations 11.5.18(1) to (7).

Executive summary

Overview of Basel 2 and Pillar 3

Barclays has applied the Basel 2 framework since 2008. The framework is made up of three pillars:

- **Pillar 1** covers the calculation of risk weighted assets for credit risk, counterparty risk, market risk and operational risk
- **Pillar 2** covers the consideration of whether additional capital is required over and above the Pillar 1 risk calculations. A firm's own internal models and assessments support this process
- **Pillar 3** covers external communication of risk and capital information by banks as specified in the Basel rules to promote transparency and good risk management

The Pillar 3 requirements includes disclosure of exposures and risk weigthed assets under the different approaches to calculating capital requirements for Pillar 1 as follows:

- **Standardised approach:** assesses capital requirements using standard industry-wide risk weightings based on a detailed classification of asset types
- **Internal Ratings Based approach (IRB):** assesses capital requirements using bank specific data and internal models to calculate risk weightings. The IRB approach is further sub-divided into two applications:
  - **Advanced IRB (A-IRB):** where internal calculations of probability of default (PD), loss given default (LGD) and credit conversion factors are used to model risk exposures
  - **Foundation IRB (F-IRB):** where internal calculations of probability of default (PD), but standardised parameters for LGD and credit conversion factors are used

See page 119 for an overview of our risk disclosures and their location.

Barclays approach to Pillar 3

The purpose of this document is to set out how Barclays manages risk and applies the Basel framework and to meet the requirements of Pillar 3. In particular it focuses on regulatory measures of risk exposure and capital requirements for credit, counterparty, market and operational risk. Barclays is committed to providing transparency of its capital resources and risk weighted assets to provide better information to investors and improve comparability across the industry.

For 2012 we have enhanced our disclosures in response to feedback from investors, regulators, and other users of the Pillar 3 report, such as recommendations from the Enhanced Disclosure Task Force, including:

- clear disclosure of the differences between the statutory and regulatory scope of consolidation
- explanations of the key drivers of movements in capital resources and risk weighted assets during the year
- additional information on the components of risk weighted asset calculations, including the relationship between underlying exposures and risk weighted assets
- information on the impact of CRD IV on Barclays capital resources, risk weighted assets and leverage

Detailed disclosures on capital resources, risk exposures and risk weighted assets are set out in the Capital Resources section on page 15 and sections analysing credit risk, counterparty credit risk, market risk, securitisations and operational risk on pages 19, 46, 52, 57, and 65. The impacts of CRD IV are set out on pages 68.

Barclays continues to support risk based measures for the calculation of capital requirements to incentivise the right behaviours with regards to risk taking and encourage the efficient use of capital within the industry. Disclosure on Barclays application of internal models by business portfolio is set out on page 13.

The use of internal models to support risk based calculations relies on a robust model control framework including the need for appropriate governance, independent control over the development and validation of models, extensive empirical experience and appropriate regulatory approval before models are used for regulatory capital purposes. Disclosure on our modelling methodologies and control framework is set out in the risk management strategy section on pages 92 and 93.

While models are a core tool to understand and measure risk, we recognise that models have limitations and are only a part of the regulatory and risk management framework that includes alternative measures such as the setting of risk appetite limits, management of concentration risk and the coverage of extreme potential risks through stress testing, capital buffers and Pillar 2 assessments of the overall capital requirements. Information on these broader elements is provided in Barclays approach to managing risks on pages 76 to 109.

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Capital management highlights

- Core Tier 1 ratio as at 31 December 2012 was 10.9% (2011: 11.0%), reflecting a 2% reduction in Core Tier 1 capital to £42.1bn partially offset by a 1% reduction in risk weighted assets to £387bn
- During 2012 Barclays generated £1.8bn Core Tier 1 capital from earnings, which excludes movements in own credit, after absorbing the impact of dividends paid and provisions for customer redress. The increase from earnings was more than offset by a £1.2bn increase in the defined benefit pension adjustment and a £1.6bn reduction in reserves due to foreign exchange movements
- Risk weighted assets reduced 1% to £387bn principally due to reductions in risk exposures, including the sell down of legacy assets, and the impact of foreign exchange movements, largely offset by an increased operational risk charge and methodology and model changes
- During the fourth quarter, the Group successfully placed $3bn of Tier 2 Contingent Capital Notes (CCNs), which was well received by the market
- We have estimated our proforma CRD IV Common Equity Tier 1 (CET1) ratio on both a transitional and fully loaded basis, reflecting our current interpretation of the rules and assuming they were applied as at 1 January 2013. As at that date Barclays proforma transitional CET1 ratio would be approximately 10.6% and the fully loaded CET1 ratio would be approximately 8.2%
- Based on our interpretation of the current proposals, the Group's CRD IV leverage ratio as at 31 December 2012 would be within the proposed limit of 33x, allowing for transitional relief to Tier 1 capital.

Table 1: Capital ratios

	As at 31.12.12	As at 31.12.11
Capital ratios		
Core Tier 1 ratio	10.9%	11.0%
Tier 1 ratio	13.3%	12.9%
Total capital ratio	17.1%	16.4%
Capital resources		
Core Tier 1 capital	£42,121m	£43,066m
Tier 1 capital	£51,634m	£50,473m
Total capital	£66,063m	£63,948m
Risk weighted assets	**£386,858m**	**£390,999m**

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Table 2: Summary of movements in capital resources

Movement in total regulatory capital	2012 £m	2011 £m
Core Tier 1 capital as at 1 January	**43,066**	42,861
(Loss)/profit for the year	(236)	3,951
Removal of own credit [1]	3,484	(2,059)
Dividends paid	(1,427)	(1,387)
Retained capital generated from earnings	**1,821**	505
Movement in reserves - impact of share schemes	(165)	714
Movement in currency translation reserves	(1,578)	(1,607)
Movement in qualifying available for sale equity reserves	-	749
Other reserves movements	33	128
Movement in other qualifying reserves	**(1,710)**	(16)
Movement in regulatory adjustments and deductions:		
Defined benefit pension adjustment [1]	(1,204)	(1,340)
Goodwill and intangible asset balances [1]	(62)	766
50% excess of expected losses over impairment [1]	(142)	(238)
50% of securitisation positions	371	783
Other regulatory adjustments	(19)	(255)
Core Tier 1 capital as at 31 December	**42,121**	43,066
Other Tier 1 capital as at 1 January	7,407	10,685
Redemption of Tier 1 notes	-	(518)
Redemption of Reserve Capital Instruments	-	(3,188)
Regulatory adjustments to other Tier 1 capital	(82)	(95)
50% of material holdings	2,141	294
50% of the tax on excess of expected losses over impairment	47	229
Tier 1 capital as at 31 December	**51,634**	50,473
Tier 2 capital as at 1 January	16,063	16,019
Issuance of Contingent Capital Notes and subordinated notes	2,258	880
Redemption of subordinated notes	(2,672)	(2,655)
Amortisation adjustments	(155)	696
Regulatory adjustments to Tier 2 capital	(612)	(287)
Reserves arising on revaluation of property [1]	14	(4)
Unrealised gains on available for sale equity [1]	(718)	828
Collectively assessed impairment allowances	(383)	(24)
50% of material holdings	2,141	294
50% excess of expected losses over impairment (gross of tax)	(189)	(467)
50% of securitisation positions	371	783
Tier 2 capital as at 31 December	**16,118**	16,063
Other deductions from total capital as at 1 January	(2,588)	(2,250)
Investments that are not material holdings or qualifying holdings	852	(369)
Other deductions from total capital	47	31
Other deductions from total capital as at 31 December	**(1,689)**	(2,588)
Total regulatory capital as at 31 December	**66,063**	63,948

[1] The capital impacts of these items are stated net of tax

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Table 3: Summary of risk weighted assets (RWAs)

Risk weighted assets	As at 31.12.12 £m	As at 31.12.11 £m
Credit risk		
- Standardised	76,767	84,758
- Foundation Internal Ratings Based Approach (FIRB)	12,580	12,720
- Advanced Internal Ratings Based Approach (AIRB)	149,903	147,746
Total credit risk	**239,250**	**245,224**
Counterparty risk		
- Internal model method (IMM)	25,627	33,131
- Non-model method	4,473	4,953
Total counterparty risk	**30,100**	**38,084**
Market risk		
- Standardised	25,396	27,823
- Modelled - Value at risk (VaR)	22,497	26,568
- Charges add-on and Non-VaR modelled	15,429	17,560
Total market risk	**63,322**	**71,951**
Operational risk		
- Basic Indicator Approach	3,494	1,401
- Standardised Approach	-	1,354
- Advanced Measurement Approach	50,692	32,985
Total operational risk	**54,186**	**35,740**
Total risk weighted assets	**386,858**	**390,999**

Risk weighted assets reduced 1% to £386.9bn. The main drivers of movements during the year are set out below.

Table 4: Movements in risk weighted assets (RWAs)

		£bn
Position as at 1.1.2012		**391.0**
Model and Methodology changes		**38.7**
Increase in operational risk RWAs driven by a recalibration of risk scenarios taking into account operational risk events impacting Barclays and the wider banking industry	18.4	
Increase in market risk RWAs within Investment Bank, principally relating to the VaR model scope and the sovereign incremental risk charge	12.0	
Increase due to the introduction of minimum loss given default parameters for sovereign exposures	4.7	
Increase as a result of changes to the treatment of real estate exposures	2.8	
Other	0.8	
Business risk reduction		**(28.4)**
Investment Bank risk reductions, primarily in market risk and derivative counterparty credit risk, including a £4.2bn decrease as a result of the sell down of legacy assets (in addition to £1.0bn lower capital deductions related to legacy business)	(24.6)	
Credit risk decrease within Corporate Banking, reflecting business risk reduction and the strategic exit from non-core international portfolios	(6.9)	
Offset by increase within UK RBB predominantly driven by mortgage balance growth	2.2	
Other	0.9	
Foreign exchange - primarily due to the depreciation of USD, EUR and ZAR against GBP		**(11.3)**
Change in risk parameters - primarily driven by improvements in underlying risk profiles and market		**(3.1)**
Position as at 31.12.2012		**386.9**

Executive summary

Table 5: Risk weighted assets by risk type and business

	Credit risk			Counterparty credit risk		Market risk			Operational risk	
	STD	F-IRB	A-IRB	IMM	Non Model Method	STD	Modelled - VaR	Charges Add-on and Non-VaR Modelled		Total Risk Weighted Assets
As at 31.12.12	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
UK RBB	1,163	-	31,096	-	-	-	-	-	6,524	**38,783**
Europe RBB	5,727	-	9,157	-	3	-	-	-	2,225	**17,112**
Africa RBB	6,217	5,778	10,580	-	7	-	-	-	4,426	**27,008**
Barclaycard	16,641	-	13,442	-	-	-	-	-	6,381	**36,464**
Investment Bank	9,530	3,055	47,991	25,127	4,264	25,396	22,497	15,429	24,730	**178,019**
Corporate Banking	25,744	3,430	31,743	500	-	-	-	-	6,556	**67,973**
Wealth and Investment Management	11,540	317	593	-	199	-	-	-	3,184	**15,833**
Head Office Functions and Other Operations	205	-	5,301	-	-	-	-	-	160	**5,666**
Total Risk Weighted Assets	**76,767**	**12,580**	**149,903**	**25,627**	**4,473**	**25,396**	**22,497**	**15,429**	**54,186**	**386,858**
As at 31.12.11										
UK RBB	1,193	-	27,896	-	-	-	-	-	4,867	**33,956**
Europe RBB	6,147	-	9,691	-	2	-	-	-	1,596	**17,436**
Africa RBB	8,840	6,615	11,452	-	6	-	-	-	3,376	**30,289**
Barclaycard	15,262	-	14,167	-	-	-	-	-	4,757	**34,186**
Investment Bank	11,395	2,882	47,937	32,570	4,792	27,823	26,568	17,560	15,173	**186,700**
Corporate Bank	30,826	2,926	34,338	561	-	-	-	-	4,191	**72,842**
Wealth and Investment Management	10,262	297	834	-	153	-	-	-	1,530	**13,076**
Head Office Functions and Other Operations	833	-	1,431	-	-	-	-	-	250	**2,514**
Total Risk Weighted Assets	**84,758**	**12,720**	**147,746**	**33,131**	**4,953**	**27,823**	**26,568**	**17,560**	**35,740**	**390,999**

The main drivers of movements in risk weighted assets (RWAs) by business were as follows:

- **UK RBB** increased 14% to £38.8bn principally due to mortgage balance growth, an increased operational risk charge and adoption of a more comprehensive approach to loans subject to forbearance.
- **Europe RBB** RWAs decreased 2% to £17.1bn principally due to reductions in loans and advances and currency movements, partially offset by an increased operational risk charge and portfolio deterioration in Spain.
- **Africa RBB** decreased 11% to £27.0bn, principally due to foreign exchange movements and a change in approach for sovereign risk weightings, offset by an increased operational risk charge.
- **Barclaycard** increased 7% to £36.5bn, principally due to growth in assets and an increased operational risk charge.
- **Investment Bank** decreased 5% to £178.0bn, principally reflecting reductions in risk exposures, including legacy asset sell downs, and foreign exchange movements. This was partially offset by an increased operational risk charge and a change in approach to loss given default on sovereign exposures.
- **Corporate Banking** decreased 7% to £68.0bn, principally reflecting the benefit of the refocusing of our international business, partially offset by an increased operational risk charge.
- **Wealth and Investment Management** increased 21% to £15.8bn principally due to growth in lending and an increased operational risk charge.
- **Head Office Functions and Other Operations** increased £3.2bn to £5.7bn, principally reflecting increases in sovereign bonds held for liquidity purposes and a change in approach to loss given default on sovereign exposures.

Additional detail on risk weighted assets and related exposures are set out on pages 21 and 23.

Basis of preparation

Location of risk disclosures

Barclays seeks to provide comprehensive risk disclosures to address the varying needs of a wide range of users, while minimising clutter or duplication. To this end, complementary disclosures may be found in different reports. Where this is the case, signposts direct the reader to the related disclosure location.

The **Pillar 3** report focuses on regulatory capital information and risk management. Disclosures include:

- Risk management frameworks, with a focus on the assessment of regulatory capital. For instance, details on our most material RWA models (see page 92).
- Regulatory credit exposure tables, including industry and geography breakdowns. (pages 19 to 37).
- Quantitative data on counterparty credit risk from derivative trades (see section "Analysis of Counterparty Credit Risk" on page 46).
- Quantitative data on market risk and information on the linkage between the balance sheet and our trading book (see the market risk management section on pages 52 to 55.
- Description of the operational risk management framework (see page 107).

The Annual Report, found at "http://group.barclays.com/about-barclays/investor-relations/annual-reports", contains extensive information with a focus on financial reporting measures (see "Presentation of risk data", below, for a description of the different bases of preparation).

A detailed summary of the location of various risk disclosures can be found from page 119.

Barclays approach to risk disclosures in the Pillar 3 report

Changes in the Pillar 3 report in 2012

We have made changes to our existing disclosures to enhance investors' and analysts' understanding of our RWA position and method of calculations. These changes also take account of regulator feedback, and industry consultations. We plan to continue enhancing the way we communicate our risk profile with investors and other stakeholders in the future.

- We have added additional information to our Pillar 3 and Annual Report disclosures by breaking down the components of the risk weights calculation further, enhancing the analysis of the relationship between the riskiness of our exposures and the level of RWAs.

See the credit risk exposure tables on pages 19 to 37 (and the Appendix on pages 110 to 116), counterparty credit risk exposures on pages 46 to 50, market risk exposures on pages 52 to 55, operational risk exposures on pages 65 and 66, and securitisation positions on pages 57 to 63.

- We provide a detailed explanation of the year-on-year movements in total RWAs, identifying the contribution of modelling changes, exposure increases, change in risk profile, etc.

See the executive summary on page 4.

- We provide more information on the modelling methodologies for risk weights, to enhance users' understanding of the science, rigour and governance behind risk weight calculations.

See pages 92 and 93 in the IRB section.

- We provide information on our capital leverage and ratios under the current and the anticipated Basel 3 regulatory frameworks.
- To enhance investors understanding of the capital position under the regulatory view (in contrast to accounting), a comparison of financial reporting and regulatory equity is presented

See page 68 for information on the impact of Basel 3.

Presentation of risk data

This document discloses Barclays assets in terms of exposures and capital requirements. For the purposes of this document, credit exposure is defined as the estimate of the amount at risk in the event of a default (before any recoveries) or through the decline in value of an asset. This estimate takes account of contractual commitments related to undrawn amounts. In contrast, an asset in the Group's balance sheet is reported as a drawn balance only. This is one of the reasons why exposure values in the Pillar 3 report will differ from asset values as reported in the Annual Report.

Where this document discloses credit exposures or capital requirements, Barclays has followed the scope and application of its Pillar 1 capital adequacy calculations (unless noted otherwise). Where figures for impairment or losses are disclosed within this document, Barclays has followed the IFRS definitions used in the Annual Report. Throughout this report, tables show credit exposures or capital requirements split into various exposure classes (for instance, industry or type of borrower). Some of these classes are specified in the FSA rules. Where the regulations

Basis of preparation

are not explicit, such as in industry and geographic analyses, Barclays shows exposure class splits at an appropriate level of granularity.

Policy, validation and sign-off

This report was validated and approved internally by Barclays in line with its Pillar 3 policy. All data submissions are attested to by the Finance and Risk Directors. Review and challenge is performed centrally within Group Risk to ensure that the disclosures are a fair representation of the risk profile. Consistency checks and reconciliations are performed within Group Finance to ensure consistency in disclosures.

The Pillar 3 policy also requires that Barclays external disclosures (which include the Pillar 3 report, the Preliminary Results Announcement, Interim Management Statements, and the Annual Report) convey its risk profile comprehensively, subject to the information being material and not proprietary nor confidential.

The report is reviewed by the Legal and Technical Committee and the Disclosure Committee alongside Barclays other external disclosures.

Previous year comparisons

The 2012 Pillar 3 disclosure describes the Group's credit risk exposures covering both the Standardised and the Internal Ratings-Based (IRB) approaches. In many cases, the change in treatment of credit risk portfolios from the Standardised to the IRB approach caused material changes in the year on year balances. Where this is the case, this is noted in the commentary to the disclosures. This enhanced exposure reporting has not affected total volumes, but is visible in year on year comparatives of certain exposure classes and categories.

See page 13 for a description of the scope of the IRB and Standardised approaches.

Presentation of not applicable or nil figures

Where a specific figure is undefined or not reported within a table, it is generally shown as a blank space. The symbol "-" means that the figure is nil.

Significant subsidiaries

Regulations require Barclays to prepare its Pillar 3 disclosures at consolidated Group level. Significant subsidiaries must also report limited Pillar 3 information on their capital resources on a standalone basis. Barclays Bank Plc is the main operating subsidiary of the Group.

Capital information can be found on pages in the Barclays Bank PLC's Annual Report (http://group.barclays.com/about-barclays/investor-relations/annual-reports).

Barclays also has a significant subsidiary in the Absa Bank Limited. Absa Group's primary regulator is the South African Reserve Bank (SARB). Absa has disclosed complete Pillar 3 information in compliance with the SARB's regulations. These disclosures may be found in the Investor Relations section of Absa's website: www.Absa.co.za.

Please see page 11 for a summary and discussion of Barclays Plc entities.

Exceptions to the disclosure requirements

In Table 33 on page 43 on backtesting, FSA regulations require the disclosure of appropriate components of the credit models' expected loss such as PD, LGD and Credit Conversion Factor (CCF). The CCF is a model's estimation of the utilisation of undrawn commitments at the time of default. Barclays believes that it is more useful and appropriate to disclose the ratio of the pre default estimated EAD to the actual EAD of defaulted assets at the time of default. Where the estimate exceeds the actual exposure the ratio is greater than 100%.

Basis of preparation

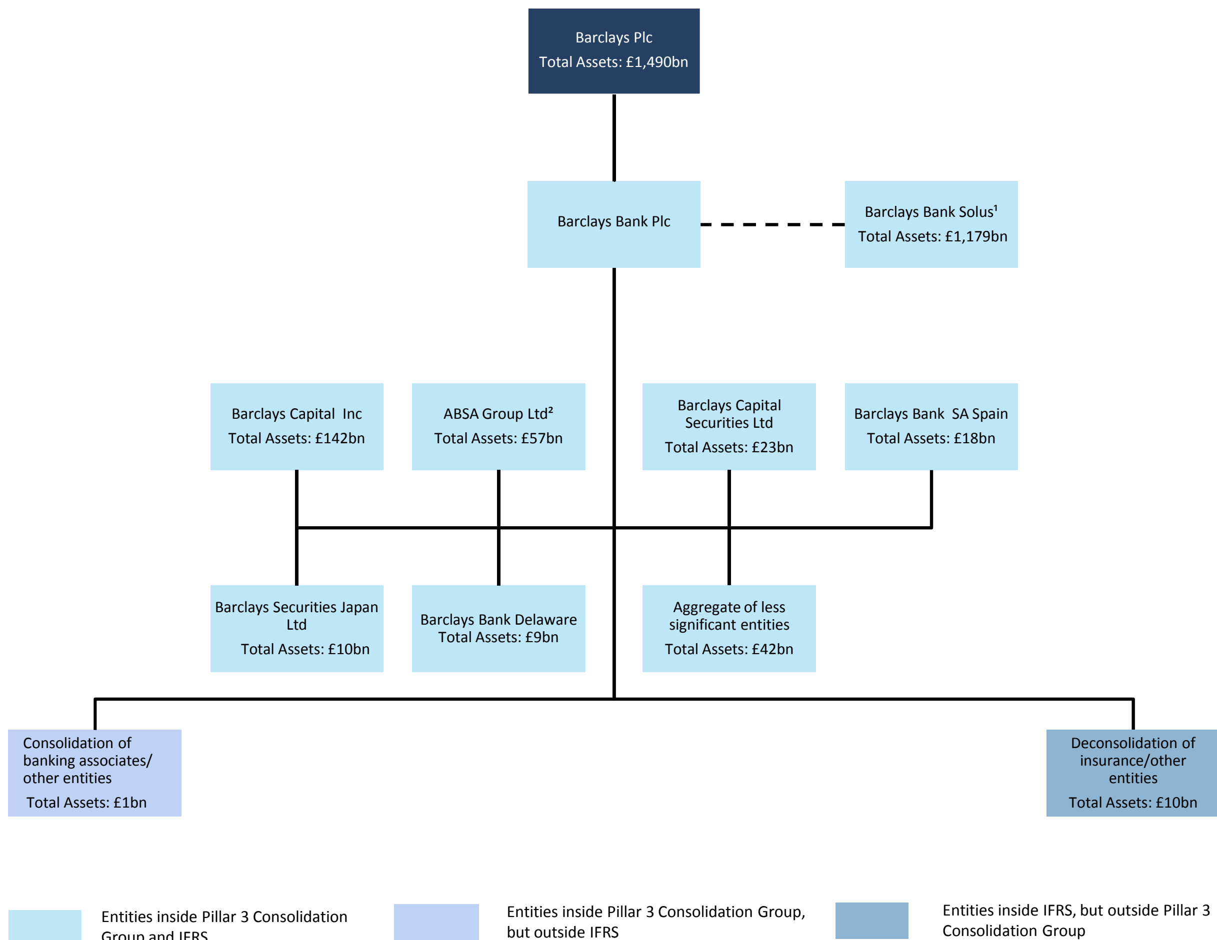
Scope of consolidation

In this report, Barclays PLC information is presented on a consolidated basis. All of these disclosures are published for Barclays PLC for the year ended 31 December 2012. The consolidation basis used is the same as that used for reporting regulatory capital adequacy to the UK Financial Services Authority. This scope of consolidation is similar to that used for statutory accounting reporting for most of the Group's activities, except for:

- Subsidiaries engaged in non-financial activities such as insurance and securitisation vehicles that are fully consolidated for statutory purposes but are not consolidated for regulatory purposes.
- Associates, joint ventures and participations that are financial in nature which would be accounted for on an equity basis in the statutory accounts are consolidated in proportion to the participation in the regulatory calculations.
- Entities that are not financial in nature, as well as private equity investments treated as associates, would be accounted for on an equity basis in the statutory accounts but deducted from capital in the regulatory calculations.

The chart below summarises the structure of the Group, with an indication of the sizes of subsidiaries in terms of total asset contribution to the Group.

Figure 1: Summary of regulatory scope of consolidation as at 31.12.12[1,2]



[1] Barclays Bank Solus refers to Barclays Bank PLC UK branches, excluding those of its subsidiaries.

[2] Barclays Bank Plc holds 100% interest in all its subsidiaries with the exception of ABSA Group Ltd, holding a 55.6% interest in the Shareholders' equity and recognising the remainder as Non-controlling interests.

Basis of preparation

Table 6: Reconciliation between gross assets per IFRS and for regulatory reporting purposes

This table details the reconciliation between Barclays PLC balance sheet for statutory versus regulatory purposes. Please note that the amount shown under the regulatory scope of consolidation is not a risk-weighted asset measure; it is an accounting measure and cannot be reconciled to other tables in this report.

As at 31.12.12	Accounting balance sheet per published financial statements £m	Deconsolidation of insurance/other entities £m	Consolidation of banking associates/other entities £m	Balance sheet per regulatory scope of consolidation £m
Assets				
Cash and balances at central banks and items in the course of collection from other banks	87,631	(1)	184	87,814
Trading portfolio assets	145,030	-	-	145,030
Financial assets designated at fair value	46,061	(1,252)	-	44,809
Derivative financial instruments	469,146	(212)	-	468,934
Available for sale investments	75,109	(2,878)	-	72,231
Loans and advances to banks	40,489	(1,247)	132	39,374
Loans and advances to customers	425,729	(2,976)	1,303	424,056
Reverse repurchase agreements and other similar secured	176,956	(24)	-	176,932
Other assets	24,170	(1,883)	(189)	22,098
Total assets	1,490,321	(10,473)	1,430	1,481,278
Liabilities				
Deposits from banks and items in the course of collection due to other banks	78,583	(5)	1,200	79,778
Customer accounts	385,707	(524)	-	385,183
Repurchase agreements and other similar secured borrowing	217,342	(23)	-	217,319
Trading portfolio liabilities	44,794	-	-	44,794
Financial liabilities designated at fair value	78,280	(451)	-	77,829
Derivative financial instruments	462,468	-	-	462,468
Debt securities in issue	119,581	(5,425)	-	114,156
Subordinated liabilities	24,018	-	-	24,018
Other liabilities	16,591	(3,922)	239	12,908
Total Liabilities	1,427,364	(10,350)	1,439	1,418,453
Shareholders' equity				
Shareholders' equity excluding non-controlling interests	53,586	(118)	(9)	53,459
Non-contolling interests	9,371	(5)	-	9,366
Total shareholders' equity	62,957	(123)	(9)	62,825
Total liabilities and shareholders' equity	1,490,321	(10,473)	1,430	1,481,278

Basis of preparation

Scope of permission of Internal Ratings Based approach

Barclays has regulatory approval to use its internal credit models in the calculation of the majority of its credit risk and counterparty credit risk exposures. The following table summarises the principal portfolios within Barclays that use the Standardised, Foundation IRB and Advanced IRB approaches as at 31 December 2012.

Table 7: The scope of the Standardised and IRB approaches.

							Internal ratings based (IRB) approaches		
As at 31.12.12	Credit Risk Weighted Assets	Credit Risk Weights	Credit Risk EAD	Counterparty Credit Risk Weighted Assets	Counterparty Risk Weight	Counterparty Exposure	Advanced	Foundation	Standardised Approach
UK RBB	£32,259m	22%	£146,494m	£0m	N/A	£0m	Most portfolios	None	Small sub-portfolios
Europe RBB	£14,884m	33%	£45,056m	£3m	50%	£6m	Portugal mortgages, Italy mortgages, Spain mortgages, Spain cards, Italy personal loans	None	Other portfolios (including legacy)
Africa RBB	£22,575m	50%	£44,975m	£8m	96%	£7m	Retail portfolios in Absa	Wholesale portfolios in Absa	Mainly non South Africa
Barclaycard	£30,083m	60%	£49,821m	£0m	N/A	£0m	UK retail credit cards, Germany retail credit cards	None	Non UK (incl. recent acquisitions and excl. Germany), UK secured Lending and Partnerships
Investment Bank	£60,576m	26%	£231,888m	£29,390m	34%	£85,775m	Most portfolios	Absa Capital	Small portfolios typically with low or no defaults (e.g. fund manager)
Corporate Banking	£60,917m	61%	£100,626m	£500m	54%	£934m	Larger and Medium business portfolios, UK trade finance portfolios	Wholesale portfolios in Absa	Non UK (incl. legacy), asset and sales finance
Wealth and Investment Management	£12,450m	60%	£20,920m	£199m	50%	£394m	Spain Mortgages	None	Most portfolios
Head office Functions and other operations	£5,506m	15%	£37,277m	£0m	N/A	£0m	All portfolios	None	Small portion of Non Customer Assets

Barclays continuously develops credit models for the calculation of regulatory capital and aims to use the Advanced Internal Ratings Based (AIRB) approach for all of its significant portfolios. To achieve this target, Barclays has a well developed AIRB roll-out plan which is discussed with our regulators and updated on a 6-monthly basis. The plan is based on current regulatory requirements with portfolios moving to advanced as soon as practicable, recognising any data constraints and methodology challenges.

Capital resources

Capital resources

Table 8: Capital resources

This table details the capital resources, as shown on pages 162 and 163 of the 2012 Annual Report.

Key Capital Ratios	As at 31.12.12	As at 31.12.11
Capital Resources	£m	£m
Shareholders' equity (excluding non-controlling interests) per balance sheet	**53,586**	**55,589**
Own credit cumulative loss/(gain)[1]	804	(2,680)
Unrealised (gains)/losses on available for sale debt securities[1, 3]	(417)	803
Unrealised gains on available for sale equity (recognised as tier 2 capital)[1]	(110)	(828)
Cash flow hedging reserve[1]	(2,099)	(1,442)
Non-controlling interests per balance sheet	9,371	9,607
- Less: Other Tier 1 capital - preference shares	(6,203)	(6,235)
- Less: Non-controlling Tier 2 capital	(547)	(573)
Other regulatory adjustments to non-controlling interests	(171)	(138)
Other regulatory adjustments and deductions:		
Defined benefit pension adjustment[1]	(2,445)	(1,241)
Goodwill and intangible assets[1]	(7,622)	(7,560)
50% excess of expected losses over impairment[1]	(648)	(506)
50% of securitisation positions	(1,206)	(1,577)
Other regulatory adjustments[3]	(172)	(153)
Core Tier 1 capital	**42,121**	**43,066**
Other Tier 1 capital:		
Preference shares	6,203	6,235
Tier 1 notes[2]	509	530
Reserve Capital Instruments	2,866	2,895
Regulatory adjustments and deductions:		
50% of material holdings	(241)	(2,382)
50% of the tax on excess of expected losses over impairment	176	129
Total Tier 1 capital	**51,634**	**50,473**
Tier 2 capital:		
Undated subordinated liabilities	1,625	1,657
Dated subordinated liabilities	14,066	15,189
Non-controlling Tier 2 capital	547	573
Reserves arising on revaluation of property[1]	39	25
Unrealised gains on available for sale equity[1]	110	828
Collectively assessed impairment allowances	2,002	2,385
Tier 2 deductions:		
50% of material holdings	(241)	(2,382)
50% excess of expected losses over impairment (gross of tax)	(824)	(635)
50% of securitisation positions	(1,206)	(1,577)
Total capital regulatory adjustments and deductions:		
Investments that are not material holdings or qualifying holdings	(1,139)	(1,991)
Other deductions from total capital	(550)	(597)
Total regulatory capital	**66,063**	**63,948**

Please refer to the executive summary for explanations of key movements.

[1] The capital impacts of these items are net of tax

[2] Tier 1 notes are included in subordinated liabilities in the consolidated balance sheet

[3] Available for sale reserves for debt securities has been revised to include the adjustments for the scope of regulatory consolidation previously disclosed in other regulatory adjustments

Capital resources

Table 9: Terms and conditions of capital resources

This table breaks down the capital issued by instrument and provides selected key terms and conditions. All Tier 1 capital comprises perpetual instruments with no maturity date.

Instrument	Initial call date	Regulatory balance 2012 £m	Regulatory balance 2011 £m	IFRS balance 2012 £m	IFRS balance 2011 £m
Other Tier 1 capital					
Preference Shares					
Barclays Bank PLC					
6.00% non cumulative callable preference shares		**744**	743	**746**	746
6.278% non cumulative callable preference shares		**548**	548	**550**	550
4.875% non cumulative callable preference shares		**684**	684	**689**	689
4.75% non cumulative callable preference shares		**967**	967	**1,010**	1,011
6.625% non cumulative callable preference shares		**406**	406	**407**	407
7.1% non cumulative callable preference shares		**657**	657	**660**	660
7.75% non cumulative callable preference shares		**550**	550	**552**	553
8.125% non cumulative callable preference shares		**1,309**	1,309	**1,313**	1,313
Absa Bank Limited					
Absa Preference Shares		**338**	371	**338**	371
Total Preference Shares		**6,203**	6,235	**6,265**	6,300
Tier One Notes (TONs) - Barclays Bank PLC					
6% Callable Perpetual Core Tier One Notes	2032	**89**	90	**116**	103
6.86% Callable Perpetual Core Tier One Notes (US$681m)	2032	**420**	440	**720**	753
Total Tier One Notes		**509**	530	**836**	856
Reserve Capital Instruments (RCIs) - Barclays Bank PLC					
5.926% Step-up Callable Perpetual Reserve Capital Instruments (US$533m)	2016	**327**	343	**393**	414
7.434% Step-up Callable Perpetual Reserve Capital Instruments (US$347m)	2017	**213**	217	**261**	273
6.3688% Step-up Callable Perpetual Reserve Capital Instruments	2019	**95**	95	**117**	122
14% Step-up Callable Perpetual Reserve Capital Instruments	2019	**2,150**	2,155	**3,298**	3,210
5.3304% Step-up Callable Perpetual Reserve Capital Instruments	2036	**81**	85	**113**	120
Total Reserve Capital Instruments		**2,866**	2,895	**4,182**	4,139
Tier 2 capital					
Undated subordinated liabilities - Barclays Bank PLC					
6.875% Undated Subordinated Notes	2015	**135**	135	**152**	158
6.375% Undated Subordinated Notes	2017	**133**	133	**153**	157
7.7% Undated Subordinated Notes (US$99m)	2018	**62**	64	**72**	75
8.25% Undated Subordinated Notes	2018	**140**	140	**165**	166
7.125% Undated Subordinated Notes	2020	**158**	158	**215**	214
6.125% Undated Subordinated Notes	2027	**196**	196	**233**	233
Junior Undated Floating Rate Notes (US$121m)	Any interest payment date	**133**	139	**75**	78
Undated Floating Rate Primary Capital Notes Series 3	Any interest payment date	**145**	145	**146**	146
Bonds - Barclays Bank PLC					
9.25% Perpetual Subordinated Bonds (ex-Woolwich PLC)	2021	**75**	75	**99**	99
9% Permanent Interest Bearing Capital Bonds	At any time	**40**	40	**47**	46
Loans - Barclays Bank PLC					
5.03% Reverse Dual Currency Undated Subordinated Loan (Yen 8,000m)	2028	**57**	66	**47**	53
5% Reverse Dual Currency Undated Subordinated Loan (Yen 12,000m)	2028	**86**	100	**72**	82
Barclays SLCSM Funding B.V. guaranteed by the bank					
6.140% Fixed Rate Guaranteed Perpetual Subordinated Notes	2015	**265**	264	**246**	239
Total undated subordinated liabilities		**1,625**	1,657	**1,722**	1,746

Capital resources

Table 9 (Continued)

Instrument	Initial call date	Maturity date	Regulatory balance 2012 £m	Regulatory balance 2011 £m	IFRS balance 2012 £m	IFRS balance 2011 £m
Dated subordinated liabilities						
Barclays Bank PLC						
Callable Floating Rate Subordinated Notes (US$500m)	2012	2017	**-**	324	-	324
10.125% Subordinated Notes (ex-Woolwich plc)	2012	2017	**-**	100	-	102
Floating Rate Subordinated Step-up Callable Notes (US$1,500m)	2012	2017	**-**	971	-	972
Floating Rate Subordinated Step-up Callable Notes (€1,500m)	2012	2017	**-**	1,257	-	1,259
5.015% Subordinated Notes (US$150m)		2013	**19**	39	**96**	103
4.875% Subordinated Notes (€750m)		2013	**122**	251	**636**	659
Callable Fixed/Floating Rate Subordinated Notes (€1,000m)	2014	2019	**815**	838	**861**	900
4.38% Fixed Rate Subordinated Notes (US$75m)		2015	**27**	39	**52**	55
4.75% Fixed Rate Subordinated Notes (US$150m)		2015	**56**	78	**103**	110
5.14% Lower Tier 2 Notes (US$1,250m)	2015	2020	**773**	810	**885**	900
6.05% Fixed Rate Subordinated Notes (US$2,250m)		2017	**1,391**	1,457	**1,635**	1,723
Floating Rate Subordinated Notes (€40m)		2018	**33**	34	**33**	34
6% Fixed Rate Subordinated Notes (€1,750m)		2018	**1,427**	1,466	**1,519**	1,556
CMS-Linked Subordinated Notes (€100m)		2018	**82**	84	**85**	88
CMS-Linked Subordinated Notes (€135m)		2018	**110**	113	**114**	117
Fixed/Floating Rate Subordinated Callable Notes	2018	2023	**500**	500	**608**	621
Floating Rate Subordinated Notes (€50m)		2019	**41**	42	**40**	41
6% Fixed Rate Subordinated Notes (€1,500m)		2021	**1,223**	1,257	**1,333**	1,333
9.5% Subordinated Bonds (ex-Woolwich plc)		2021	**200**	200	**338**	344
Subordinated Floating Rate Notes (€100m)		2021	**82**	84	**80**	83
10% Fixed Rate Subordinated Notes		2021	**1,962**	1,961	**2,446**	2,389
10.179% Fixed Rate Subordinated Notes (US$1,521m)		2021	**940**	985	**1,133**	1,174
Subordinated Floating Rate Notes (€50m)		2022	**41**	42	**41**	42
6.625% Fixed Rate Subordinated Notes (€1,000m)		2022	**815**	838	**954**	954
7.625% Contingent Capital Notes (US$3,000m)		2022	**1,855**	-	**1,848**	-
Subordinated Floating Rate Notes (€50m)		2023	**41**	42	**41**	42
5.75% Fixed Rate Subordinated Notes		2026	**600**	600	**810**	781
5.4% Reverse Dual Currency Subordinated Loan (Yen 15,000m)		2027	**108**	126	**90**	104
6.33% Subordinated Notes		2032	**50**	50	**62**	62
Subordinated Floating Rate Notes (€100m)		2040	**82**	84	**82**	84
Absa Bank Limited						
8.75% Subordinated Callable Notes (ZAR 1,500m)	2012	2017	**-**	120	**-**	124
6.25% CPI-linked Subordinated Callable Notes (ZAR 1,886m)	2013	2018	**-**	71	**169**	181
8.8% Subordinated Fixed Rate Callable Notes (ZAR 1,725m)	2014	2019	**129**	138	**136**	148
6.00% CPI-linked Subordinated Callable Notes (ZAR 3,758m)	2014	2019	**-**	-	**275**	286
8.1% Subordinated Callable Notes (ZAR 2,000m)	2015	2020	**149**	159	**156**	167
10.28% Subordinated Callable Notes (ZAR 600m)	2017	2022	**-**	-	**44**	49
Subordinated Callable Notes (ZAR 400m)	2017	2022	**-**	-	**29**	32
Subordinated Callable Notes (ZAR 1,805m)	2017	2022	**132**	-	**132**	-
Subordinated Callable Notes (ZAR 2,007m)	2018	2023	**147**	-	**147**	-
8.295% Subordinated Callable Notes (ZAR 1,188m)	2018	2023	**87**	-	**87**	-
5.50% CPI-linked Subordinated Callable Notes (ZAR 1,500m)	2023	2028	**-**	-	**129**	135
Other capital issued by Barclays Botswana, Kenya and Zambia		2011-16	**27**	29	**49**	51
Total Dated subordinated liabilities			**14,066**	15,189	**17,278**	18,129
Non controlling tier 2 capital - Barclays Bank PLC						
Undated Floating Rate Primary Capital Notes Series 1			**249**	261	**276**	274
Undated Floating Rate Primary Capital Notes Series 2			**298**	313	**315**	312
Total non controlling tier 2 capital			**547**	573	**591**	586

Further details on the terms of each instrument of subordinated liabilities can be found on pages 286 to 289 of the 2012 Annual Report.

Analysis of credit risk

Analysis of credit risk

Analysis of capital requirements for credit risk and exposures

Table 10: Minimum capital requirements and Exposure for Credit risk

This table summarises the credit risk information presented in the rest of this report and shows exposure at default before and after credit risk mitigation (CRM), and the associated capital requirements. In accordance with regulatory requirements credit mitigation is either reflected in regulatory measures for exposure (EAD), or in the risk inputs (PD, LGD). For the majority of Barclays exposures, in particular mortgages and those under the AIRB treatment, the impact of credit mitigation is reflected in the PD or LGD rather than EAD measures.

The risk weighted assets and post-credit risk mitigation exposures are analysed by business on pages 21 to 23. The pre-credit risk mitigation exposures are further analysed by geography page 24, industry page 26, residual maturity page 27. Information on the impact of credit mitigation on EAD is set out on page 29.

	EAD Pre-CRM[1]	EAD Post-CRM[1]		Capital Requirements		
Credit Exposure Class	Year-end	Year-end	Average	RWA	Average RWA	Capital reqs
As at 31.12.12	£m	£m	£m	£m	£m	£m
Standardised approach						
Central governments or central banks	10,775	10,775	11,300	2,433	3,365	195
Regional governments or local authorities	187	187	124	98	59	8
Administrative bodies and non-commercial undertakings	266	266	294	199	140	16
Multilateral development banks	14	14	3	-	-	-
International organisations	-	-	-	-	-	-
Institutions	4,733	4,679	5,579	2,091	2,584	167
Corporates	41,443	38,045	40,250	37,415	38,980	2,993
Retail	26,791	25,988	25,328	19,391	18,947	1,551
Secured By Mortgages On Residential Property	15,498	15,020	14,804	6,447	6,509	516
Secured By Mortgages On Commercial Real Estate	1,836	1,836	2,440	1,626	2,184	130
Past due items	3,072	3,072	2,939	4,836	4,148	387
Private equity positions	664	664	903	995	1,356	80
Covered bonds	401	401	310	96	65	8
Securitisation positions	456	456	406	282	227	23
Collective investment undertakings	610	610	640	237	203	19
Other items	6,919	6,919	7,099	621	920	50
Total Standardised Approach Credit Risk Exposure	**113,665**	**108,932**	**112,419**	**76,767**	**79,687**	**6,143**
Foundation IRB approach						
Central governments or central banks	263	263	360	100	51	8
Institutions	1,254	1,254	987	319	251	26
Corporates	16,784	16,784	16,758	12,161	12,359	973
Total Foundation Approach Credit Risk Exposure	**18,301**	**18,301**	**18,105**	**12,580**	**12,661**	**1,007**
Advanced IRB approach						
Central governments or central banks	126,345	126,345	145,599	7,042	4,215	563
Institutions	22,741	22,741	26,166	3,186	2,975	255
Corporates	137,089	137,089	139,019	64,250	63,971	5,140
Retail						
- Small and medium enterprises (SME)	9,497	9,497	11,573	6,466	7,475	517
- Secured by real estate collateral	171,210	171,210	169,360	29,416	27,985	2,353
- Qualifying revolving retail	35,333	35,333	35,139	14,111	14,114	1,129
- Other retail	9,674	9,674	10,104	8,425	8,822	674
Equity	55	55	48	204	176	16
Securitisation positions	24,442	24,442	25,725	3,831	4,154	306
Non-credit obligation assets	13,438	13,438	13,643	12,972	13,314	1,038
Total Advanced IRB Credit Risk Exposure	**549,824**	**549,824**	**576,376**	**149,903**	**147,201**	**11,991**
Total Credit Exposure	**681,790**	**677,057**	**706,900**	**239,250**	**239,549**	**19,141**

[1] Collateral and guarantees for Advanced IRB are included within the EAD pre-CRM as these are incorporated in loss given default (LGD) calculations. The average post-CRM EAD is calculated from the last five quarters. This shows intra-year fluctuations. For example AIRB Central governments and central banks is showing a higher average compared with year-end figures in 2011 and 2012 due to ongoing management of the liquidity portfolio.

Analysis of credit risk

Table 10 (Continued)

	EAD Pre-CRM	EAD Post-CRM		Capital Requirements		
Credit Exposure Class	Year-end	Year-end	Average	RWA	Average RWA	Capital reqs
As at 31.12.11	£m	£m	£m	£m	£m	£m
Standardised approach						
Central governments or central banks	10,321	10,321	12,896	4,844	3,229	388
Regional governments or local authorities	86	86	116	29	31	2
Administrative bodies and non-commercial undertakings	324	324	310	66	63	5
Multilateral development banks	-	-	-	-	-	-
International organisations	-	-	-	-	-	-
Institutions	7,122	7,081	3,775	3,545	1,817	284
Corporates	45,294	41,757	39,996	40,333	38,964	3,227
Retail	26,594	26,225	25,143	19,643	20,495	1,571
Secured By Mortgages On Residential Property	14,926	14,555	19,242	6,574	8,067	526
Secured By Mortgages On Commercial Real Estate	3,023	3,023	2,376	2,178	1,832	174
Past due items	3,368	3,358	3,781	4,567	5,089	365
Private equity positions	877	877	1,104	1,325	1,658	106
Covered bonds	286	286	295	57	59	5
Securitisation positions	374	374	400	189	236	15
Collective investment undertakings	740	740	703	149	119	12
Other items	6,731	6,731	4,837	1,259	807	101
Total Standardised Approach Credit Risk Exposure	**120,066**	**115,738**	**114,974**	**84,758**	**82,466**	**6,781**
Foundation IRB approach						
Central governments or central banks	1,070	1,070	1,217	17	14	1
Institutions	936	936	844	516	216	18
Corporates	16,266	16,266	17,198	12,187	12,591	975
Total Foundation Approach Credit Risk Exposure	**18,272**	**18,272**	**19,259**	**12,720**	**12,821**	**994**
Advanced IRB approach						
Central governments or central banks	140,518	140,518	132,769	2,382	2,491	191
Institutions	29,823	29,823	28,220	2,692	2,715	215
Corporates	141,780	141,780	145,051	65,894	69,990	5,295
Retail						
- Small and medium enterprises (SME)	12,536	12,536	12,946	7,898	8,154	632
- Secured by real estate collateral	168,611	168,611	159,655	26,738	25,847	2,139
- Qualifying revolving retail	36,165	36,165	36,693	14,909	14,118	1,193
- Other retail	10,396	10,396	11,577	9,225	10,282	738
Equity	40	40	482	147	1,854	12
Securitisation positions	26,009	26,009	25,459	4,582	5,432	367
Non-credit obligation assets	13,962	13,962	14,399	13,279	13,828	1,062
Total Advanced IRB Credit Risk Exposure	**579,840**	**579,840**	**567,251**	**147,746**	**154,711**	**11,844**
Total Credit Exposure	**718,178**	**713,850**	**701,484**	**245,224**	**249,998**	**19,619**

Analysis of credit risk

Table 11: Detailed view of exposure at default, post-CRM by business

This table summarises EAD post-credit risk mitigation by business and exposure class for credit risk in the banking book. Information on the impact of credit mitigation on EAD is set out on page 29.

EAD post-CRM Credit Exposure Class As at 31.12.12	UK RBB £m	Europe RBB £m	Africa RBB £m	Barclaycard £m	Investment Bank £m	Corporate Banking £m	Wealth and Investment Management £m	Head Office and Other Operations impact[1] £m	Total £m
Credit risk									
Standardised approach									
Central governments or central banks	-	1,054	5,655	969	2,168	599	330	-	10,775
Regional governments or local authorities	-	-	12	-	84	91	-	-	187
Administrative bodies and non-commercial undertakings	-	2	-	-	-	197	67	-	266
Multilateral development banks	-	-	14	-	-	-	-	-	14
Institutions	21	476	437	332	1,313	1,406	694	-	4,679
Corporates	19	1,195	2,514	565	5,562	21,758	6,234	198	38,045
Retail	741	4,657	1,816	17,066	-	1,347	361	-	25,988
Secured By Mortgages On Residential Property	129	1,143	258	2,287	346	242	10,615	-	15,020
Secured By Mortgages On Commercial Real Estate	9	222	1	-	968	376	260	-	1,836
Past due items	206	556	64	1,098	22	816	310	-	3,072
Private equity positions	-	-	-	-	617	42	-	5	664
Covered bonds	-	297	-	-	104	-	-	-	401
Securitisation positions	-	-	-	-	443	13	-	-	456
Short term claims on institutions and corporates	-	-	-	-	-	-	-	-	-
Collective investment undertakings	-	-	1	-	-	-	609	-	610
Other items	1,777	846	832	431	3,147	746	53	(913)	6,919
Total Standardised Approach Credit Risk Exposure	**2,902**	**10,448**	**11,604**	**22,748**	**14,774**	**27,633**	**19,533**	**(710)**	**108,932**
Foundation IRB approach									
Central governments or central banks	-	-	1	-	262	-	-	-	263
Institutions	-	-	-	-	1,236	18	-	-	1,254
Corporates	-	-	6,505	-	5,340	4,572	367	-	16,784
Total Foundation Approach Credit Risk Exposure	**-**	**-**	**6,506**	**-**	**6,838**	**4,590**	**367**	**-**	**18,301**
Advanced IRB approach									
Central governments or central banks	-	-	-	-	96,868	13	-	29,464	126,345
Institutions	1	-	-	-	15,660	1,267	-	5,813	22,741
Corporates	1,712	-	2	-	69,262	66,103	-	10	137,089
Retail									
- Small and medium enterprises (SME)	8,055	-	1,421	-	-	20	1	-	9,497
- Secured by real estate collateral	119,047	33,188	18,379	-	-	-	596	-	171,210
- Qualifying revolving retail	8,909	351	481	25,554	-	-	38	-	35,333
- Other retail	4,708	24	4,825	1	-	-	116	-	9,674
Equity	-	-	-	-	-	-	-	55	55
Securitisation positions	-	-	337	-	21,385	-	-	2,720	24,442
Non-credit obligation assets	1,160	1,045	1,420	1,518	7,101	1,000	269	(75)	13,438
Total Advanced IRB Credit Risk Exposure	**143,592**	**34,608**	**26,865**	**27,073**	**210,276**	**68,403**	**1,020**	**37,987**	**549,824**
Total Credit Risk Exposure	**146,494**	**45,056**	**44,975**	**49,821**	**231,888**	**100,626**	**20,920**	**37,277**	**677,057**
As at 31.12.11	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**
Credit risk									
Standardised approach									
Central governments or central banks	-	1,970	5,839	387	1,238	485	402	-	10,321
Regional governments or local authorities	-	-	15	-	3	68	-	-	86
Administrative bodies and non-commercial undertakings	-	-	-	-	-	271	53	-	324
Multilateral development banks	-	-	-	-	-	-	-	-	-
Institutions	19	585	650	190	910	2,935	596	1,196	7,081
Corporates	25	1,460	3,416	544	5,745	24,657	5,757	153	41,757
Retail	923	5,340	1,440	14,743	-	3,184	595	-	26,225
Secured By Mortgages On Residential Property	154	1,331	258	2,661	762	270	9,119	-	14,555
Secured By Mortgages On Commercial Real Estate	12	347	-	-	2,010	577	77	-	3,023
Past due items	154	397	97	1,232	129	1,090	259	-	3,358
Private equity positions	-	-	-	-	708	164	-	5	877
Covered bonds	-	286	-	-	-	-	-	-	286
Securitisation positions	-	-	-	-	374	-	-	-	374
Short term claims on institutions and corporates	-	-	-	-	-	-	-	-	-
Collective investment undertakings	-	13	-	-	-	-	727	-	740
Other items	1,359	841	779	762	2,410	904	87	(411)	6,731
Total Standardised Approach Credit Risk Exposure	**2,646**	**12,570**	**12,494**	**20,519**	**14,289**	**34,605**	**17,672**	**943**	**115,738**
Foundation IRB approach									
Central governments or central banks	-	-	2	-	1,068	-	-	-	1,070
Institutions	-	-	3	-	933	-	-	-	936
Corporates	-	-	7,202	-	5,156	3,908	-	-	16,266
Total Foundation Approach Credit Risk Exposure	**-**	**-**	**7,207**	**-**	**7,157**	**3,908**	**-**	**-**	**18,272**
Advanced IRB approach									
Central governments or central banks	-	-	-	-	123,574	115	-	16,829	140,518
Institutions	1	-	-	-	19,364	673	-	9,785	29,823
Corporates	1,360	-	6	-	72,198	66,265	251	1,700	141,780
Retail									
- Small and medium enterprises (SME)	8,366	-	1,625	-	-	2,545	-	-	12,536
- Secured by real estate collateral	112,214	35,166	20,546	-	-	-	685	-	168,611
- Qualifying revolving retail	9,255	319	503	26,053	-	-	35	-	36,165
- Other retail	5,012	92	4,959	41	-	-	292	-	10,396
Equity	-	-	-	-	-	-	-	40	40
Securitisation positions	-	-	444	-	24,761	-	-	804	26,009
Non-credit obligation assets	1,207	1,291	2,279	1,301	6,649	1,114	245	(124)	13,962
Total Advanced IRB Credit Risk Exposure	**137,415**	**36,868**	**30,362**	**27,395**	**246,546**	**70,712**	**1,508**	**29,034**	**579,840**
Total Credit Risk Exposure	**140,061**	**49,438**	**50,063**	**47,914**	**267,992**	**109,225**	**19,180**	**29,977**	**713,850**

[1] Negative balances within 'Non-Credit obligation assets' and 'Other items' relate to tax related netting adjustments recorded within Head Office and other Operations.

Analysis of credit risk

Credit risk exposures post-credit risk mitigation decreased by 5.2% to £677.1bn. The key movements by business were as follows:

- Exposures in **UK RBB** increased 4.6% to £146.5bn, principally due to mortgage balance growth.
- Exposures in **Europe RBB** decreased 8.9% to £45.1bn, principally due to reductions in loans and advances and foreign exchange movements.
- Exposures in **Africa RBB** decreased 10.2% to £45.0bn, principally due to foreign exchange movements, as well as a modest decline in the South African mortgage book and reduced corporate lending balances in certain other African countries.
- Exposures in **Barclaycard** increased 4.0% to £49.8bn, principally due to business growth and acquisitions.
- Exposures in the **Investment Bank** decreased 13.5% to £231.9bn, principally due to a decrease in exposures to Central governments and central banks as part of the management of liquidity positions.
- Exposures in **Corporate Banking** decreased 7.9% to £100.6bn, principally due to refocusing of our international businesses.
- Exposures in **Wealth and Investment Management** increased 9.1% to £20.9bn principally due to growth in lending.
- Exposures in **Head Office and Other Operations** increased 24.4% to £37.3bn principally due to increases in sovereign bonds held for liquidity purposes.

Analysis of credit risk

Table 12: Detailed view of credit risk weighted assets by business

The following table shows RWAs for credit risk in the banking book. RWAs for counterparty credit risk are analysed on page 47; RWAs for market risk are analysed on page 52, and RWAs for operational risk are analysed on page 65.

Risk Weighted Assets Credit Risk Exposure Class As at 31.12.12	UK RBB £m	Europe RBB £m	Africa RBB £m	Barclaycard £m	Investment Bank £m	Corporate Banking £m	Wealth and Investment Management £m	Head Office and Other Operations[1] £m	Total £m
Credit risk									
Standardised approach									
Central governments or central banks	-	-	1,810	-	260	350	13	-	2,433
Regional governments or local authorities	-	-	12	-	84	2	-	-	98
Administrative bodies and non-commercial	-	1	-	-	-	173	25	-	199
Institutions	4	66	293	98	618	688	324	-	2,091
Corporates	19	702	2,432	635	5,769	21,510	6,150	198	37,415
Retail	559	3,492	1,362	12,808	-	992	178	-	19,391
Secured By Mortgages On Residential Property	97	428	137	1,394	254	148	3,989	-	6,447
Secured By Mortgages On Commercial Real Estate	9	128	1	-	968	261	259	-	1,626
Past due items	401	793	87	1,681	34	1,475	365	-	4,836
Private equity positions	-	-	-	-	925	63	-	7	995
Covered bonds	-	59	-	-	37	-	-	-	96
Securitisation positions	-	-	-	-	269	13	-	-	282
Short term claims on institutions and corporates	-	-	-	-	-	-	-	-	-
Collective investment undertakings	-	-	1	-	-	-	236	-	237
Other items	74	58	82	25	312	69	1	-	621
Total Standardised Approach Credit Risk Exposure	**1,163**	**5,727**	**6,217**	**16,641**	**9,530**	**25,744**	**11,540**	**205**	**76,767**
Foundation IRB approach									
Central governments or central banks	-	-	-	-	100	-	-	-	100
Institutions	-	-	-	-	313	6	-	-	319
Corporates	-	-	5,778	-	2,642	3,424	317	-	12,161
Total Foundation Approach Credit Risk Exposure	**-**	**-**	**5,778**	**-**	**3,055**	**3,430**	**317**	**-**	**12,580**
Advanced IRB approach									
Central governments or central banks	-	-	-	-	3,297	3	-	3,742	7,042
Institutions	1	-	-	-	1,755	215	-	1,215	3,186
Corporates	1,081	-	-	-	32,612	30,546	-	11	64,250
Retail									
- Small and medium enterprises (SME)	5,436	-	1,008	-	-	22	-	-	6,466
- Secured by real estate collateral	16,837	7,707	4,634	-	-	-	238	-	29,416
- Qualifying revolving retail	1,599	375	135	11,996	-	-	6	-	14,111
- Other retail	4,982	30	3,334	-	-	-	79	-	8,425
Equity	-	-	-	-	-	-	-	204	204
Securitisation positions	-	-	64	-	3,565	-	-	202	3,831
Non-credit obligation assets	1,160	1,045	1,405	1,446	6,762	957	270	(73)	12,972
Total Advanced IRB Credit Risk Exposure	**31,096**	**9,157**	**10,580**	**13,442**	**47,991**	**31,743**	**593**	**5,301**	**149,903**
Total Credit Risk Weighted Assets	**32,259**	**14,884**	**22,575**	**30,083**	**60,576**	**60,917**	**12,450**	**5,506**	**239,250**
As at 31.12.11	£m	£m	£m	£m	£m	£m	£m	£m	£m
Credit risk									
Standardised approach									
Central governments or central banks	-	-	3,752	50	605	395	42	-	4,844
Regional governments or local authorities	-	-	15	-	3	11	-	-	29
Administrative bodies and non-commercial	-	-	-	-	-	55	11	-	66
Institutions	4	62	466	46	360	1,650	284	673	3,545
Corporates	25	781	3,077	620	6,277	23,975	5,425	153	40,333
Retail	696	4,004	1,083	11,065	-	2,367	428	-	19,643
Secured By Mortgages On Residential Property	115	474	147	1,601	552	176	3,509	-	6,574
Secured By Mortgages On Commercial Real Estate	12	218	-	-	1,470	401	77	-	2,178
Past due items	231	520	138	1,788	194	1,362	334	-	4,567
Private equity positions	-	-	-	-	1,070	248	-	7	1,325
Covered bonds	-	57	-	-	-	-	-	-	57
Securitisation positions	-	-	-	-	189	-	-	-	189
Short term claims on institutions and corporates	-	-	-	-	-	-	-	-	-
Collective investment undertakings	-	13	-	-	-	-	136	-	149
Other items	110	18	162	92	675	186	16	-	1,259
Total Standardised Approach Credit Risk Exposure	**1,193**	**6,147**	**8,840**	**15,262**	**11,395**	**30,826**	**10,262**	**833**	**84,758**
Foundation IRB approach									
Central governments or central banks	-	-	-	-	17	-	-	-	17
Institutions	-	-	1	-	218	-	-	-	219
Corporates	-	-	6,614	-	2,647	2,926	297	-	12,484
Total Foundation Approach Credit Risk Exposure	**-**	**-**	**6,615**	**-**	**2,882**	**2,926**	**297**	**-**	**12,720**
Advanced IRB approach									
Central governments or central banks	-	-	-	-	1,793	12	-	577	2,382
Institutions	1	-	-	-	1,857	80	-	755	2,693
Corporates	983	-	21	-	33,162	31,600	39	90	65,895
Retail									-
- Small and medium enterprises (SME)	5,319	-	1,048	-	-	1,532	-	-	7,899
- Secured by real estate collateral	13,739	8,034	4,733	-	-	-	231	-	26,737
- Qualifying revolving retail	1,639	278	96	12,862	-	-	34	-	14,909
- Other retail	5,008	88	3,802	41	-	-	285	-	9,224
Equity	-	-	-	-	-	-	-	147	147
Securitisation positions	-	-	91	-	4,431	-	-	60	4,582
Non-credit obligation assets	1,207	1,291	1,661	1,264	6,694	1,114	245	(198)	13,278
Total Advanced IRB Credit Risk Exposure	**27,896**	**9,691**	**11,452**	**14,167**	**47,937**	**34,338**	**834**	**1,431**	**147,746**
Total Credit Risk Weighted Assets	**29,089**	**15,838**	**26,907**	**29,429**	**62,214**	**68,090**	**11,393**	**2,264**	**245,224**

[1] Negative balances within 'Non-Credit obligation assets' relate to tax related netting adjustments recorded within Head Office and other Operations.

Analysis of credit risk

Table 13: Geographic analysis of credit exposure

This table shows exposure at default before credit risk mitigation, broken down by Basel exposure class and the country of operation of the counterparty.

EAD pre-CRM Credit Exposure Class As at 31.12.12	United Kingdom £m	Europe £m	Americas £m	Africa and Middle East £m	Asia £m	Total £m
Standardised approach						
Central governments or central banks	41	1,349	889	8,129	367	10,775
Regional governments or local authorities	9	81	76	21	-	187
Administrative bodies and non-commercial undertakings	54	212	-	-	-	266
Institutions	525	1,376	792	505	1,549	4,747
Corporates	11,862	12,405	9,733	4,942	2,501	41,443
Retail	7,436	6,691	9,059	3,408	197	26,791
Secured By Mortgages On Residential Property	9,410	3,318	1,451	908	411	15,498
Secured By Mortgages On Commercial Real Estate	254	897	608	1	76	1,836
Past due items	1,235	1,336	333	135	33	3,072
Private equity positions	163	127	246	49	79	664
Covered bonds	-	401	-	-	-	401
Securitisation positions	351	73	19	-	13	456
Collective investment undertakings	-	609	-	1	-	610
Other items	4,970	1,024	112	748	65	6,919
Total Standardised Approach Credit Risk Exposure	**36,310**	**29,899**	**23,318**	**18,847**	**5,291**	**113,665**
Foundation IRB approach						
Central governments or central banks	-	24	-	239	-	263
Institutions	69	36	148	992	9	1,254
Corporates	12	141	98	16,533	-	16,784
Total Foundation Approach Credit Risk Exposure	**81**	**201**	**246**	**17,764**	**9**	**18,301**
Advanced IRB approach						
Central governments or central banks	15,750	91,226	13,127	1,184	5,058	126,345
Institutions	8,399	6,965	5,365	543	1,469	22,741
Corporates	78,165	19,298	36,544	874	2,208	137,089
Retail	161,973	35,418	34	28,278	11	225,714
Equity	55	-	-	-	-	55
Securitisation positions	7,669	3,285	12,529	451	508	24,442
Non-credit obligation assets	5,837	2,116	3,225	1,781	479	13,438
Total Advanced IRB Credit Risk Exposure	**277,848**	**158,308**	**70,824**	**33,111**	**9,733**	**549,824**
Total Credit Risk Exposure	**314,239**	**188,408**	**94,388**	**69,722**	**15,033**	**681,790**

Analysis of credit risk

Table 13 (continued)

EAD pre-CRM Credit Exposure Class As at 31.12.11	United Kingdom £m	Europe £m	Americas £m	Africa and Middle East £m	Asia £m	Total £m
Standardised approach						
Central governments or central banks	29	2,303	277	7,281	431	10,321
Regional governments or local authorities	11	57	-	18	-	86
Administrative bodies and non-commercial undertakings	54	270	-	-	-	324
Institutions	1,661	1,315	607	1,282	2,257	7,122
Corporates	11,138	18,194	7,677	5,977	2,308	45,294
Retail	7,814	8,477	7,873	1,925	505	26,594
Secured By Mortgages On Residential Property	9,064	2,918	1,805	832	307	14,926
Secured By Mortgages On Commercial Real Estate	92	2,005	681	1	244	3,023
Past due items	1,098	1,415	499	271	85	3,368
Private equity positions	268	133	381	47	48	877
Covered bonds	-	286	-	-	-	286
Securitisation positions	354	-	20	-	-	374
Collective investment undertakings	-	740	-	-	-	740
Other items	4,198	1,052	504	918	59	6,731
Total Standardised Approach Credit Risk Exposure	**35,781**	**39,165**	**20,324**	**18,552**	**6,244**	**120,066**
Foundation IRB approach						
Central governments or central banks	-	24	-	1,046	-	1,070
Institutions	82	395	127	330	2	936
Corporates	12	109	87	16,058	-	16,266
Total Foundation Approach Credit Risk Exposure	**94**	**528**	**214**	**17,434**	**2**	**18,272**
Advanced IRB approach						
Central governments or central banks	22,905	65,687	34,583	2,491	14,852	140,518
Institutions	14,972	5,695	7,304	645	1,207	29,823
Corporates	82,464	18,190	38,257	1,280	1,589	141,780
Retail	158,785	37,107	34	31,772	10	227,708
Equity	40	-	-	-	-	40
Securitisation positions	6,767	3,695	14,211	717	619	26,009
Non-credit obligation assets	7,273	1,762	2,241	2,401	285	13,962
Total Advanced IRB Credit Risk Exposure	**293,206**	**132,136**	**96,630**	**39,306**	**18,562**	**579,840**
Total Credit Risk Exposure	**329,081**	**171,829**	**117,168**	**75,292**	**24,808**	**718,178**

Total Credit Risk Exposure decreased by 5.1% to £681.8bn principally reflecting movements in sovereign exposures with reduction in exposures to the US Federal Reserve, Bank of England and Bank of Japan, partly offset by increases in positions with the European Central Bank and Swiss Central Bank.

Exposures to the Americas decreased 19.4% to £94.4bn, driven by:

- Lower exposure to central banks, reflecting reductions in US dollar positions in favour of other currencies during 2012. There were also lower exposures due to:
  - Reductions in corporate exposures under AIRB reflecting the sell-down of large positions and maturing loans, partially offset by increased lending under the Standardised approach;
  - Reduced exposure to financial institutions primarily driven by business risk reduction and the cessation of lending guarantee arrangements with BlackRock inc.
  - A decrease in securitisation exposures to conduits and disposals.
- Partly offset by the increased retail lending reflecting Barclaycard US acquisitions and increased seasonal spending compared with 2011.

Exposures to the United Kingdom decreased by 4.5% to £314.2bn, principally driven by a reduction in positions with the Bank of England and UK Banks that was partially offset by an increase in retail exposures, principally driven by increased mortgage lending and by a new treatment in the estimation of EAD for accounts in forbearance.

These decreases were partly offset by a 9.6% increase in Europe to £188.4bn driven by increased exposure to governments and central banks due to increased Swiss Francs balances and new bond positions, mainly in Germany and Denmark. Partly offset by:

- Reduced lending to corporates in Portugal and Spain in Corporate Banking, the completion of a corporate lending syndication and a reduction in commercial real estate exposures as a result of the sale of Baubecon (a large residential property portfolio);
- Reduction in residential mortgages and other retail lending across Spain, Italy and Portugal.

Analysis of credit risk

Table 14: Industry analysis of credit exposure

This table shows exposure at default before credit risk mitigation, broken down by Basel exposure class and the industrial sector associated with the obligor or counterparty.

EAD pre-CRM Credit Exposure Class As at 31.12.12	Government and central banks £m	Banks £m	Other financial institutions £m	Manufacturing £m	Construction £m	Property £m	Energy and water £m	Wholesale and retail, distribution and leisure £m	Business and other services £m	Home Loans £m	Cards, unsecured loans, other personal lending £m	Other £m	Total £m
Standardised approach													
Central governments or central banks	10,775	-	-	-	-	-	-	-	-	-	-	-	10,775
Regional governments or local authorities	-	-	-	-	-	-	33	-	139	-	-	15	187
Administrative bodies and non-commercial undertakings	-	-	42	-	-	-	107	-	70	-	-	47	266
Institutions	-	4,029	438	3	-	2	-	-	221	-	31	23	4,747
Corporates	-	153	7,739	5,000	998	3,922	2,399	4,042	10,027	2	4,301	2,860	41,443
Retail	-	-	193	243	75	223	244	249	1,128	584	23,793	59	26,791
Secured By Mortgages On Residential Property	-	-	870	11	53	1,049	5	44	2,399	4,237	6,822	8	15,498
Secured By Mortgages On Commercial Real Estate	-	-	106	83	38	1,045	4	227	273	9	13	38	1,836
Past due items	-	-	85	94	95	458	10	134	248	389	1,521	38	3,072
Private equity positions	-		320	34	10	10	29	14	232	-	-	15	664
Covered bonds	-	319	82	-	-	-	-	-	-	-	-	-	401
Securitisation positions	-	-	73	-	-	285	-	25	73	-	-	-	456
Collective investment undertakings	-	-	610	-	-	-	-	-	-	-	-	-	610
Other items	-	92		-	-	-	-	(14)	3	-	-	6,838	6,919
Total Standardised Approach Credit Exposure	**10,775**	**4,593**	**10,558**	**5,468**	**1,269**	**6,994**	**2,831**	**4,721**	**14,813**	**5,221**	**36,481**	**9,941**	**113,665**
Foundation IRB approach													
Central governments or central banks	-	119	-	10	-	-	-	-	97	-	-	37	263
Institutions	-	1,224	-	-	-	-	30	-	-	-	-	-	1,254
Corporates	-	-	1,662	2,132	535	2,152	683	2,198	4,545	-	-	2,877	16,784
Total Foundation IRB Approach Credit Exposure	**-**	**1,343**	**1,662**	**2,142**	**535**	**2,152**	**713**	**2,198**	**4,642**	**-**	**-**	**2,914**	**18,301**
Advanced IRB approach													
Central governments or central banks	126,345	-	-	-	-	-	-	-	-				126,345
Institutions	-	21,734	737	-	-	-	-	-	270				22,741
Corporates	-	47	15,132	17,689	4,090	25,361	18,362	12,328	33,551		3	10,526	137,088
Retail	-	-	59	792	668	1,871	34	2,496	3,595	168,653	41,823	5,723	225,715
Equity	-	-	55	-	-	-	-	-	-				55
Securitisation positions	-	-	23,634	-	-	762	-	-	46				24,442
Non-credit obligation assets	-	1,412	-	-	-	-	-	-	-			12,026	13,439
Total Advanced IRB Approach Credit Exposure	**126,345**	**23,193**	**39,617**	**18,481**	**4,758**	**27,994**	**18,396**	**14,824**	**37,462**	**168,653**	**41,826**	**28,275**	**549,824**
Total Credit Exposures	**137,120**	**29,129**	**51,837**	**26,091**	**6,562**	**37,140**	**21,940**	**21,743**	**56,917**	**173,874**	**78,307**	**41,130**	**681,790**
At at 31.12.11													
Standardised approach													
Central governments or central banks	10,321	-	-	-	-	-	-	-	-	-	-	-	10,321
Regional governments or local authorities	-	-	-	-	-	-	-	-	86	-	-	-	86
Administrative bodies and non-commercial undertakings	-	-	-	1	-	-	143	-	108	-	-	72	324
Institutions	-	5,861	1,166	-	-	3	-	-	92	-	-	-	7,122
Corporates	-	327	6,322	5,844	1,405	3,246	2,339	5,279	13,227	47	3,442	3,816	45,294
Retail	-	-	220	290	120	233	276	261	750	691	22,579	1,174	26,594
Secured By Mortgages On Residential Property	-	-	848	9	41	1,162	2	68	1,640	5,282	5,864	10	14,926
Secured By Mortgages On Commercial Real Estate	-	-	20	107	56	2,095	10	210	416	12	42	55	3,023
Past due items	-	-	152	156	57	436	3	78	195	473	1,494	324	3,368
Private equity positions	-	-	603	79	8	4	17	15	132	-	-	19	877
Covered bonds	-	286	-	-	-	-	-	-	-	-	-	-	286
Securitisation positions	-	-	374	-	-	-	-	-	-	-	-	-	374
Collective investment undertakings	-	-	740	-	-	-	-	-	-	-	-	-	740
Other items	-	8	50	8	1	70	-	40	388	-	-	6,166	6,731
Total Standardised Approach Credit Exposure	**10,321**	**6,482**	**10,495**	**6,494**	**1,688**	**7,249**	**2,790**	**5,951**	**17,034**	**6,505**	**33,421**	**11,636**	**120,066**
Foundation IRB approach													
Central governments or central banks	1,070	-	-	-	-	-	-	-	-	-	-	-	1,070
Institutions	-	882	3	-	-	-	-	-	24	-	-	27	936
Corporates	-	-	1,143	2,158	611	2,263	603	2,199	4,162	-	-	3,127	16,266
Total Foundation IRB Approach Credit Exposure	**1,070**	**882**	**1,146**	**2,158**	**611**	**2,263**	**603**	**2,199**	**4,186**	**-**	**-**	**3,154**	**18,272**
Advanced IRB approach													
Central governments or central banks	140,518	-	-	-	-	-	-	-	-	-	-	-	140,518
Institutions	-	28,435	1,388	-	-	-	-	-	-	-	-	-	29,823
Corporates	-	15	16,718	16,330	4,238	28,181	18,282	13,232	32,851	-	10	11,923	141,780
Retail	-	9	93	1,176	867	2,425	43	3,286	5,254	165,280	43,473	5,802	227,708
Equity	-	-	40	-	-	-	-	-	-	-	-	-	40
Securitisation positions	-	-	25,734	3	-	113	-	-	159	-	-	-	26,009
Non-credit obligation assets	-	-	-	-	-	-	-	-	450	-	-	13,512	13,962
Total Advanced IRB Approach Credit Exposure	**140,518**	**28,459**	**43,973**	**17,509**	**5,105**	**30,719**	**18,325**	**16,518**	**38,714**	**165,280**	**43,483**	**31,237**	**579,840**
Total Credit Exposures	**151,909**	**35,823**	**55,614**	**26,161**	**7,404**	**40,231**	**21,718**	**24,668**	**59,934**	**171,785**	**76,904**	**46,027**	**718,178**

The £36.4bn (5.1%) decrease in credit exposure was broadly spread with reductions seen in almost all industries across Standardised, Foundation and Advanced approaches.

There were particularly notable decreases in exposure to “central governments and central banks” as a result of reductions in exposure in the Investment Bank, particularly to the governments of the US, UK and Japan.

The most significant increase was seen in the Home Loans category reflecting business growth in the UK.

Analysis of credit risk

Table 15: Residual maturity analysis credit exposures

This table shows exposure at default before credit risk mitigation, broken down by residual maturity. Residual maturity is the remaining number of years before an obligation comes due according to the existing terms of the agreement.

Credit exposure (EAD) Pre-CRM As at 31.12.12	On demand and qualifying revolving £m	Under one year £m	Over one year but not more than three years £m	Over three years but not more than five years £m	Over five years but not more than ten years £m	Over ten years or undated[1] £m	Total £m
Standardised approach							
Central governments or central banks	6,281	2,923	1,448	49	28	46	10,775
Regional governments or local authorities	22	63	6	18	-	78	187
Administrative bodies and non-commercial undertakings	-	136	81	31	2	17	267
Institutions	1,222	2,561	640	185	21	118	4,747
Corporates	1,512	18,594	7,480	7,058	4,163	2,635	41,442
Retail	14,686	1,922	3,774	2,707	3,072	629	26,790
Secured By Mortgages On Residential Property	268	2,170	2,491	3,675	3,677	3,217	15,498
Secured By Mortgages On Commercial Real Estate	5	75	159	948	341	308	1,836
Past due items	1,485	537	145	156	309	440	3,072
Private equity	-	9	14	24	-	618	665
Covered Bonds	-	96	143	40	120	2	401
Securitisation positions	-	-	54	-	98	304	456
Collective investment undertakings	1	582	-	27	-	-	610
Other items	192	45	33	-	1	6,648	6,919
Total Standardised Approach Credit Risk Exposure	**25,674**	**29,713**	**16,468**	**14,918**	**11,832**	**15,060**	**113,665**
Foundation IRB approach							
Central governments or central banks	-	1	262	-	-	-	263
Institutions	-	19	974	93	168	-	1,254
Corporates	3,818	1	8,724	726	3,498	17	16,784
Total Foundation IRB Approach Credit Risk Exposure	**3,818**	**21**	**9,960**	**819**	**3,666**	**17**	**18,301**
Advanced IRB approach							
Central governments or central banks	31,624	56,536	8,921	8,882	12,534	7,848	126,345
Institutions	2,470	9,480	6,785	2,929	970	107	22,741
Corporates	6,886	18,285	32,611	42,868	6,463	29,975	137,088
Retail	41,015	3,847	5,463	10,910	22,171	142,309	225,715
Equity	-	-	55	-	-	-	55
Securitisation positions	-	5,591	3,378	283	8,412	6,778	24,442
Non-credit obligation assets	-	-	-	-	-	13,438	13,438
Total Advanced IRB Credit Risk Exposure	**81,995**	**93,739**	**57,213**	**65,872**	**50,550**	**200,455**	**549,824**
Total Credit Risk Exposure	**111,487**	**123,473**	**83,641**	**81,609**	**66,048**	**215,532**	**681,790**

[1] The Over ten years or undated category includes some items without contractual liquidity such as cash and tax assets. These are found in the Other items and Non-credit obligations assets lines.

Analysis of credit risk

Table 15 (Continued)

Credit exposure (EAD) Pre-CRM As at 31.12.11	On demand and qualifying revolving £m	Under one year £m	Over one year but not more than three years £m	Over three years but not more than five years £m	Over five years but not more than ten years £m	Over ten years or undated £m	Total £m
Standardised approach							
Central governments or central banks	5,158	3,233	1,629	23	39	239	10,321
Regional governments or local authorities	18	58	1	-	3	6	86
Administrative bodies and non-commercial undertakings	-	158	110	35	8	13	324
Institutions	1,845	3,750	865	278	309	75	7,122
Corporates	2,308	20,389	9,157	7,569	3,059	2,812	45,294
Retail	14,193	2,374	2,624	3,196	3,358	849	26,594
Secured By Mortgages On Residential Property	17	1,722	1,905	3,380	4,450	3,452	14,926
Secured By Mortgages On Commercial Real Estate	2	276	142	100	580	1,923	3,023
Past due items	1,128	841	287	244	381	487	3,368
Private equity	-	8	23	65	74	707	877
Covered Bonds	-	-	126	71	89	-	286
Securitisation positions	-	-	61	-	-	313	374
Collective investment undertakings	-	704	-	20	16	-	740
Other items	1,106	161	7	169	-	5,288	6,731
Total Standardised Approach Credit Risk Exposure	**25,775**	**33,674**	**16,937**	**15,150**	**12,366**	**16,164**	**120,066**
Foundation IRB approach							
Central governments or central banks	981	-	89	-	-	-	1,070
Institutions	2	2	931	-	1	-	936
Corporates	3,625	-	8,358	719	3,564	-	16,266
Total Foundation IRB Approach Credit Risk Exposure	**4,608**	**2**	**9,378**	**719**	**3,565**	**-**	**18,272**
Advanced IRB approach							
Central governments or central banks	51,313	59,291	4,217	5,693	11,520	8,484	140,518
Institutions	3,946	13,834	8,368	3,013	564	98	29,823
Corporates	7,570	20,690	32,865	41,416	8,142	31,097	141,780
Retail	41,471	5,207	5,821	11,226	22,015	141,968	227,708
Equity	-	-	40	-	-	-	40
Securitisation positions	-	5,459	3,721	707	12,006	4,116	26,009
Non-credit obligation assets	146	14	-	-	-	13,802	13,962
Total Advanced IRB Credit Risk Exposure	**104,446**	**104,495**	**55,032**	**62,055**	**54,247**	**199,565**	**579,840**
Total Credit Risk Exposure	**134,829**	**138,171**	**81,347**	**77,924**	**70,178**	**215,729**	**718,178**

Total Credit Risk Exposure decreased by 5.1% to £681.8bn principally reflecting decreases in the on-demand and under one year categories.

On-demand and qualifying revolving exposures decreased by 17.3% to £111.5bn driven by reductions in short term deposits with central banks.

Exposures under one year decreased 10.6% to £123.5bn driven by reductions in short term exposures to central banks, maturities of UK financial institution debt securites and reductions in corporate facilities.

Analysis of credit risk

Collateral and Guarantees

Table 16: Collateral and guarantees for Standardised approach

This table shows the Group's exposure for assets in Standardised approach portfolios after eligible financial collateral and guarantees. Barclays has no credit exposure in its Standardised approach portfolios which has been reduced through the application of other (non-financial) collateral or by guarantees or credit derivatives. Also, collateral for retail mortgages is accounted for directly in the loss given default measure under the Standardised approach (therefore these amounts are not separately shown in this table).

Standardised Approach Credit Risk Exposure Class	As at 31.12.12 £m	As at 31.12.11 £m
Institutions	54	41
Corporates	3,398	3,537
Retail	803	369
Secured By Mortgages On Residential Property	478	371
Past due items	-	10
Total	4,733	**4,328**

Collateral and guarantees against exposures treated under the Standardised approach increased by 9.4% to £4.7bn, principally due to the posting of financial collateral against lending in Wealth and Investment Management and increased collateralised lending to individuals.

Table 17: Collateral and guarantees for IRB approach

The bank has taken the approach to eligible collateral and guarantees, or Credit Risk Mitigation (CRM), to appropriately reflect them in the downturn Loss Given Default (LGD) used to calculate risk weighted assets for IRB exposures. In the case of Foundation IRB LGDs, this can be measured through the reduction of LGDs as stipulated by regulatory requirements for the application of CRM. Advanced IRB LGDs are modelled with the use of various and often correlated factors, meaning that to show the discrete effect of CRM for such exposures is not straight forward. As such, the bank does not currently disclose the effect of CRM for the Advanced IRB portfolio.

	Foundation IRB	
IRB Exposure Class As at 31.12.12	Total Exposure - after netting and volatility adjustments covered by Eligible Financial Collateral £m	Total Exposure - after netting and volatility adjustments covered by Other Eligible Collateral £m
Central governments or central banks	26	-
Corporates	137	448
Total	**163**	**448**
As at 31.12.11		
Central governments or central banks	35	-
Corporates	144	536
Total	**179**	**536**

The basis of preparation for the table has been changed in 2012. Prior year disclosures showed the total value of CRM for Foundation IRB exposures before assessment for eligibility and regulatory haircuts. This new table provides figures that take these factors into account.

For the Foundation IRB approach, under which LGD is not modelled, collateral is explicitly reported and applied in accordance with regulatory formulas.

Other Eligible Collateral decreased 16.4% to £0.4bn driven by a reduction in the valuation for commercial real estate collateral in South Africa.

Analysis of credit risk

Credit quality analyses of standardised exposures

Credit rating agencies (ECAIs)

Under the Standardised approach, the Group makes use of credit ratings assigned by credit rating agencies in its calculation of credit RWAs. The FSA determines which agencies may be relied upon in the determination of this risk weight. Barclays uses ratings assigned by the following agencies:

- Standard & Poor's
- Moody's
- Fitch

These ratings are used in the calculation of risk weights for the (Central governments and central banks, Institutions, Corporates) exposure classes.

Unrated and rated counterparties

Where a rating is not available, Barclays follows the provisions of the regulations. The following is a summary of the rules governing the Standardised approach. Each exposure must be assigned to one of six credit quality steps if a rating is available as defined in the table below.

Table 18: Credit rating agencies and credit quality steps under the Standardised approach

After each unrated exposure has been assigned a quality step, exposure class and maturity are then used to determine the risk weight percentage. Exposures cannot be assigned a risk weight that is lower than that of the sovereign risk of the country in which the asset is located. The following table is a simplified version of the risk weight allocation process. Note that where a rating is not available, a default treatment is applied. As per the Standardised approach rules in the United Kingdom, in most cases this default capital requirement equates to that which is applied to credit quality step 3.

Standard and Poor's	Moody's	Fitch	Credit Quality Step
AAA to AA-	Aaa to Aa3	AAA to AA-	Credit Quality Step 1
A+ to A-	A1 to A3	A+ to A-	Credit Quality Step 2
BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	Credit Quality Step 3
BB+ to BB-	Ba1 to Ba3	BB+ to BB-	Credit Quality Step 4
B+ to B-	B1 to B3	B+ to B-	Credit Quality Step 5
CCC+ and below	Caa1 and below	CCC+ and below	Credit Quality Step 6

Table 19: Credit quality steps and risk weights under the Standardised approach

This table shows the prescribed regulatory risk weights associated with credit quality steps. These are linked to ratings as shown in this table[1].

Credit quality Step	Central governments and central banks	Corporates	Institutions greater than 3 months maturity
Credit quality Step 1	0%	20%	20%
Credit quality Step 2	20%	50%	50%
Credit quality Step 3	50%	100%	50%
Credit quality Step 4	100%	100%	100%
Credit quality Step 5	100%	150%	100%
Credit quality Step 6	150%	150%	150%

Retail exposures are generally assigned a risk weight of 75%. More detailed criteria are applied for exposures secured on residential or commercial property to include the credit risk mitigation.

[1] Information on the association of external ratings to credit quality steps can be found at http://www.fsa.gov.uk/pubs/international/ecais_standardised.pdf.

Analysis of credit risk

Table 20: Credit quality step analysis of pre-CRM exposure and capital deductions under the Standardised approach

This tables shows exposure at default before credit risk mitigation under the Standardised Approach, broken down by credit quality step (this treatment only applies to Standardised exposures). The "uniform regulatory treatment" is equivalent in most cases to Credit Quality Step 3 and is applied where a rating is not available (as is the case for the great majority of retail and smaller business customers).

EAD and Capital Pre-CRM As at 31.12.12	Credit Quality Step 1 £m	Credit Quality Step 2 £m	Credit Quality Step 3 £m	Credit Quality Step 4 £m	Credit Quality Step 5 £m	Credit Quality Step 6 £m	Uniform regulatory treatment £m	Total £m	Deduction from Capital Resources £m
Central governments or central banks	1,689	186	751	165	276	-	7,708	10,775	-
Regional governments or local authorities	-	-	-	16	-	-	171	187	-
Administrative bodies and non-commercial undertakings				42	-	-	224	266	-
Institutions	257	466	679	88		4	3,253	4,747	-
Corporates	-	1,073	429	303	86	220	39,332	41,443	-
Retail	-	-	-	-	-	-	26,791	26,791	-
Secured By Mortgages On Residential Property	-	-	-	-	-	-	15,498	15,498	-
Secured By Mortgages On Commercial Real Estate	-	-	-	-	-	-	1,836	1,836	-
Past due items	-	-	-	-	-	-	3,072	3,072	-
Private Equity	-	-	-	-	-	-	664	664	739
Covered Bonds	88	293	20	-	-	-	-	401	-
Collective investment undertakings	221	387		-	-	-	2	610	-
Other items	-	-	-	-	-	-	6,919	6,919	-
Securitisation positions	-	-	-	-	-	-	456	456	-
Total Standardised Approach Credit Exposure/ Capital	**2,255**	**2,405**	**1,879**	**614**	**362**	**224**	**105,926**	**113,665**	**739**
As at 31.12.11									
Central governments or central banks	912	189	6,865	926	681	-	748	10,321	-
Regional governments or local authorities	10	-	47	-	-	-	29	86	-
Administrative bodies and non-commercial undertakings	-	43	-	-	-	-	281	324	-
Institutions	1,003	1,378	733	139	2	-	3,867	7,122	-
Corporates	493	1,838	1,203	87	266	154	41,253	45,294	-
Retail	-	-	-	-	-	-	26,594	26,594	-
Secured By Mortgages On Residential Property	-	-	-	-	-	-	14,926	14,926	-
Secured By Mortgages On Commercial Real Estate	-	-	-	-	-	-	3,023	3,023	-
Past due items	-	-	-	-	-	-	3,368	3,368	-
Private Equity	-	-	-	-	-	-	877	877	931
Covered Bonds	-	286	-	-	-	-	-	286	-
Collective investment undertakings	557	169	-	-	-	-	14	740	-
Other items	-	-	-	-	-	-	6,731	6,731	-
Securitisation positions	-	292	-	-	-	-	82	374	614
Total Standardised Approach Credit Exposure / Capital	2,975	4,195	8,848	1,152	949	154	101,793	120,066	1,545

Following a change in approach during the year, Central governments or central banks exposures of £4.5bn reported under CQS 3 in 2011 are included in the Uniform Regulatory Treatment category for 2012.

Standardised Approach exposure decreased by 5.3% to £113.7bn principally due to movements in credit quality steps 2 and 3, and for the majority of exposures where a rating is either not available or was not used in the calculation of risk-weighted assets ("Uniform Regulatory Treatment" in the table above).

- Credit quality step 3: decrease of 78.8% to £1.9bn principally resulted from the movement of South African Reserve Bank exposures to the "Uniform Regulatory Treatment" category.
- Credit quality step 2: decrease of 42.7% to £2.4bn principally due to reduced exposures to financial institutions and lending to large businesses and asset finance.
- Partly offset by an increase in "Uniform Regulatory Treatment" of 4.1% to £105.9bn, principally resulting from the movement referred to above partially offset by a decrease in corporate exposures in:
  - Corporate Banking: following the disposal of an Italian asset financing business.
  - Africa RBB: large decreases in assets from write-off and lower net lending.
  - Investment Bank: due to the sale of Baubecon (a large residential property portfolio).

Analysis of credit risk

Table 21: Credit quality step analysis of post-CRM exposure and capital deductions under the Standardised approach

The difference between the pre-CRM exposures set out in Table 20 and the post-CRM exposures in Table 21 below is the impact of CRM shown on Table 16 on page 29.

EAD and Capital Post-CRM As at 31.12.12	Credit Quality Step 1 £m	Credit Quality Step 2 £m	Credit Quality Step 3 £m	Credit Quality Step 4 £m	Credit Quality Step 5 £m	Credit Quality Step 6 £m	Uniform regulatory treatment £m	Total £m	Deduction from Capital Resources £m
Central governments or central banks	1,689	186	751	165	276	-	7,708	10,775	-
Regional governments or local authorities	-	-	-	16	-	-	171	187	-
Administrative bodies and non-commercial undertakings	-	-	-	42	-	-	224	266	-
Institutions	257	480	665	88	-	4	3,199	4,693	-
Corporates	-	1,073	429	303	86	220	35,934	38,045	-
Retail	-	-	-	-	-	-	25,988	25,988	-
Secured By Mortgages On Residential Property	-	-	-	-	-	-	15,020	15,020	-
Secured By Mortgages On Commercial Real Estate	-	-	-	-	-	-	1,836	1,836	-
Past due items	-	-	-	-	-	-	3,072	3,072	-
Private Equity	-	-	-	-	-	-	664	664	739
Covered Bonds	88	293	20	-	-	-	-	401	-
Collective investment undertakings	221	387		-	-	-	2	610	-
Other items	-	-	-	-	-	-	6,919	6,919	-
Securitisation positions	-	-	-	-	-	-	456	456	-
Total Standardised Approach Credit Exposure/ Capital	**2,255**	**2,419**	**1,865**	**614**	**362**	**224**	**101,193**	**108,932**	**739**
As at 31.12.11									
Central governments or central banks	912	189	6,865	926	681	-	748	10,321	-
Regional governments or local authorities	10	-	47	-	-	-	29	86	-
Administrative bodies and non-commercial undertakings	-	43	-	-	-	-	281	324	-
Institutions	1,003	1,378	733	139	2	-	3,826	7,081	-
Corporates	493	1,837	1,203	87	266	154	37,717	41,757	-
Retail	-	-	-	-	-	-	26,225	26,225	-
Secured By Mortgages On Residential Property	-	-	-	-	-	-	14,555	14,555	-
Secured By Mortgages On Commercial Real Estate	-	-	-	-	-	-	3,023	3,023	-
Past due items	-	-	-	-	-	-	3,358	3,358	-
Private Equity	-	-	-	-	-	-	877	877	931
Covered Bonds	-	286	-	-	-	-	-	286	-
Collective investment undertakings	557	169	-	-	-	-	14	740	-
Other items	-	-	-	-	-	-	6,731	6,731	-
Securitisation positions	-	292	-	-	-	-	82	374	614
Total Standardised Approach Credit Exposure / Capital	2,975	4,194	8,848	1,152	949	154	97,466	115,738	1,545

Analysis of credit risk

Credit quality analysis of IRB exposures

The following section provides breakdowns of inputs into risk weighted asset calculations. Please note that risk weights and risk factors may be volatile in granular breakdowns of wholesale exposures, especially in categories that are more sparsely populated. This is often due to the addition or removal of relatively large exposures data to/from narrow categories when their risk factors are different to the category average. This happens in the normal course of business, for instance, following new lending, repayments, or syndications. See page 86 for a discussion of IRB models.

Table 22: Internal default grade probabilities and mapping to external ratings

This table represents Barclays internal view of the relationship between external rating agency grades and our own internal scale (DG bands) for wholesale exposures. Note that Barclays DG system follows estimation rules and governance that may differ from those of ratings agencies. As such this relationship must be seen as approximate and dynamic through time.

DG Band	Default Probability			Financial statements description	S&P	Moody's
	>=Min	Mid	<Max			
1	0.00%	0.01%	0.02%	Strong	AAA	Aaa
2	0.02%	0.03%	0.03%		AA+	Aa1
3	0.03%	0.04%	0.05%		AA/AA-	Aa2/Aa3
4	0.05%	0.08%	0.10%		A+/A/A-	A1/A2/A3
5	0.10%	0.13%	0.15%		BBB+	Baa1
6	0.15%	0.18%	0.20%			
7	0.20%	0.23%	0.25%		BBB	Baa2
8	0.25%	0.28%	0.30%			
9	0.30%	0.35%	0.40%		BBB-	Baa3
10	0.40%	0.45%	0.50%			
11	0.50%	0.55%	0.60%			
12	0.60%	0.90%	1.20%	Satisfactory	BB+/BB	Ba1/Ba2
13	1.20%	1.38%	1.55%			
14	1.55%	1.85%	2.15%		BB-	Ba3
15	2.15%	2.60%	3.05%		B+	B1
16	3.05%	3.75%	4.45%			
17	4.45%	5.40%	6.35%		B	B2
18	6.35%	7.50%	8.65%			
19	8.65%	10.00%	11.35%		B-	B3
20	11.35%	15.00%	18.65%	Higher risk	CCC+	Caa1
21	18.65%	30.00%	100.00%		CCC/CCC-/CC	Caa1/Caa3/Ca

Analysis of credit risk

Table 23: IRB wholesale obligor grade disclosure

The following table details Barclays credit risk and counterparty exposures for Advanced IRB approach and Foundation IRB approach portfolios in the wholesale business in both the Trading and Banking books. It shows exposure at default after credit risk mitigation, which is used to calculate risk weights. It is also split between exposures to Central governments and central banks (23a), Institutions (23b), and Corporates (23c).

Tables in the Appendix on page 110 show banking book data separately. Counterparty risk data is shown on pages 45 to 50.

Table 23a: Central Governments & Central Banks

	Central Governments & Central Banks						
	Advanced IRB					Foundation IRB	
Obligor Grade	EAD Post CRM	Exposure-Weighted Average LGD	Exposure-Weighted Average Risk Weight	Undrawn Commitments	Average Exposure Value	EAD Post CRM	Exposure-Weighted Average Risk Weight
As at 31.12.12	£m	%	%	£m	£m	£m	%
Default Grade 1-3	131,586	44.9	4.5	1,740	156,544	38	4.9
Default Grade 4-5	6,148	39.9	35.3	72	4,514	99	35.8
Default Grade 6-8	573	44.8	37.2	-	308	118	43.9
Default Grade 9-11	323	49.1	74.1	-	440	-	-
Default Grade 12-14	33	44.7	97.5	-	174	10	105.7
Default Grade 15-19	68	54.0	218.7	-	32	1	144.8
Default Grade 20-21	-	-	-	-	2	-	-
In default	-	-	-	-	-	-	-
Total	**138,731**	**44.7**	**6.3**	**1,812**	**162,014**	**266**	**38.0**
As at 31.12.11							
Default Grade 1-3	155,195	11.1	1.7	2,517	145,552	1,018	-
Default Grade 4-5	2,521	9.5	4.9	301	2,070	58	32.9
Default Grade 6-8	218	24.1	17.6	-	702	-	-
Default Grade 9-11	610	37.7	50.5	-	210	-	70.3
Default Grade 12-14	14	50.2	101.4	-	48	-	96.1
Default Grade 15-19	4	16.2	39.7	-	3	-	144.5
Default Grade 20-21	8	30.0	165.9	-	4	-	-
In default	-	-	-	-	-	-	-
Total	**158,570**	**11.2**	**2.0**	**2,818**	**148,589**	**1,076**	**1.8**

Table 61 on page 110 shows a breakdown of risk data for the banking book.

Exposure under the Advanced IRB approach, including credit and counterparty risk, reduced 12.5% to £138.7bn, resulting from decreases in DG 1 to 3 reflecting reductions in liquidity portfolio requirements, and the downgrade of European countries that were reflected within Barclays IRB models.

This was partially offset by an increase to exposures in DG 4 and 5 following the migration of downgraded European countries into these bands.

The risk weights across risk bands increased significantly during 2012 driven by the introduction of a minimum LGD parameter of 45% for unsecured sovereign exposures.

Foundation IRB approach: Exposure decreased 75.3% to £0.3bn due to the transfer of cash balances with the South African Central Bank to the Standardised approach.

Analysis of credit risk

Table 23b: Institutions

	Institutions						
	Advanced IRB					Foundation IRB	
Obligor Grade	EAD Post CRM	Exposure-Weighted Average LGD	Exposure-Weighted Average Risk Weight	Undrawn Commitments	Average Exposure Value	EAD Post CRM	Exposure-Weighted Average Risk Weight
As at 31.12.12	£m	%	%	£m	£m	£m	%
Default Grade 1-3	35,547	41.4	13.2	1,232	38,945	606	14.0
Default Grade 4-5	3,825	46.3	26.8	270	4,031	1,031	29.4
Default Grade 6-8	977	31.2	31.6	42	1,399	64	45.6
Default Grade 9-11	453	44.9	56.5	64	496	17	66.7
Default Grade 12-14	206	55.6	121.4	8	46	1	90.2
Default Grade 15-19	84	47.3	192.3	1	71	3	137.2
Default Grade 20-21	8	40.6	198.3	6	23	-	0.0
In default	116	59.2	168.4	-	87	-	0.0
Total	**41,216**	**41.8**	**16.8**	**1,623**	**45,098**	**1,722**	**25.2**
As at 31.12.11							
Default Grade 1-3	45,627	32.4	11.7	1,336	46,539	1,086	13.8
Default Grade 4-5	2,430	47.9	27.3	124	2,801	512	26.8
Default Grade 6-8	1,796	33.4	30.2	4	1,862	203	46.4
Default Grade 9-11	578	51.2	65.3	2	477	45	9.7
Default Grade 12-14	311	45.5	96.0	1	374	2	111.6
Default Grade 15-19	104	49.0	190.2	-	120	2	144.8
Default Grade 20-21	37	46.9	241.8	-	18	-	221.8
In default	57	61.8	48.9	-	67	-	-
Total	**50,940**	**33.6**	**14.8**	**1,467**	**52,258**	**1,850**	**21.1**

Table 62 on page 111 shows a breakdown of risk data for the banking book.

Exposure under the Advanced IRB approach, including credit and counterparty risk, decreased 19.1% to £41.2bn, mainly driven by:

- Exposure in DG 1 to 3 principally driven by the downgrade of Spanish banks to DG bands 4 and 5. A further decrease resulted from the UK financial institutions debt securities maturing. The exposure-averaged risk weight increase (from 11.7% to 13.2%) was driven by an increased LGD (from 32.4% to 41.4%) following the reclassification of a clearing house counterparty to the institutions exposure class.
- This was partially offset by an increase in DG bands 4 and 5 mainly driven by the migration of the Spanish bank exposures.

Foundation IRB approach exposures decreased 6.9% to £1.7bn, principally due to the depreciation of ZAR, with movements from DG bands 1 to 3 into DG 4 and 5 driven by downgrades of South African banks.

Analysis of credit risk

Table 23c: Corporates

	Corporates						
	Advanced IRB					Foundation IRB	
Obligor Grade	EAD Post CRM	Exposure-Weighted Average LGD	Exposure-Weighted Average Risk Weight	Undrawn Commitments	Average Exposure Value	EAD Post CRM	Exposure-Weighted Average Risk Weight
As at 31.12.12	£m	%	%	£m	£m	£m	%
Default Grade 1-3	59,297	33.4	11.2	31,117	60,417	1,310	17.1
Default Grade 4-5	41,549	32.9	24.6	27,086	44,523	2,499	29.8
Default Grade 6-8	16,659	36.5	40.7	12,397	21,885	3,110	46.2
Default Grade 9-11	14,630	42.4	61.7	7,024	16,892	2,669	64.6
Default Grade 12-14	21,717	37.0	80.4	9,597	22,611	4,666	90.6
Default Grade 15-19	15,201	32.2	107.8	4,634	16,056	2,201	123.3
Default Grade 20-21	1,812	34.5	180.5	433	2,350	203	205.6
In default	2,309	44.7	132.4	256	3,132	544	170.6
Total	**173,174**	**34.8**	**42.1**	**92,544**	**187,866**	**17,202**	**72.2**
As at 31.12.11							
Default Grade 1-3	68,705	32.9	11.3	24,005	63,392	1,280	27.4
Default Grade 4-5	47,642	32.1	21.5	27,259	44,354	2,944	30.3
Default Grade 6-8	23,772	36.5	41.0	12,862	22,042	2,789	45.1
Default Grade 9-11	18,014	40.9	62.6	9,723	17,997	2,445	65.9
Default Grade 12-14	23,257	37.5	82.1	8,278	23,218	4,642	95.2
Default Grade 15-19	17,736	36.5	122.4	4,396	18,444	1,933	133.4
Default Grade 20-21	2,266	33.5	175.3	636	3,775	257	210.9
In default	3,599	40.0	93.9	177	3,837	424	181.4
Total	**204,991**	**34.8**	**42.5**	**87,336**	**197,059**	**16,714**	**74.3**

Table 63 on page 112 shows a breakdown of risk data for the banking book.

Exposure under the Advanced IRB approach, including credit and counterparty risk, decreased 15.5% to £173.2bn principally reflecting:

- Decreases in DG bands 1 to 3 and DG band 4 and 5 principally due to the decrease in counterparty credit risk exposure within Investment Banking (see Table 34 on page 46), and lower corporate lending.
- Decreases in DG bands 6 to 8 following FSA changes in the treatment of real estate exposures to the slotting approach. These are now analysed separately in Table 23d below.

Table 23d: Corporate exposures subject to the slotting approach

Slotting is a Basel 2 approach that requires a standard set of rules to be used in the calculation of RWAs, based upon an assessment of factors such as of the financial strength of the counterparty. The requirements for the application of the Slotting approach a detailed in BIPRU 4.5.

Obligor Grade	Remaining Maturity <2.5 years		Remaining Maturity >2.5 years	
As at 31.12.12	EAD post-CRM	Risk Weighted Assets	EAD post-CRM	Risk Weighted Assets
Strong	1,042	521	2,307	1,153
Good	1,079	756	941	658
Satisfactory	1,534	1,764	763	877
Weak	550	1,374	116	289
Default[1]	465	-	506	-
Total	**4,670**	**4,415**	**4,633**	**2,977**

The application of the Slotting approach in 2012 to commercial real estate portfolios increased RWAs by £2.8bn across the banking and trading books, with further impacts for expected loss resulting in a further increase of £0.4bn for capital deductions. [1]

[1] Exposures in default do not generate risk weighted assets as they are already reflected in deductions in capital resources.

Analysis of credit risk

The tables below show analyses of exposures by EL Grade for the retail portfolios modelled under the Advanced IRB approach. Secured and unsecured exposures are shown in separate tables to reflect their differing risk profiles. This is also reflected in the different risk bands used. Table 24 shows Barclays retail exposures under the Advanced IRB approach by Expected Loss (EL) Grade for exposures secured by real estate collateral.

Table 24: Expected loss grade analysis of retail exposures (EAD Post CRM) secured on real estate collateral

	EAD post-CRM	
	As at 31.12.12	As at 31.12.11
EL Grade	£m	£m
EL Grade => 0 - < 0.15%	134,993	134,132
EL Grade => 0.15 - < 0.3%	18,097	16,259
EL Grade => 0.3 - < 0.8%	9,600	8,436
EL Grade => 0.8 - < 2.15%	3,479	4,100
EL Grade => 2.15 - < 4.45%	1,055	1,094
EL Grade => 4.45 - < 8.65%	957	1,141
EL Grade => 8.65 - < 18.65%	763	784
EL Grade => 18.65 - < 100%	2,266	2,665
Total	**171,210**	**168,611**

The distribution of exposures remained broadly stable, with the 1.5% overall increase in exposures to £171.2bn (£168.6bn) mainly concentrated in the highest quality grades:

- EL grades from 0.15% to 0.3% and EL grades from 0.3% to 0.8%: increase reflects increased mortgage lending in the UK.
- EL grades 0.8% to 2.15%: decrease primarily driven by the depreciation of ZAR against GBP.

Table 25: Expected loss grade analysis of unsecured retail exposures (EAD Post CRM)

	EAD Post CRM			
EL Grade	Retail SME	Qualifying revolving retail	Other retail	Total Unsecured Retail
As at 31.12.12	£m	£m	£m	£m
EL Grade => 0 - < 0.8%	5,699	23,434	2,455	31,588
EL Grade => 0.8 - < 2.15%	2,131	4,773	3,701	10,605
EL Grade => 2.15 - < 3.05%	425	1,389	782	2,596
EL Grade => 3.05 - < 4.45%	386	1,951	600	2,937
EL Grade => 4.45 - < 6.35%	229	737	344	1,310
EL Grade => 6.35 - < 8.65%	191	425	301	917
EL Grade => 8.65 - < 18.65%	217	588	256	1,061
EL Grade => 18.65 - < 100%	219	2,036	1,235	3,490
Total	**9,497**	**35,333**	**9,674**	**54,504**
As at 31.12.11				
EL Grade => 0 - < 0.8%	7,295	21,777	2,832	31,904
EL Grade => 0.8 - < 2.15%	2,734	4,746	3,278	10,758
EL Grade => 2.15 - < 3.05%	587	2,209	693	3,489
EL Grade => 3.05 - < 4.45%	472	1,526	693	2,691
EL Grade => 4.45 - < 6.35%	359	1,430	726	2,515
EL Grade => 6.35 - < 8.65%	242	835	332	1,409
EL Grade => 8.65 - < 18.65%	388	1,303	335	2,026
EL Grade => 18.65 - < 100%	459	2,339	1,507	4,305
Total	**12,536**	**36,165**	**10,396**	**59,097**

Exposure to unsecured retail lending covered by AIRB models decreased by 7.8% to £54.5bn due to:

Retail SME exposures decreased by 24.2% to £9.5bn following the transfer of a portfolio to the Corporate SME category. This accounted for the majority of the movement across all grades.

Qualifying revolving Exposures decreased by 2.3% to £35.3bn with the distribution moving toward the highest quality grades:

- EL grades from 0% to 0.8%: increase principally due to a change in definition of default affecting EL bands to align with industry standards.
- EL grades from 2.15% to 3.05%: decrease principally driven by a deterioration of exposures in Africa RBB.

Analysis of credit risk

- EL grades from 4.45% to 6.35% and grades 8.65% to 18.65%: decrease principally due to a change in definition of default affecting EL bands to align with industry standards.

Other retail IRB exposures decreased by 6.9% to £9.7bn reflecting:

- EL grades from 0% to 0.8%: decrease primarily driven by the transfer of exposures to Corporate portfolios. Lower exposure and repayments.
- EL grades between 0.8% and 2.15%: increase driven by refinement of inputs in the light of further historical empirical information and business growth.
- EL grades 4.45% to 6.35%: decrease resulted from the refinement of model inputs.

Impairment and Actual Value Adjustments

Table 26: Impairment charges and actual value adjustments and individual impairment charges for IRB exposures

Table 26 shows the individual impairment and actual value adjustments relating to IRB approaches. The figures include actual value adjustments taken on portfolios within the trading book and banking book where the Advanced IRB approach is used to determine the counterparty credit exposure. These charges are included within the net trading income and net investment income within the financial statements. For this and other reasons, the figures below differ from the impairment roll-forward analysis in Table 30. Additionally, the figures below are only for portfolios that use the IRB approaches; in contrast, the analysis in Table 30 shows impairment and actual value adjustments for both IRB and Standardised approach portfolios.

IRB Exposure Class	As at 31.12.12 £m	As at 31.12.11 £m
Central governments or central banks	1	-
Institutions	6	(6)
Corporates	603	760
Retail		
- Retail SME	78	136
- Retail exposures secured by real estate collateral	43	24
- Qualifying revolving retail	-	-
- Other retail	-	-
Equity	3	-
Securitisation positions	-	-
Non-credit obligation assets	-	-
Total	**734**	**914**

Total individual value adjustments for the IRB portfolio decreased 19.7% to £0.7bn primarily driven by Corporate exposures reflecting risk reduction and a change of approach for certain corporate exposures from individual to collective impairment.

Loss Analysis – Regulatory Expected Loss (EL) versus Actual Losses

The following table shows Barclays EL measure compared with an actual loss measure in 2012 for those portfolios where credit risk is calculated using the IRB approach.

Regulatory Expected Loss (EL)

EL is a Basel 2 measure based upon Pillar 1 metrics that is an input to the capital adequacy process which can be seen as an expectation of average future loss as derived from our IRB models over a one year period.

Non-defaulted assets: EL is calculated using probability of default and downturn loss given default estimates.

Defaulted assets: EL is based upon an estimate of likely recovery levels for each asset.

Actual Losses

Actual Losses have been based upon actual impairment charges in the year following the estimated expected losses for IRB portfolios. This represents a change in the basis of preparation for this table to prior years, based on our view that this definition of actual loss presents a more informative comparison to our expected losses.

It should be noted that the purpose of EL is not to represent a prediction of future impairment charges, a comparison of those impairments in the period following estimates for EL show a conservative trend in model outputs and regulatory estimations used, in which Actual losses for 2011 and 2010 were 72% and 71% lower than our EL stated in the previous year for relevant IRB portfolios.

Analysis of credit risk

When considering the figures for EL and actual loss:

- Whilst the impairment charge and the EL measure respond to similar drivers, they are not directly comparable.
- The EL does not reflect growth of portfolios or changes in the mix of exposures. In forecasting and calculating impairment, balances and trends in the cash flow behaviour of customer accounts are considered.

Table 27: Analysis of expected loss versus actual losses for IRB exposures

IRB Exposure Class	Total Expected Loss to 31.12.11 £m	Total Actual Loss to 31.12.12 £m
Central governments or central banks	3	1
Institutions	39	6
Corporates	1,911	444
Retail		
- SME	411	151
- Secured by real estate collateral	1,095	471
- Qualifying revolving retail	1,879	546
- Other retail	1,239	196
Equity	1	3
Securitisation positions	-	-
Non-credit obligation assets	-	-
Total IRB	**6,578**	**1,818**

IRB Exposure Class	Total Expected Loss to 31.12.10 £m	Total Actual Loss to 31.12.11 £m
Central governments or central banks	3	-
Institutions	74	-
Corporates	2,461	685
Retail		
- SME	536	214
- Secured by real estate collateral	851	319
- Qualifying revolving retail	2,396	714
- Other retail	1,449	368
Equity	34	-
Securitisation positions	-	-
Non-credit obligation assets	-	-
Total IRB	**7,804**	**2,300**

Total expected loss decreased by 15.7% to £6.6bn principally driven by Corporate and Qualifying revolving retail exposures during the year, reflecting an improvement in overall financial conditions.

Total actual loss decreased by 21.0% to £1.8bn.

Overall the trends remained consistent with those estimated by the prior year expected losses.

Analysis of credit risk

Table 28: Analysis of impaired and past due exposures and allowance for impairment by exposure type

This table shows impaired and past due exposures on the same basis as the financial statements. See pages 330 and 331 of the Annual Report for details of the basis of preparation.

	Neither Past due nor Impaired	Past Due but not Impaired	Impaired Loans		Total	Allowance for Impairment
			Individually	Collectively		
As at 31.12.12	£m	£m	£m	£m	£m	£m
Traded loans	2,404	-	-	-	2,404	-
Financial assets designated at fair value	21,605	392	-	-	21,997	-
Loans and advanced to banks	39,618	848	64	-	40,530	41
Home Loans	164,333	279	783	10,448	175,843	855
Credit card receivables	28,523	-	644	2,767	31,934	1,648
Other personal lending	27,220	170	843	3,191	31,424	2,047
Wholesale and Corporate loans and advances	175,560	5,006	7,385	1,376	189,327	5,000
Finance lease receivables	6,410	18	130	278	6,836	85
Total	**465,673**	**6,713**	**9,849**	**18,060**	**500,295**	**9,676**
As at 31.12.11						
Traded loans	1,374	-	-	-	1,374	-
Financial assets designated at fair value	21,528	432	-	-	21,960	-
Loans and advanced to banks	44,986	2,471	34	-	47,491	45
Home Loans	160,932	114	382	10,678	172,106	834
Credit card receivables	24,989	-	-	3,392	28,381	1,825
Other personal lending	27,481	249	381	3,542	31,653	2,425
Wholesale and Corporate loans and advances	183,923	7,036	9,573	816	201,348	5,178
Finance lease receivables	8,178	99	321	400	8,998	290
Total	**473,391**	**10,401**	**10,691**	**18,828**	**513,311**	**10,597**

Loans and Advances to Banks has decreased by 11.9% to £39.6bn within 'Neither past due nor impaired' driven mainly by the overall reduced lending to Financial Institutions.

Credit card receivables increased by 14.1% to £28.5bn within 'Neither past due nor impaired', mainly driven by business growth and acquisitions.

Wholesale and corporate loans have decreased 4.5% to £175.6bn within 'Neither past due nor impaired', driven mainly by reductions in the Investment Bank and Corporate Banking exposures.

Table 29: Geographic analysis of impaired and past due exposures and allowance for impairment

This table shows impaired and past due exposures on the same basis as the financial statements. See pages 330 and 331 of the 2012 Annual Report for details of the basis of preparation.

	Past Due but not Impaired	Impaired Loans		Allowance for Impairment
		Individually	Collectively	
As at 31.12.12	£m	£m	£m	£m
UK	2,148	1,622	11,722	3,270
Europe	1,627	3,406	3,037	2,775
Americas	2,658	3,348	372	2,180
Africa and Middle East	194	1,384	2,926	1,381
Asia	86	89	3	70
Total	**6,713**	**9,849**	**18,060**	**9,676**
As at 31.12.11	£m	£m	£m	£m
UK	2,110	2,008	11,528	4,005
Europe	3,340	3,911	2,919	2,920
Americas	4,342	3,528	382	2,128
Africa and Middle East	441	1,183	3,994	1,446
Asia	168	61	5	98
Total	**10,401**	**10,691**	**18,828**	**10,597**

Europe exposures have decreased by 51.3% to £1.6bn within 'Past Due but not Impaired', mainly driven by an improvement in settlement rates for Cash balances related to Bond and Repo trades.

Americas exposures have decreased by 38.8% to £2.7bn within 'Past Due but not Impaired', mainly driven by a reduction of failed trades in the USA.

Africa and Middle East exposures have decreased by 13.8% to £0.4bn within 'Collectively Impaired' , mainly driven by the adoption of stricter lending criteria in Absa and the depreciation of ZAR against GBP.

Analysis of credit risk

The table below shows the movement of impairment in 2012 as well as amounts directly written off or recovered to profit and loss.

Table 30: Analysis of movement on impairment and amounts taken directly to profit and loss

This table analyses movement in impairment between 2011 and 2012 year-end. Please see pages 124 to 128 and 323 to 325 in the 2012 Annual Report for further information on impairment.

	Allowance for Impairment	
	As at 31.12.12	As at 31.12.11
Impairment Movement	£m	£m
Starting period	10,597	12,432
Acquisitions & Disposals	(80)	(18)
Exchange and other adjustments	(286)	(440)
Unwind of discount	(211)	(243)
Amounts written off	(4,119)	(5,165)
Recoveries	212	265
Amounts charged against profit	3,563	3,766
Ending period	**9,676**	**10,597**

	P&L Impact	
Direct P&L Impacts	£m	£m
New and increased impairment allowances	4,703	4,962
Releases	(928)	(931)
Recoveries	(212)	(265)
Total Impairment on loans and advances	**3,563**	**3,766**

We have changed the basis of preparation for this table for to enhance transparency, allowing users to directly reconcile a breakdown of 'Amount charged against profit' to their impact on the movement of impairments year on year.

Non-traded equity investments

Within these disclosures the Group has adopted a definition of equity that is consistent with the IFRS definition used within the Annual Report. Barclays reports non trading book equities under the Advanced IRB approach and the Standardised approach. (The Advanced IRB approach is only available where regulatory approval has been given.) The following table shows the Group's exposure to equities where it uses the Simple Risk Weight approach under the Advanced IRB approach to determine the credit exposure.

Table 31: Risk weighted exposures of equity investments

This table shows equity exposures that are treated under the credit risk framework.

	Risk Weighted Exposure Amount for Equities Exposures using Simple Risk Weight Approach	
	As at 31.12.12	As at 31.12.11
Risk Weight Category	£m	£m
Exchange Traded Exposures	-	-
Private Equity	-	-
Other Exposures	188	147
Total Risk Weighted Exposure Amount for Equities	**188**	**147**

We have changed the basis of preparation for this table to improve alignment to the BIPRU definitions of 'Simple Equity' and enhance comparability to industry peers.

Analysis of credit risk

Table 32: Fair value of and gains and losses on equity investments

This table present the fair value of and gains and losses on equity investments consolidated in the bank's regulatory assets assessed for credit risk weighted assets.

Non Trading Book Equity Investments Fair Value	As at 31.12.12 £m	As at 31.12.11[1] £m
Exchange Traded	755	598
Private Equity	748	897
Other	51	40
Total	**1,554**	**1,535**
Cumulative Realised Gains / Losses from Sale and Liquidations of equity investments	(130)	(128)
Unrealised gains/(losses)	110	153
Total Gains or Losses	110	153
Amount included in Tier 1, 2 or 3 Capital	-	-
Latent Revaluation gains/(losses)	-	-
Total Gains or Losses	-	-
Amount included in Tier 1, 2 or 3 Capital	-	-

Balances at fair value in 2012 of £1,554m remained broadly flat.

Credit Model Performance - Estimated versus Actual

The following table indicates the forecast probability of default and loss given default from the IRB exposure models. They are compared with data from actual defaults. These comparisons are used in "backtesting" analyses to validate that the models are fit for purpose.

In Table 33, below, the PDs are based on the total portfolio of Advanced and Foundation assets managed by the Group. Individual portfolio PDs within an exposure class have been weighted at the same level as they were estimated (usually obligor or facility) to yield average PDs. The LGD percentages and EAD ratios are based on analysis of defaulted assets only, under the Advanced approach (the Foundation approach does not estimate these figures but uses parameters stipulated by FSA regulations).

Difference with values used as inputs to the capital calculation

The forecasts shown in the table are based on Barclays operational model calibrations at the start of the 12-month period. The estimates and actuals represent the direct output from the models rather than assumptions used in regulatory capital calculations which may be adjusted to apply more conservative assumptions to reflect:

- Probability of default values on a "through the cycle" basis and loss given default on a downturn basis.
- Minimum values for certain parameters typically that imply higher severity than Barclays modelled and observed values. In particular, retail loans secured by real estate collateral have a regulatory minimum LGD of 10%.

No post model adjustments are applied that reduce capital requirements compared to the model output.

"Backtesting" models at Barclays

As discussed in the Barclays risk management strategy section, risk models are subject to the Group's Risk Model Policy that contains detailed guidance on the minimum standards around model features. For instance, probabilities of default must be estimated over a sufficient period, show sufficient differentiation in predictions for different customers, show conservatism where data limitations exist, follow prescriptive spreadsheet/database techniques, etc. These standards are achieved via an independent development validation process (using appropriately independent experts or external consultants). Once validated and correctly implemented, models are subject to regular monitoring to ensure they can still be used. Backtesting is part of this monitoring.

Analysis of credit risk

Table 33: Analysis of expected performance versus actual results

This table provides an overview of credit risk model performance assessed through the analysis of average PDs, average LGDs and EAD ratios.

The table reflects backtesting information, comparing the raw model output to the actual experience in our portfolios. Such analysis is used to assess and enhance the adequacy and accuracy of models.

The raw outputs are subject to a number of adjustments before they are used in the calculation of capital, for example to allow for the position in the credit cycle and the impact of stress on recovery rates. Where models are underpredicting default or loss rates (for example LGD in the "Secured by Real Estate Collateral Rest of World") management overrides to the RWA calculation ensure that capital requirements are not understated.

IRB Exposure Class\Year	PD of Total Portfolio		LGD of Defaulted Assets		EAD of Defaulted Assets
As at 31.12.12	Estimate %	Actual %	Estimated %	Actual %	Estimate to Actual Ratio
Wholesale					
Central governments or central banks					
Investment Bank	0.36	-	-	-	
Corporate Banking	0.23	-	-	-	-
ABSA	0.74	-	n/a	n/a	n/a
Institutions					
Investment Bank	0.97	0.02	-	-	1.43
Corporate Banking	1.11	-	-	-	-
ABSA	1.05	-	n/a	n/a	n/a
Corporates					
Investment Bank	1.65	0.31	44.00	15.00	1.08
Corporate Banking	2.75	1.70	45.34	44.68	1.11
ABSA	1.85	2.15	n/a	n/a	n/a
Retail					
SME	7.06	5.91	68.21	72.11	1.06
Secured by real estate collateral UK	0.67	0.53	4.39	1.47	1.02
Secured by real estate collateral Rest of World	1.98	2.10	13.67	24.45	1.03
Qualifying revolving retail	1.64	1.77	83.97	82.88	1.02
Other retail	7.44	4.81	62.19	59.59	1.01

IRB Exposure Class\Year	PD of Total Portfolio		LGD of Defaulted Assets		EAD of Defaulted Assets
As at 31.12.11	Estimate %	Actual %	Estimated %	Actual %	Estimate to Actual Ratio
Wholesale					
Central governments or central banks					
Investment Bank	0.24	-	-	-	
Corporate Banking	n/a	n/a	n/a	n/a	n/a
ABSA	0.85	-	n/a	n/a	n/a
Institutions					
Investment Bank	1.02	0.01	67.00	64.00	0.88
Corporate Banking	0.87	0.38	-	-	1.00
ABSA	0.98	-	n/a	n/a	n/a
Corporates					
Investment Bank	1.77	0.50	37.00	34.00	1.13
Corporate Banking	3.53	1.76	50.40	50.57	1.06
ABSA	1.78	1.76	n/a	n/a	n/a
Retail					
SME	6.74	5.55	65.21	69.47	1.04
Secured by real estate collateral UK	0.68	0.57	3.79	1.34	1.02
Secured by real estate collateral Rest of World	2.13	2.84	8.26	15.22	1.02
Qualifying revolving retail	1.85	2.12	82.89	82.99	1.00
Other retail	7.89	6.36	62.59	60.02	1.01

IRB Exposure Class\Year	PD of Total Portfolio		LGD of Defaulted Assets		EAD of Defaulted Assets
As at 31.12.10	Estimate %	Actual %	Estimated %	Actual %	Estimate to Actual Ratio
Wholesale					
Central governments or central banks					
Investment Bank	0.36	-	-	-	
Corporate Banking	n/a	n/a	n/a	n/a	n/a
ABSA	1.06	-	n/a	n/a	n/a
Institutions					
Investment Bank	1.00	0.01	48.00	37.00	
Corporate Banking	0.80	0.37	n/a	n/a	n/a
ABSA	0.95	-	n/a	n/a	n/a
Corporates					
Investment Bank	2.23	0.45	44.00	45.00	0.98
Corporate Banking	3.29	1.78	58.04	36.52	1.10
ABSA	1.24	0.70	n/a	n/a	n/a
Retail					
SME	6.59	6.91	64.08	65.17	1.13
Secured by real estate collateral UK	0.71	0.59	4.00	1.25	1.02
Secured by real estate collateral Rest of World	4.27	3.62	5.29	13.90	1.03
Qualifying revolving retail	2.18	2.12	78.91	84.59	1.04
Other retail	7.36	6.96	56.29	59.44	1.01

Note that some of the data underlying the table follows the business model monitoring cycle that does not precisely coincide with year ends; we do not consider this introduces a bias in a particular direction.

Note that LGD and EAD for Foundation IRB portfolios (wholesale Absa asset classes) are prescribed measures and not derived using credit risk models.

Analysis of credit risk

Probability of default measures

- The estimated PDs are simple averages at the level of single exposures (usually facilities for retail asset classes, and obligors in wholesale asset classes), for the total portfolio population.
- In Wholesale portfolios the point-in-time PD is used as the predicted measure in backtesting. In contrast the capital calculation uses through-the-cycle PDs with additional adjustments where modelled outputs display evidence of risk understatement (including credit expert overrides, regulatory adjustments, Basel 2 add-ons). Retail portfolios use through-the-cycle PDs for backtesting and these are also subject to regulatory adjustments, though only in cases where such adjustments increase the overall RWAs.
- Actual PD is the default rate for each asset class, which is the ratio of the defaulted population to the total population in terms of unit of exposure.

Average LGD measures

- Estimated LGDs are derived from simple averages at facility or customer level with the exception of the Investment Bank where the underlying model drivers are used to derive a portfolio LGD estimate.
- Point-in-time LGD measures are used for backtesting, with the exception of the Investment Bank that uses a downturn LGD estimate. The capital calculation uses downturn LGDs with additional adjustments where modelled outputs display evidence of risk understatement (including credit expert overrides, regulatory adjustments, and Basel 2 add-ons).
- The actual LGD is an estimate of loss based on outstanding impairment, write offs and exposure at default of the defaulted population.

EAD ratio is calculated as the estimated EAD as a proportion of the actual EAD for the defaulted population.

Analysis of counterparty credit risk

Analysis of counterparty credit risk

Counterparty risk exposures

The following tables analyse counterparty credit risk exposures and risk weighted assets.

Table 34: Exposure at default associated with counterparty credit risk by business

This table summarises EAD post-credit risk mitigation by business and exposure class for counterparty credit risk.

Post CRM EAD As at 31.12.12	Europe RBB £m	Africa RBB £m	Investment Bank £m	Corporate Banking £m	Wealth and Investment Management £m	Total £m
Counterparty Credit Risk Exposure Class						
Standardised approach						
Central governments or central banks	-	-	264	-	-	264
Regional governments or local authorities	-	-	61	-	-	61
Multilateral development banks	-	-	-	-	-	-
International organisations	-	-	108	-	-	108
Institutions	4	1	668	-	-	673
Corporates	2	7	6,196	-	-	6,205
Retail	-	-	-	-	394	394
Total Standardised Approach Credit Risk	**6**	**8**	**7,298**	**-**	**394**	**7,706**
Foundation IRB approach						
Central governments or central banks	-	-	4	-	-	4
Institutions	-	-	467	-	-	467
Corporates	-	-	416	-	-	416
Total Foundation Approach Credit Risk Exposure	**-**	**-**	**887**	**-**	**-**	**887**
Advanced IRB approach						
Central governments or central banks	-	-	12,386	-	-	12,386
Institutions	-	-	18,605	-	-	18,605
Corporates	-	-	44,455	934	-	45,389
Securitisation positions	-	-	2,144	-	-	2,144
Total Advanced IRB Credit Risk Exposure	**-**	**-**	**77,590**	**934**	**-**	**78,524**
	6	**8**	**85,775**	**934**	**394**	**87,117**

Post CRM EAD As at 31.12.11	Europe RBB £m	Africa RBB £m	Investment Bank £m	Corporate Banking £m	Wealth and Investment Management £m	Total £m
Counterparty Credit Risk Exposure Class						
Standardised approach						
Central governments or central banks	-	-	517	-	-	517
Regional governments or local authorities	-	-	111	-	-	111
Multilateral development banks	-	-	14	-	-	14
International organisations	-	-	104	-	-	104
Institutions	5	-	1,132	1	57	1,195
Corporates	-	6	8,915	-	-	8,921
Retail	-	-	-	-	346	346
Total Standardised Approach Credit Risk	**5**	**6**	**10,793**	**1**	**403**	**11,208**
Foundation IRB approach						
Central governments or central banks	-	-	7	-	-	7
Institutions	-	-	914	-	-	914
Corporates	-	-	449	-	-	449
Total Foundation Approach Credit Risk Exposure	**-**	**-**	**1,370**	**-**	**-**	**1,370**
Advanced IRB approach						
Central governments or central banks	-	-	18,052	-	-	18,052
Institutions	-	-	21,118	-	-	21,118
Corporates	-	-	62,163	1,048	-	63,211
Securitisation positions	-	-	3,631	-	-	3,631
Total Advanced IRB Credit Risk Exposure	**-**	**-**	**104,964**	**1,048**	**-**	**106,012**
Total Counterparty Credit Risk	**5**	**6**	**117,127**	**1,049**	**403**	**118,590**

Counterparty Credit Risk Exposure Post CRM decreased by 26.5% to £87.1bn across various approaches and exposure types, driven primarily by business risk reduction and foreign exchange movements in the year.

The above table shows movements in counterparty credit exposure amounts.

Analysis of counterparty credit risk

Table 35: Risk weighted assets of counterparty credit risk exposures by business units

This table summarises risk weighted assets by business and exposure class for counterparty credit risk.

Risk Weighted Assets As at 31.12.12	Europe RBB £m	Africa RBB £m	Investment Bank £m	Corporate Banking £m	Wealth and Investment Management £m	Total £m
Counterparty Credit Risk						
Standardised approach						
Central governments or central banks	-	-	214	-	-	214
Regional governments or local authorities	-	-	61	-	-	61
Multilateral development banks	-	-	-	-	-	-
International organisations	-	-	-	-	-	-
Institutions	1	1	328	-	-	330
Corporates	2	7	6,267	-	-	6,276
Retail	-	-	-	-	199	199
Total Standardised Approach	**3**	**8**	**6,870**	**-**	**199**	**7,080**
Foundation IRB approach						
Central governments or central banks	-	-	1	-	-	1
Institutions	-	-	113	-	-	113
Corporates	-	-	256	-	-	256
Total Foundation Approach	**-**	**-**	**370**	**-**	**-**	**370**
Advanced IRB approach						
Central governments or central banks	-	-	1,698	-	-	1,698
Institutions	-	-	3,721	-	-	3,721
Corporates	-	-	15,750	500	-	16,250
Securitisation positions	-	-	981	-	-	981
Total Advanced IRB	**-**	**-**	**22,150**	**500**	**-**	**22,650**
Total Counterparty Credit Risk	**3**	**8**	**29,390**	**500**	**199**	**30,100**

Risk Weighted Assets As at 31.12.11	Europe RBB £m	Africa RBB £m	Investment Bank £m	Corporate Banking £m	Wealth and Investment Management £m	Total £m
Counterparty Credit Risk Exposure Class						
Standardised approach						
Central governments or central banks	-	-	195	-	-	195
Regional governments or local authorities	-	-	111	-	-	111
Multilateral development banks	-	-	-	-	-	-
International organisations	-	-	-	-	-	-
Institutions	2	-	333	-	22	357
Corporates	-	6	9,205	-	-	9,211
Retail	-	-	-	-	131	131
Total Standardised Approach Credit Risk	**2**	**6**	**9,844**	**-**	**153**	**10,005**
Foundation IRB approach						
Central governments or central banks	-	-	2	-	-	2
Institutions	-	-	172	-	-	172
Corporates	-	-	235	-	-	235
Total Foundation Approach Credit Risk Exposure	**-**	**-**	**409**	**-**	**-**	**409**
Advanced IRB approach						
Central governments or central banks	-	-	786	-	-	786
Institutions	-	-	4,845	-	-	4,845
Corporates	-	-	20,600	561	-	21,161
Securitisation positions	-	-	878	-	-	878
Total Advanced IRB Credit Risk Exposure	**-**	**-**	**27,109**	**561**	**-**	**27,670**
Total Counterparty Credit Risk	**2**	**6**	**37,362**	**561**	**153**	**38,084**

Counterparty Credit Risk Weighted Assets decreased by 21.0% to £30.1bn, primarily due to a reduction in Standardised and AIRB Corporates exposure, driven primarily by a business risk reduction and foreign exchange movements in the year for the Investment Bank.

Analysis of counterparty credit risk

Table 36: Counterparty credit exposure

Counterparty credit risk trading book exposures are set out below covering mainly exposures on derivatives, securities financing transactions and other trading exposures.

This table's population is the same as Table 37, below, except that it does not contain counterparty credit exposures that relate to the securities financing transactions or other categories.

Exposures reported under Mark to market (MTM) method refer to credit exposures arising from over the counter (OTC) derivatives that are not computed using a modelled approach. Collateral for OTC exposures derived under the MTM method is recognised for portfolio swaps and contracts for differences.

Other exposures are treated under the Internal Models Methodology (IMM). It is the most risk sensitive approach available for the calculation of CCR exposures. Permission is necessary from the regulator in order to use this approach. All other collateral is shown under IMM effective expected positive exposure (EEPE) computations and therefore excluded from OTC MTM population. Please note that as the method (IMM) considers the interaction of different factors within a statistical simulation across a range of asset classes, the output is not to be re-allocated to the categories shown in the columns below.

	Gross Positive Fair Value of Contracts	Potential Future Credit Exposure	Netting Benefits	Net Current Credit Exposure	Collateral Held	Net Derivatives Credit Exposure
As at 31.12.12	£m	£m	£m	£m	£m	£m
Mark to Market Method	4,707	3,217	(5,300)	2,624	133	2,491
Internal Model Method						54,762
As at 31.12.11						
Mark to Market Method	7,264	3,647	(5,724)	5,187	-	5,187
Internal Model Method						71,833

MTM net derivative credit exposure reduced by 52.0% to £2.5bn principally driven by:

- Fair value of contracts: decrease largely driven by risk reduction against a number of counterparties. This includes foreign currency contracts, agency trading and central clearing counterparties.
- Potential future value of credit exposure: decrease largely due to reductions in swap trades (FX and commodities).

This was partially offset by increased collateral on contracts for difference and equity portfolio swaps in the Investment Bank's portfolio now being recognised.

The IMM derivative credit exposure decreased by 23.8% to £54.8bn largely due to business risk reduction and foreign exchange movements in the year.

Analysis of counterparty credit risk

Table 37: Counterparty credit exposures analysed by financial contract type

The following table shows the Group's exposure at default to counterparty credit risk after credit risk mitigation analysed by the type of financial contract. The nature of the calculation of credit exposure under the IMM precludes the identification of individual product exposures. Only the total for each counterparty has been calculated.

This table is based on the same portfolio as Table 36 with the addition of securities financing transactions.

Financial Contract Type	EAD Post CRM under Internal Model Method	EAD Post CRM under Other Approaches [1] £m	EAD Post CRM under Mark to Market Approach
As at 31.12.12			
Interest Rate Contracts		-	627
Foreign Currency Contracts		-	573
Equities Contracts		-	210
Precious Metal other than Gold Contracts		-	3
Commodities other than Precious Metal Contracts		-	364
Securities financing transactions		3,427	-
Credit Derivatives		-	133
Other		3,503	582
Total	**77,947**	**6,678**	**2,491**
As at 31.12.11			
Interest Rate Contracts		-	2,075
Foreign Currency Contracts		-	1,113
Equities Contracts		-	328
Precious Metal other than Gold Contracts		-	708
Commodities other than Precious Metal Contracts		-	210
Securities financing transactions		3,714	-
Credit Derivatives[1]		-	22
Other		2,937	633
Total	**107,122**	**6,378**	**5,089**

Net derivative credit exposure under the IMM reduced by 27.2% to £77.9bn. This figure is the result of a portfolio-level statistical calculation and is presented at a total level:

- Derivatives: reduction largely due to the migration of derivative trades into primary models from marginal models which resulted in exposure reduction as a result of a greater level of precision available. Further decreases resulted from the reduction in the number and value of trades, both over-the-counter and on exchanges.
- Securities financing transactions: reduction largely due to a decrease in pledges given, and a reduction in the market value of repo transactions and cash loans. This is partially offset by an increase due to new trades and mark-to-market values across multiple trades.

Net derivative credit exposure under the MTM method reduced by 51.1% to £2.5bn. This is principally reflected in the following categories:

- Interest rate contracts: reduced due to rolled off agency-related trades, the recognition of a counterparty as a central clearing counterparty (and therefore does not generate counterparty credit risk); and a number of exposure reductions across a large number of counterparties.
- Precious metals other than gold: decrease predominantly driven by the Investment Bank following the termination of a number of trades.
- Foreign currency contracts: reduced principally due to a counterparty entering into a standardised ISDA agreement reducing Barclays exposure and a reduction in trading.

[1] Previously the exposure under Other Approaches were noted in commentary, these are now introduced into the table directly.

Analysis of counterparty credit risk

Credit derivative notionals

The following table shows the notional of the credit derivative transactions outstanding as at 31 December 2012.

Barclays internal counterparty credit risk models calculate expected exposure as the first stage in the preparation of the regulatory capital requirement. The model is calibrated to simulate an economic downturn through the use of a scaling factor (known generically as alpha) to arrive at the exposure at default.

Table 38: Notional exposure associated with credit derivative contracts

This table splits the notional values of credit derivatives, credit default swaps (CDS) and total return swaps (TRS), by two categories: own credit portfolio and intermediation activities.

Own credit portfolio consist of banking book trades under business lines used for hedging and credit management. Intermediation activities are all other credit derivatives and include trades cleared by other subsidiaries on behalf of BBPLC.

Note, credit derivatives booked arising from clearing activities performed, for example within Barclays subsidiaries, on behalf of external counterparties are not reported in this table as the Group does not have any long / short exposures to the underlying reference obligations.

	Own Credit Portfolio		Intermediation Activities	
Outstanding Amount of Exposure held:	As Protection Purchaser	As Protection Seller	As Protection Purchaser	As Protection Seller
Credit Derivative Product Type as at 31.12.12	£m	£m	£m	£m
Credit Default Swaps	18,251	4,978	857,692	856,198
Total Return Swaps	87	-	14,766	-
Total	**18,337**	**4,978**	**872,457**	**856,198**
Credit Derivative Product Type as at 31.12.11				
Credit Default Swaps	24,245	14,272	937,503	908,716
Total Return Swaps	5,739	5,835	14,670	2,207
Total	**29,984**	**20,107**	**952,173**	**910,923**

- Own credit portfolio: which mainly comprise derivatives used to manage the banking book, reduced 53.5% to £23.3bn, reflecting a 38.8% reduction to £18.3bn as protection purchaser of both credit default swaps and total return swaps and a 75.2% reduction to £5.0bn as protection seller, principally reflecting the closing out of positions, repayment of underlying assets and business reductions and certain reclassifications of notional exposures
- Intermediation activities: which mainly comprise derivatives used to manage the trading book, reduced 7.2% to £1,729.1bn, reflecting a decrease of 8.4% to £872.5bn in relation to credit default swap protection purchased and a 6% decrease to £856.2bn in relation to credit default swap protection sold, driven principally by the closing out of positions and the unwinding of legacy positions partially offset by additional notional exposures recognised in the year.

Table 39: Notional value of credit derivative contracts held for hedging purposes

Risk Methodology	As at 31.12.12 £m	As at 31.12.11 £m
Notional value of credit derivative hedges for Mark to Market Method	376	330
Notional value of credit derivative hedges under the Internal Model Method	2,592	3,276
Total	**2,968**	**3,606**

The notional value of credit derivative hedges has reduced by 17.7% to £3.0bn, largely driven by reduction in internal model method hedges due to decrease in credit default swap hedges resulting from the maturity and sale of loan positions.

Analysis of market risk

Analysis of market risk

Capital requirements for market risk

Information on the management of market risk is found in this section and on pages 155 to 161 and 332 to 336 of the Annual Report. Barclays market risk capital requirements comprise two elements:

- Trading book positions booked to legal entities within the scope of our FSA waiver where the market risk is measured under an FSA approved internal models approach, including Daily Value at Risk (DVaR), stressed Value at Risk (SVaR), incremental risk charge (IRC) and all price risk (APR) as required.
- Trading book positions that do not meet the conditions for inclusion within the approved internal models approach. Their capital requirement is calculated using Standardised rules.

Table 40: Minimum capital requirement for market risk

This table shows the capital requirements and risk weighted assets by Position Risk Requirement ("PRR") under the market risk framework.

	Capital requirements		Risk weighted assets	
	As at 31.12.12	As at 31.12.11	As at 31.12.12	As at 31.12.11
Market Risk	£m	£m	£m	£m
DVaR Model Based PRR	1,010	1,563	12,626	19,532
Stressed VaR PRR	1,239	1,291	15,486	16,142
All Price Risk Measure Requirement	176	169	2,202	2,108
Incremental Risk Charge Requirement	587	508	7,343	6,347
Interest rate PRR	1,464	1,535	18,305	19,187
Equity PRR	382	446	4,776	5,578
Option PRR	30	5	373	66
Collective investment schemes PRR	79	155	987	1,938
Commodity PRR	14	20	177	249
Foreign exchange PRR	84	64	1,047	804
Total Market Risk Capital Requirement	**5,066**	**5,756**	**63,322**	**71,951**
Counterparty risk capital component	2,408	3,047	30,100	38,084
Specific interest rate risk of securitisation positions	153	171	1,913	2,138

Under CRD III, Barclays modelled market risk position risk requirements are computed using four measures – DVaR, Stressed VaR, Incremental Risk Charge and the All Price Risk measure. The minimum capital requirements generated by these measures are additive to each other and standard rules PRR, and are shown in the table above.

DVaR Model Based PRR fell from 2011 levels due to

- reduction in the regulatory VaR overall; and
- Transitioning from Pillar 1 capital charge for certain illiquid risk to model based capital.

Table 41: Analysis of regulatory DVaR, SVaR, IRC and All Price Risk Measure

The table below shows modelled market risk measures that drive capital requirements. Intra-year measures for Stressed Value at Risk, Incremental Risk Charge and the All Price Risk Measure are not shown for 2011 as the models were implemented at the end of December 2011.

	Year-end	Avg.	Max	Min	Weighted Average Liquidity Horizon
As at 31.12.12	£m	£m	£m	£m	Years
Daily Value at Risk (DVaR)	44	68	133	42	
Stressed Value at Risk	68	111	139	68	
Incremental Risk Charge	532	574	931	362	1
Charge for "All Price Risk Measure"	176	213	275	176	1
As at 31.12.11					
Daily Value at Risk (DVaR)	126	67	134	47	
Stressed Value at Risk	131				
Incremental Risk Charge	508				1
Charge for "All Price Risk Measure"	169				1

Analysis of market risk

Total Regulatory DVaR and SVaR have dropped sharply from 2011 year-end levels, principally driven by the change in the estimation period as well as the portfolio composition. As at year end the IRC and APR charges are broadly unchanged from year end 2011.

Note that IRC, SVaR and All Price risk all went live on the final day of 2011, hence there are no annual averages for comparison.

The 99% regulatory DVaR reflects general market risk DVaR plus specific market risk DVaR on an undiversified basis. Consequently these figures do not correspond precisely to the 95% management DVaR figures reported in Barclays Annual Report on pages 155 and 156.

Barclays Investment Bank uses Management DVaR at 95% confidence level to manage its market risk exposures.

"Backtesting" of DVaR models

The backtesting is performed at a legal entity level and at sub-portfolio levels. Regulatory backtesting compares Regulatory VaR at 99% confidence level (1 day holding period) to a clean P&L as defined in BIPRU 7.10. The consolidated Barclays Bank plc and Barclays Capital Securities Ltd is the highest level of consolidation for the VaR models that are used in the calculation of regulatory capital. Below this level, there is backtesting performed at sub-portfolio level on a legal entity agnostic basis.

The table below shows the VaR backtesting exceptions. Subsequently the graphs show the comparison of VaR history to the corresponding P&L. A backtesting exception is generated when a loss is greater than the VaR for a given day.

Table 42: Regulatory DVaR - exceptions and model status

Exceptions occur on days where a loss exceeds the DVaR. Typically fewer exceptions are expected for larger, more diversified portfolios versus single asset class portfolios.

Regulatory portfolio and significant regulatory sub-portfolios As at 31.12.12	Exceptions	Model status
Barclays Bank PLC Trading and Barclays Capital Securities Ltd	0	Green
- Fixed Income Rates	0	Green
- Foreign Exchange	0	Green
- Equities	1	Green
- Commodities	2	Green
- Emerging Markets	0	Green
- Client Capital Management	0	Green
- Credit Correlation	2	Green
- Fixed Income Credit	1	Green
- EM Credit Business	0	Green

The number of exceptions in these portfolios does not have to add up to the number of exceptions in the consolidated portfolio due to diversification effects.

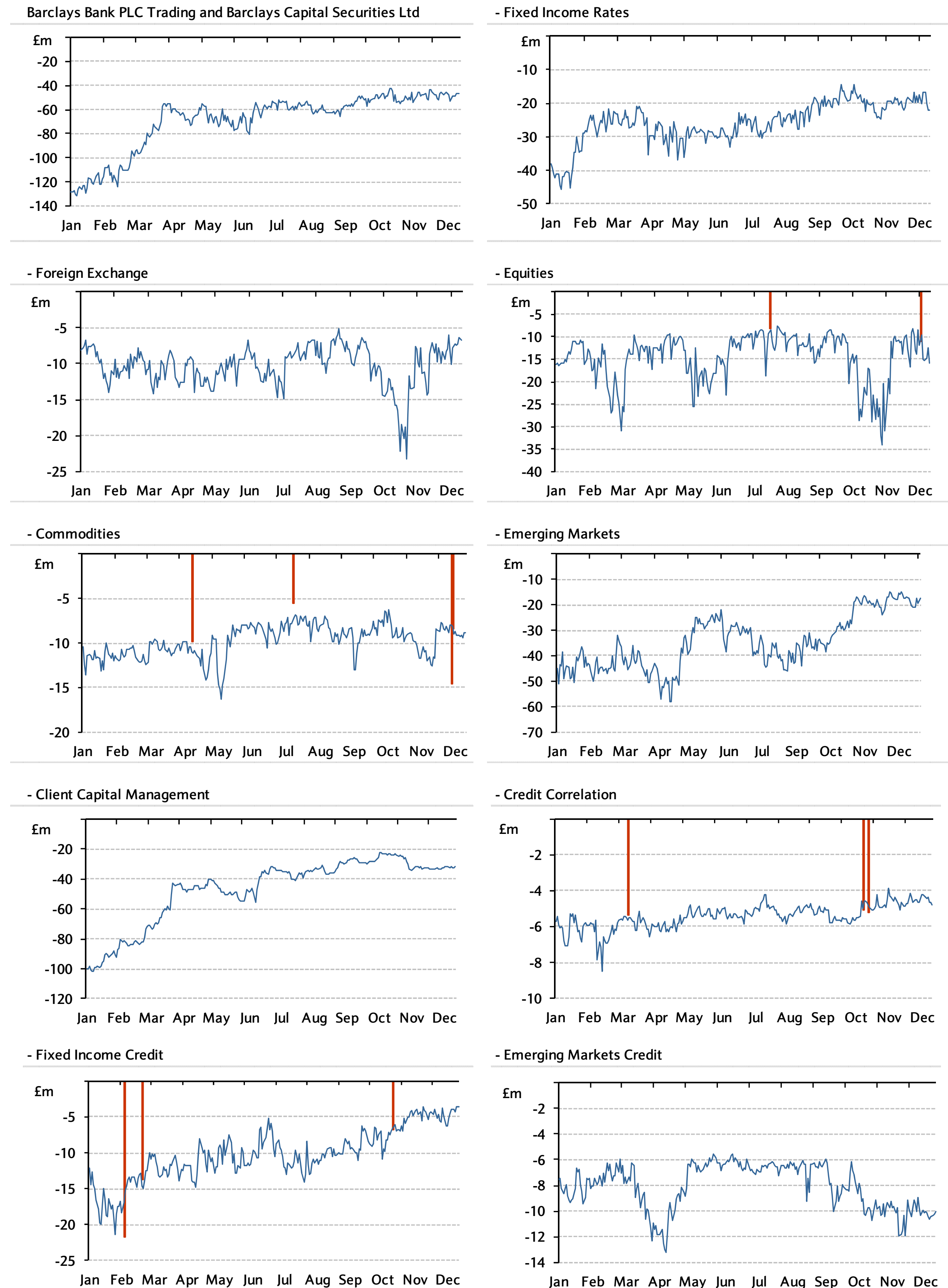
In the table above, "Green" signifies 4 exceptions or less (Amber: 5 to 9 exceptions, Red: 10 or more exceptions). Since DVaR is a statistical process, some exceptions are expected due to normal random fluctuations. A "Green" status means that the number of exceptions does not raise concerns on the adequacy of the model.

During 2012 there were no exceptions at the consolidated Investment Bank level, all other businesses had less than 4 exceptions during the year. These occurred in the normal course of business and are not attributable to particular market factors.

Analysis of market risk

Figure 2: Regulatory DVaR against P/L of regulatory portfolios

The charts below show DVaR for Barclays regulatory portfolios. Red lines indicate losses on the small number of days on which they exceeded 75% of the DVaR amount.



Analysis of market risk

Table 43: Income sensitivity from the effect of interest rate changes on the value of banking book assets

	Change in Economic Value of Equity	
Currency	**£m**	**£m**
As at 31.12.12	+200 basis points	-200 basis points
GBP	(1,014)	457
USD	(677)	272
EUR	(135)	(3)
ZAR	(247)	277
Other	(27)	(10)
Total Economic Value of Equity (EVE)	**(2,100)**	**993**
Percentage of EVE to Tier 1 and Tier 2 Capital	**3.18%**	
As at 31.12.11		
GBP	(880)	70
USD	(544)	425
EUR	(307)	151
ZAR	(186)	208
Other	5	(114)
Total Economic Value of Equity (EVE)	**(1,912)**	**740**
Percentage of EVE to Tier 1 and Tier 2 Capital	**2.99%**	

Potential change in EVE from a 200bps increase in rates, in proportion to Tier 1 and Tier 2 capital, was broadly unchanged. The persistent low interest rate environment has reduced the potential change in EVE for a 200bps decrease in rates similar to the previous year.

Similar analyses of net interest income sensitivity can be found on pages 156 and 157 of the Annual Report.

Analysis of securitisations

Analysis of securitisations

For the purposes of Pillar 3 disclosure, securitisation is defined as a transaction or scheme where the payments are dependent upon the performance of a single exposure or pool of exposures and where the subordination of tranches determines the distribution of losses during the on-going life of the transaction or scheme. Such transactions are undertaken for a variety of reasons including the transfer of risk for Barclays or on behalf of a client.

The tables below detail exposures from securitisation trades entered into by the Group and cover banking book and trading book exposures. Only transactions that achieve Significant Risk Transfer (SRT) and therefore have an impact on RWAs are included. Where securitisations do not achieve SRT (for instance when they are entered into for funding purposes), the associated exposures are presented alongside the rest of the banking book or trading book positions in other sections of the Pillar 3 report.

Please see page 103 for further details on Barclays securitisation activities.

Table 44: Securitisation activity during the year

	Banking Book					Trading Book				
	Traditional			Synthetic		Traditional			Synthetic	
Exposure Type As at 31.12.12	Originator[1] £m	Sponsor[2] £m	Recognised Gain / Loss on Sale £m	Originator[1] £m	Sponsor[2] £m	Originator[1] £m	Sponsor[2] £m	Recognised Gain / Loss on Sale £m	Originator[1] £m	Sponsor[2] £m
Residential Mortgages	-	-	-	-	-	72	-	-	-	-
Commercial Mortgages	1,176	-	44	-	-	-	-	-	-	-
Loans to Corporates or SMEs	-	-	-	-	-	2	-	-	-	-
Securitisations/ Re-securitisations	-	-	-	-	-	20	-	-	-	-
Total	**1,176**	**-**	**44**	**-**	**-**	**94**	**-**	**-**	**-**	**-**
As at 31.12.11										
Residential Mortgages	-	-	-	-	-	37	-	-	-	-
Commercial Mortgages	-	-	-	-	-	-	-	-	-	-
Loans to Corporates or SMEs	-	-	-	3,185	-	-	-	-	-	-
Securitisations/ Re-securitisations	-	-	-	-	-	2	-	-	-	-
Total	**-**	**-**	**-**	**3,185**	**-**	**39**	**-**	**-**	**-**	**-**

[1] "Originator" is an entity which, either itself or through related entities, directly or indirectly, was involved in the original agreement which created the obligations or potential obligations of the debtor or potential debtor giving rise to the exposures being securitised; or an entity which securitises purchased third-party exposures.

[2] "Sponsor" performs an activity other than "originator" that establishes and manages an asset backed commercial paper programme or other securitisation transaction that purchases exposures from third party entities. Barclays is defined as the sponsor of four conduit facilities: Sheffield, Salisbury, Surrey and Sussex which were entered into prior to 2012.

Securitisation activity in 2012 primarily related to £1.2bn in traditional securitisations of banking book commercial mortgages. This transaction involved assets from Barclays and a third party bank. The figure above represents Barclays share of assets that contributed to the deals. Note that the associated gain on sale of £44m represents the book value less the sale price, excluding any fees.

The £94m in the trading book relates to the acquisition of re-securitisations of real estate mortgage investment conduits ("re-REMIC") positions.

Activity in 2011 mainly related to the purchase of protection against the credit risk of corporate loans in the banking book.

Table 45: Assets awaiting securitisation

	Recorded in the Banking Book		Recorded in the Trading Book	
Exposure Type As at 31.12.12	"Warehouse" £m	"Pipeline" £m	"Warehouse" £m	"Pipeline" £m
Residential Mortgages	54	-	-	-
Commercial Mortgages	173	-	-	-
Consumer Loans	22	-	-	-
Total	**249**	**-**	**-**	**-**
As at 31.12.11				
Residential Mortgages	71	-	-	-
Commercial Mortgages	-	-	-	-
Consumer Loans	-	-	-	-
Total	**71**	**-**	**-**	**-**

Assets awaiting securitisation relate to banking book commercial and student loans that are due to be securitised where Barclays has originated the underlying loans or has warehoused the loans.

Analysis of securitisations

Table 46: Outstanding amount of exposures securitised

This table presents the underlying assets of securitisation vehicle where Barclays is the originator.

	Banking Book				Trading Book			
	Traditional Transactions		Synthetic Transactions		Traditional Transactions		Synthetic Transactions	
Exposure Type	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor	Originator	Sponsor
As at 31.12.12	£m	£m	£m	£m	£m	£m	£m	£m
Residential Mortgages	13,497	825	-	-	72	-	-	-
Commercial Mortgages	9,611	-	-	-	-	-	-	-
Loans to Corporates or SMEs	5,724	-	3,193	-	2	-	-	-
Consumer Loans	-	4,380	-	-	-	-	-	-
Securitisations/ Re-securitisations	3,386	-	-	-	20	-	-	-
Total	**32,218**	**5,205**	**3,193**	**-**	**94**	**-**	**-**	**-**
As at 31.12.11[1]								
Residential Mortgages	14,651	1,117	-	-	37	-	-	-
Commercial Mortgages	12,084	-	-	-	-	-	-	-
Loans to Corporates or SMEs	4,232	-	3,710	-	-	-	-	-
Consumer Loans	-	7,747	-	-	-	-	-	-
Securitisations/ Re-securitisations	3,277	-	-	-	2	-	-	-
Total	**34,244**	**8,864**	**3,710**	**-**	**39**	**-**	**-**	**-**

[1] December 2011 comparatives have been revised to provide greater consistency of disclosure based the definition of 'originator' and 'sponsor' (refer to Table 44 definitions).

Banking book securitisation assets reduced 13.2% to £40.6bn.

- Originator of traditional transactions decreased by 5.9% to £32.2bn principally driven by a reduction in commercial mortgages following the disposal of holdings and reductions in retained interests.
- Sponsor of traditional transactions have reduced by 41.3% to £5.2bn. This is principally due to net repayments on various consumer loan facilities underlying the Sheffield and Salisbury vehicles and reductions in residential mortgage exposures underlying the Surrey and Sussex vehicles.

Originator of synthetic banking book has reduced by 13.9% to £3.2bn, predominantly due to a decrease in exposure related to commercial credit protection bought.

Trading book exposure has increased by 141.0% to £94m relating to originated re-REMIC positions.

Table 47: Amounts past due and losses against securitisation positions

This table discloses the amounts past due and losses in the underlying securitisation portfolio for originated and sponsored positions. The recognised losses represent the movement in the impairment provision.

	Past Due		Recognised Losses	
Exposure Type	Originator	Sponsor	Originator	Sponsor
As at 31.12.12	£m	£m	£m	£m
Residential Mortgages	1,358	61	-	4
Commercial Mortgages	-	-	-	-
Loans to Corporates or SMEs	305	-	-	-
Consumer Loans	-	74	-	-
Securitisations/ Re-securitisations	486	-	159	-
Total	**2,149**	**135**	**159**	**4**
As at 31.12.11				
Residential Mortgages	2,079	80	-	-
Commercial Mortgages	13	-	-	-
Loans to Corporates or SMEs	-	-	-	-
Consumer Loans	-	103	-	-
Securitisations/ Re-securitisations	-	-	-	-
Total	**2,092**	**183**	**-**	**-**

Originator past due in Residential mortgages have remained broadly stable, though underlying movements were due to reclassification of agency CDOs to Securitisation/Re-securitisations, and reclassifications to Loans to Corporates and SMEs.

Originator recognised losses have increased by £0.2bn reflecting the provision taken against agency CDOs.

Analysis of securitisations

Table 48: Aggregate amount of securitised positions retained or purchased

The aggregate amount of securitisation positions has the population consistent with Table 49, Table 53, and Table 54.

Exposure Type[1]	Banking Book		Trading Book
As at 31.12.12	Retained[2] £m	Purchased[3] £m	£m
Residential Mortgages	1,233	7,611	2,250
Commercial Mortgages	800	390	377
Credit Card Receivables	-	827	139
Leasing	-	94	-
Loans to Corporates or SMEs	5,098	3,176	348
Consumer Loans	10	5,299	283
Trade Receivables	-	36	-
Securitisations/ Re-securitisations	1,153	343	102
Other Assets	10	2,330	75
Total	**8,304**	**20,106**	**3,574**
As at 31.12.11			
Residential Mortgages	1,382	5,927	2,645
Commercial Mortgages	841	1,677	343
Credit Card Receivables	-	76	130
Leasing	-	58	-
Loans to Corporates or SMEs	5,790	6,298	541
Consumer Loans	-	6,856	260
Trade Receivables	-	-	-
Securitisations/ Re-securitisations	1,035	1,052	244
Other Assets	8	225	220
Total	**9,056**	**22,169**	**4,383**

[1] The "exposure type" is based on the asset class of underlying positions.

[2] "Retained" positions are where Barclays retains an exposure in a position it originated.

[3] "Purchased" exposures are where Barclays is considered to be an investor or a sponsor. All conduits are classified as purchased.

The total amount of securitisation positions in the banking book has reduced 9.0% to £28.4bn, driven by:

- Purchased exposure decrease of £2.1bn following the disposals of Collateralised Loan Obligations (CLO) where the underlyings comprised of loans to corporates.
- Decrease of £1.6bn in Consumer Loans.
- Commercial mortgage reduction due to disposal of commercial mortgage backed security (CMBS).
- This is offset by increases in "other assets" due to a number of new positions including holdings of residential mortgage backed securities (RMBS) positions.

The decrease of 8.3% to £8.3bn in retained exposures is predominantly driven by Loans to Corporates or SMEs due to a decrease in exposure related to commercial credit protection bought.

The trading book exposure has reduced by 18.5% to £3.6bn, driven by Residential Mortgages resulting from movements across a number of positions.

Analysis of securitisations

Table 49: Risk weight band analysis of securitised positions retained or purchased

The risk weight band analysis of aggregate amount of securitisation positions has the population consistent with Table 48, Table 53, and Table 54.

	Exposure Values			Capital Requirements		
	Banking Book		Trading Book	Banking Book		Trading Book
Risk Weight Band	Retained	Purchased		Retained	Purchased	
As at 31.12.12	£m	£m	£m	£m	£m	£m
IRB Approach						
<= 10%	4,385	12,406	133	27	76	1
> 10% <= 20%	199	3,388	58	2	32	1
> 20% <= 50%	1,957	2,442	2,194	42	46	45
> 50% <= 100%	34	302	209	2	17	12
>100% <= 650%	698	308	254	58	69	50
> 650% <= 1250%	12	3	77	7	1	43
> 1250% / Deducted	694	1,127	649	694	1,127	649
Total IRB	**7,979**	**19,976**	**3,574**	**832**	**1,368**	**801**
Standardised Approach						
Concentration Approach	325	130	-	11	12	-
Total Standardised	**325**	**130**	**-**	**11**	**12**	**-**
Total	**8,304**	**20,106**	**3,574**	**843**	**1,380**	**801**
As at 31.12.11						
IRB Approach						
<= 10%	4,812	13,018	467	29	74	3
> 10% <= 20%	510	2,978	213	5	21	2
> 20% <= 50%	2,160	4,265	2,554	41	72	56
> 50% <= 100%	51	184	203	3	7	12
>100% <= 650%	377	603	210	37	98	47
> 650% <= 1250%	45	33	26	25	17	15
> 1250% / Deducted	747	1,034	710	746	1,033	710
Total IRB	**8,702**	**22,115**	**4,383**	**886**	**1,322**	**845**
Standardised Approach						
Concentration Approach	354	54	-	12	6	-
Total Standardised	**354**	**54**	**-**	**12**	**6**	**-**
Total	**9,056**	**22,169**	**4,383**	**898**	**1,328**	**845**

Guidance for Risk Weight Bands		
Risk Weight Band	**IRB S&P Equiv Rating**	**STD S&P Equivalent Rating**
<= 10%	AAA to A+ (Senior Positions Only)	N/A
> 10% <= 20%	A to A- (Senior Positions Only) / AAA to A+ (Base Case)	N/A
> 20% <= 50%	A to A- (Base Case)	AAA to AA-
> 50% <= 100%	BBB+ to BBB (Base Case)	A+ to A-
>100% <= 650%	BBB- (Base Case) to BB (Base Case)	BBB+ to BB-
> 650% <= 1250%	BB- (Base Case)	N/A
> 1250% / Deducted	B+ & Below (Base Case)	B+ & Below
Non-1250% Deduction	Cap deduction with assets rated BB- or above	

Total amount of securitisation positions in Banking Book has reduced by 9.0% to £28.4bn driven by:

- Retained exposure decrease predominantly driven by '<10%' reduction of notional amount.
- Retained capital requirements reduced driven by decrease in exposures in higher risk weighted bands '>1250%/deducted' and '> 650% <= 1250%', with some offsetting increase in exposures in the '>100%-650%' band.
- Purchased exposure decrease driven by '<10%' band due to disposal of commercial mortgage backed securities and various disposals in the '>20% <=50%' band, partly offset by an increase in new residential mortgage backed security (RMBS) positions.
- Purchased capital requirements increase driven by a change in approach following guidance from the Regulator, partly offset by reduction in exposure in lower capital consuming bands.

Analysis of securitisations

Table 50: Risk weight band analysis of re-securitised positions retained or purchased

	Exposure Values			Capital Requirements		
	Banking Book		Trading Book	Banking Book		Trading Book
Risk Weight Band	Retained	Purchased		Retained	Purchased	
As at 31.12.12	£m	£m	£m	£m	£m	£m
IRB Approach						
> 20% <= 50%	1,245	1,790	36	25	33	1
> 50% <= 100%	10	84	4	1	5	-
>100% <= 650%	10	48	51	2	11	10
> 650% <= 1250%	-	1	10	-	-	6
> 1250% / Deducted	475	801	125	475	801	124
Total IRB	**1,740**	**2,724**	**226**	**503**	**850**	**141**
Total Standardised	**-**	**-**	**-**	**-**	**-**	**-**
Total	**1,740**	**2,724**	**226**	**503**	**850**	**141**
As at 31.12.11						
IRB Approach						
> 20% <= 50%	1,597	3,416	279	31	58	8
> 50% <= 100%	10	7	-	1	-	-
>100% <= 650%	8	379	104	1	44	20
> 650% <= 1250%	-	2	10	-	1	6
> 1250% / Deducted	568	468	122	568	468	122
Total IRB	**2,183**	**4,272**	**515**	**601**	**571**	**156**
Total Standardised	**-**	**-**	**-**	**-**	**-**	**-**
Total	**2,183**	**4,272**	**515**	**601**	**571**	**156**

Banking book re-securitisation value has decreased by 30.8% to £4.5bn predominantly driven by:

- Purchased positions decrease in '>20%<=50%' band due to reductions across collateral loan obligations and disposal of positions, and partially offset by '1250%/Deduction' due to downgrade of positions.
- Retained positions '> 20% <= 50%' have reduced predominantly driven by reclassification of a position.

Table 51: Total deductions for securitisation positions

The table discloses Barclays total capital deductions, for exposure value considered to be RWA/1250% where RWA (K_{IRB}) is applied.

Exposure Type	Banking Book	Trading Book
As at 31.12.12	£m	£m
Residential Mortgages	864	427
Commercial Mortgages	64	51
Credit Card Receivables	-	4
Leasing	7	-
Loans to Corporates or SMEs	46	87
Consumer Loans	11	3
Securitisations/ Re-securitisations	708	72
Other Assets	63	5
Total	**1,763**	**649**
As at 31.12.11		
Residential Mortgages	636	450
Commercial Mortgages	88	51
Credit Card Receivables	1	15
Leasing	55	-
Loans to Corporates or SMEs	139	75
Consumer Loans	15	24
Securitisations/ Re-securitisations	727	76
Other Assets	46	18
Total	**1,707**	**709**

Banking book capital deductions have increased by 2.8% to £1.8bn largely due to a change in regulatory approach for Residential mortgages positions; this was partly offset by disposal of various positions in loans to corporates or SMEs.

Analysis of securitisations

Table 52: Trading book exposures subject to a market risk capital requirement

Trading book exposures subject to market risk capital requirements, are classified as originated and treated as capital deductions.

Exposure Type As at 31.12.12	Traditional £m	Synthetic £m
Residential Mortgages	72	-
Total	**72**	**-**
As at 31.12.11		
Residential Mortgages	61	-
Total	**61**	**-**

Trading book exposures which are subject to market risk capital requirements, increased by 18.0% to £0.1bn mainly due to re-REMIC positions classified as originated and treated as capital deductions..

Table 53: Aggregate amount of securitised positions retained or purchased by geography - banking book

This table presents total exposure type by geography, with the country based on the location of the counterparty.

Exposure Type As at 31.12.12	United Kingdom £m	Europe £m	Americas £m	Africa and Middle East £m	Asia £m	Total £m
Residential Mortgages	4,925	212	2,544	69	1,094	8,844
Commercial Mortgages	717	433	14	-	26	1,190
Credit Card Receivables	14	-	813	-	-	827
Leasing	-	-	94	-	-	94
Loans to Corporates or SMEs	3,186	2,319	2,769	-	-	8,274
Consumer Loans	231	244	4,834	-	-	5,309
Trade Receivables	-	-	36	-	-	36
Securitisations/ Re-securitisations	15	484	997	-	-	1,496
Other Assets	36	-	2,283	-	21	2,340
Total	**9,124**	**3,692**	**14,384**	**69**	**1,141**	**28,410**
As at 31.12.11						
Residential Mortgages	3,458	347	1,938	164	1,402	7,309
Commercial Mortgages	859	443	1,174	12	30	2,518
Credit Card Receivables	17	-	59	-	-	76
Leasing	-	1	53	-	4	58
Loans to Corporates or SMEs	4,116	2,862	5,110	-	-	12,088
Consumer Loans	5	5	6,846	-	-	6,856
Trade Receivables	-	-	-	-	-	-
Securitisations/ Re-securitisations	2	150	1,935	-	-	2,087
Other Assets	21	3	154	29	26	233
Total	**8,478**	**3,811**	**17,269**	**205**	**1,462**	**31,225**

Overall Banking Book exposure has reduced by 9.0% to £28.4bn (£31.2bn) predominately due to a reduction of in Americas, partly offset by an increase in the UK.

The reduction in Americas is driven by decreases in Loans to Corporates or SMEs, due to disposal of collateralised loan obligations across a number of counterparties, consumer loans and the sale of commercial mortgage backed securities; offset by increases in Other Assets due to new facilities and exposures brought onto the balance sheet.

The increase in the UK is driven by new residential mortgage backed security (RMBS) positions, offset by decreases in Loans to Corporates or SMEs due to the amortisation of the underlying positions.

Analysis of securitisations

Table 54: Aggregate amount of securitised positions retained or purchased by geography - trading book

This table presents total exposure type by geography. The country is based on location of the counterparty for counterparty credit risk, country of operation of issuer for market risk.

Exposure Type	United Kingdom	Europe	Americas	Africa and Middle East	Asia	Total
As at 31.12.12	£m	£m	£m	£m	£m	£m
Residential Mortgages	1,230	132	807	-	81	2,250
Commercial Mortgages	55	45	274	-	3	377
Credit Card Receivables	49	6	84	-	-	139
Loans to Corporates or SMEs	70	81	197	-	-	348
Consumer Loans	12	73	197	-	1	283
Securitisations/ Re-securitisations	3	5	94	-	-	102
Other Assets	7	2	66	-	-	75
Total	**1,426**	**344**	**1,719**	**-**	**85**	**3,574**
As at 31.12.11						
Residential Mortgages	1,540	203	859	-	43	2,645
Commercial Mortgages	129	26	177	-	11	343
Credit Card Receivables	40	16	74	-	-	130
Loans to Corporates or SMEs	59	300	182	-	-	541
Consumer Loans	4	47	208	-	1	260
Securitisations/ Re-securitisations	35	163	46	-	-	244
Other Assets	7	1	192	-	20	220
Total	**1,814**	**756**	**1,738**	**-**	**75**	**4,383**

Overall trading book exposure has reduced by 18.5% to £3.6bn driven by reductions in the UK and Europe across a number of positions.

Analysis of operational risk

Analysis of operational risk

Operational risk capital requirements

The following table details the Group's operational risk capital requirement. Barclays has approval from the FSA to calculate its operational risk capital requirement using a Basel 2 Advanced Measurement Approach (AMA), although recently acquired businesses are excluded from this approval. Barclays uses the Basic Indicator Approach while it transitions these areas to AMA.

See page 107 for information on operational risk management.

Table 55: Risk weighted assets for operational risk

Risk Weighted Assets Calculation approach As at 31.12.12	UK RBB £m	Europe RBB £m	Africa RBB £m	Barclaycard £m	Investment Bank £m	Corporate Banking £m	Wealth and Investment Management £m	Head Office and Other Operations £m	Total £m
Operational Risk									
Basic Indicator Approach	243	308	239	1,343	987	35	339	-	3,494
Standardised Approach	-	-	-	-	-	-	-	-	-
Advanced Measurement Approach	6,281	1,917	4,187	5,038	23,743	6,521	2,845	160	50,692
Total Operational Risk Capital Requirement	**6,524**	**2,225**	**4,426**	**6,381**	**24,730**	**6,556**	**3,184**	**160**	**54,186**
As at 31.12.11	£m	£m	£m	£m	£m	£m	£m	£m	£m
Operational Risk									
Basic Indicator Approach	-	-	20	-	1,007	21	353	-	1,401
Standardised Approach	154	253	125	822	-	-	-	-	1,354
Advanced Measurement Approach	4,713	1,343	3,231	3,935	14,166	4,170	1,177	250	32,985
Total Operational Risk Capital Requirement	**4,867**	**1,596**	**3,376**	**4,757**	**15,173**	**4,191**	**1,530**	**250**	**35,740**

Barclays operational risk capital requirement increased 51.6% to £54.2bn.

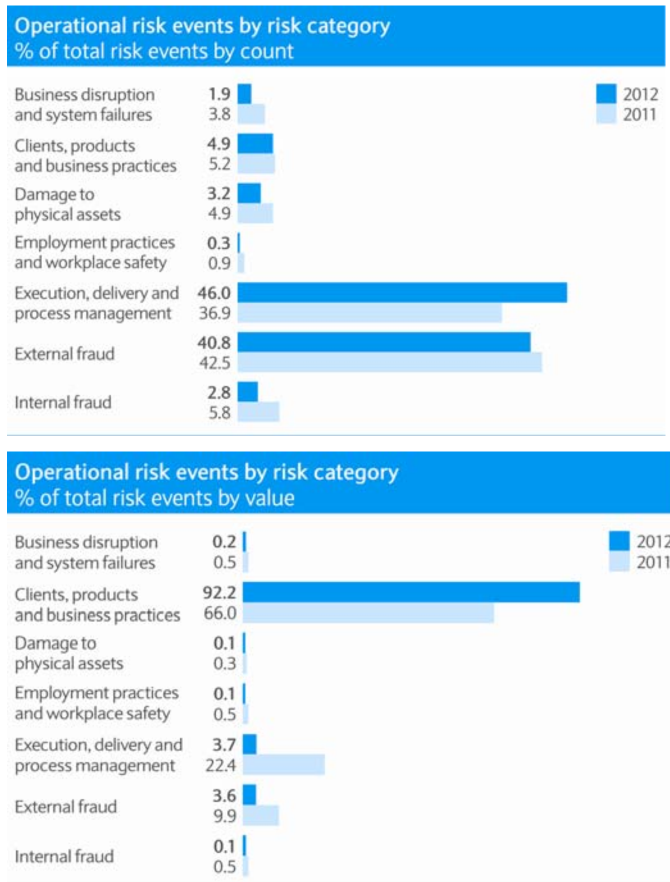
The majority of this increase was within the Advanced Measurement Approach (AMA) driven by a recalibration of risk scenarios taking into account risk events impacting Barclays and the wider banking industry principally relating to sales practices and market conduct risk as well as adjustments for business growth and stategies.

Capital requirements under the Basic Indicator Approach increased driven by new acquisitions. The Standardised approach is no longer used.

Analysis of operational risk

Figure 3: Operational risk profile

Operational risk events by risk category by: (i) number of events and (ii) value of events, are shown on the figure below.



The Barclays operational risk profile in 2012 was dominated by the regulatory penalties in respect of LIBOR and EURIBOR submissions (£290m) and provisions for PPI (£1.6bn) and interest rate hedging product redress (£850m).

Risk Factors section in Annual Report pages 108 to 115 describe the material risks which the Group believes could cause its future results of operations, financial condition and prospects to differ materially from current expectations.

Within operational risk a high proportion of risk events have a low associated financial cost and a very small proportion of operational risk events will have a material impact on results of operations and financial conditions of the Group. In 2012 74.7% of the Group's net operational risk losses had a value of £50,000 or less (2011: 70.4%) and accounted for only 1.3% of the Group's total net loss impact. The analysis below presents Barclays operational risk events by Basel 2 category. There has been an increase in the proportion of losses by amount within the Clients, products and business practices category to 92.2% (2011: 65.9%), driven by penalties relating to the industry-wide investigation into the setting of interbank offered rates, provisions for PPI and interest rate hedging product redress. In 2012, Execution, delivery and process management (46.1%) and External fraud (40.8%) remain the categories with the highest frequency of events. Execution, delivery and process management events are common to the banking industry where high volumes of transactions are processed on a daily basis. These are often fully or partially recovered, resulting in low value net losses. High volume, low value external fraud events are also consistent with industry experience, driven by debit and credit card fraud. These remained within the expected levels during 2012

The Group's operational risk profile is informed by bottom-up risk assessment by business unit and top-down qualitative review from the Operational Risk Committee. This continues to highlight Clients, products and business practices as a key operational risk exposure. CyberSecurity risk is an area identified for increased focus which has driven the introduction of a new key risk category and impacts business disruption and system failures and external fraud risk events.

Impacts of Basel 3

Impacts of Basel 3

Implementation of Basel 3 – Impact on Regulatory Capital

- The new capital requirements regulation and capital requirements directive that implement Basel 3 proposals within the EU (collectively known as CRD IV) are still under consideration. The requirements are expected to be finalised during 2013, however the implementation date is uncertain.
- CRD IV includes the requirement for a minimum Common Equity Tier 1 (CET1) ratio of 4.5%, a minimum Tier 1 ratio of 6% and a minimum total capital ratio of 8%. There is an additional requirement for a Capital Conservation Buffer (CCB) of 2.5% and Counter-Cyclical Capital Buffer (CCCB) of up to 2.5% to be applied when macroeconomic conditions indicate areas of the economy are over-heating. Our working assumption is that the CCCB would be zero if implemented today;
- In addition, globally systemically important banks are expected to hold a buffer of up to 2.5%. For Barclays, this was confirmed in November 2012 by the Financial Stability Board (FSB) to be 2.0% resulting in an expected regulatory target CET1 ratio of 9.0%. This regulatory target capital requirement will phase in between adoption of CRD IV and 2019.
- The proposed changes to the definition of CET1 also include transitional provisions relating to capital deductions and grandfathering of ineligible capital instruments that are in line with the FSA's statement on CRD IV transitional provisions in October 2012.
- Given the phasing of both capital requirements and target levels, in advance of needing to comply with the fully loaded end state requirements, Barclays will have the opportunity to continue to generate additional capital from earnings and take management actions to mitigate the impact of CRD IV. Our expectation is that ineligible Additional Tier 1 capital, which qualifies for grandfathering under the transitional relief, will be replaced with eligible capital over time.
- To provide an indication of the potential impact on Barclays, we have estimated our proforma RWAs and CET1 ratio on both a transitional and fully loaded basis, reflecting our current interpretation of the rules and assuming they were applied as at 1 January 2013. As at that date Barclays proforma RWAs on a CRD IV basis would have been estimated at approximately £468bn, with a resultant transitional CET1 ratio of approximately 10.6% and a fully loaded CET1 ratio of approximately 8.2%. Further analysis of the impacts are set out on page 69.
- Based on our estimated proforma capital ratios, identified actions and retained earnings, we expect to be in excess of the minimum capital requirements as they are expected to apply over the transitional period and through to the end state position.
- The Basel 3 guidelines also include a proposed leverage metric to be implemented by national supervisors initially under a parallel run for disclosure purposes only, and migrating to a mandatory limit over a period of 5 years. Based on our interpretation of the current proposals, the Group's CRD IV leverage ratio as at 31 December 2012 would be within the proposed limit of 33x, allowing for transitional relief to Tier 1 capital.
- The actual impact of CRD IV may be materially different as the requirements and related technical standards have not yet been finalised, for example provisions relating to the scope of application of the CVA volatility charge and restrictions on short hedges relating to insignificant financial holdings. The actual impact will also be dependent on required regulatory approval of models, market conditions at the point of implementation and the extent to which further management action is taken prior to implementation.
- There are a number of other regulatory developments that may impact capital requirements. Further details are set out in the supervision and regulation section of the Annual Report on pages 190 to 195.

Impacts of Basel 3

Table 56: Estimated impact of CRD IV

	Reported as at 31.12.12 £bn	Proforma CET1 Transitional 1.1.13 £bn	Proforma CET1 Fully- loaded 1.1.13 £bn
Core Tier 1 (CT1) Capital (FSA 2009 definition)	**42.1**	**42.1**	**42.1**
IFRS10 impact (introduced on 1 Jan 2013)		(0.4)	(0.4)
CT1 Capital post-IFRS 10 (FSA 2009 definition)		**41.7**	**41.7**
Risk Weighted Assets (RWA) (current Basel 2.5 rules)	**387**	**387**	**387**
CT1 Ratio (Basel 2.5)	**10.9%**	**10.8%**	**10.8%**
CRD IV impact on CT1 Capital:			
Adjustments not impacted by transitional provisions			
Conversion from securitisation deductions to RWA		1.0	1.0
Prudential Valuation Adjustment (PVA)		(1.2)	(1.2)
Other		(0.2)	(0.2)
Adjustments impacted by transitional provisions			
Goodwill and intangibles		7.6	-
EL > impairment		0.6	(1.1)
Deferred tax assets (losses)		(0.1)	(1.3)
Excess minority interest		-	(0.9)
Debit Valuation Adjustment (DVA)		-	(0.3)
Pensions		-	(0.1)
Gains on AFS equity and debt		-	0.7
Common Equity Tier 1 (CET1) Capital		**49.5**	**38.4**
RWAs (post CRD IV)		**468**	**468**
CET1 Ratio		**10.6%**	**8.2%**

Basis of calculation of the impact of CRD IV

CRD IV, models and waivers

- The proforma ratios, capital computations and RWAs are based on our interpretation of the draft July 2011 CRD IV rules and best expectation of how these draft rules will be updated for subsequent Basel announcements and EU discussions. They assume that all items in the Internal Model Method application to the FSA are approved, and existing FSA waivers, where such discretion is available under CRD IV, will continue.
- While we have discussed our implementation of CRD IV with the FSA, in light of the ongoing uncertainty regarding the final rules and implementation date, the FSA have not yet considered model applications for approval.

Capital resources

- Proforma capital numbers at 1 January 2013 are based on 31 December 2012 actuals with an adjustment for IFRS 10 impact (as a result of consolidating some entities that were not previously consolidated and deconsolidating some entities that were previously consolidated).
- Transitional CET1 capital is based on application of the CRD IV transitional provisions and FSA guidance dated 26 October 2012 setting out the minimum pace of transitions with certain exceptions set out in the guidance. In line with this guidance, deferred tax assets deduction is assumed to transition in at 10% in 2013. Other deductions (including goodwill and intangibles, expected losses over impairment and DVA) transition in at 0% in 2013, 20% in 2014, 40% in 2015 and so on;
- Prudent Valuation Adjustment (PVA) was previously assumed to be subject to transitional treatment. Following FSA guidance, the impact of PVA is now factored into CET1 on inception in full. PVA is subject to final rules to be agreed by the EBA and the impact is currently based on methodology agreed with the FSA.
- The draft July 2011 CRD IV rules include the implementation of a capital deduction for financial holdings greater than 10% of CET1 capital, which under Basel 2.5 are subject to equity market risk capital requirements. Under current regulatory rules, the Group’s financial holdings net down to £3.3bn exposure after allowing for permitted economic hedging. The current draft of the CRD IV rules applies a further restriction, where the maturity of the hedging instrument is less than one year, which would result in a higher net position of approximately £10.1bn. This would be in excess of 10% of our CET1 and would result in a capital deduction on a fully loaded basis of approximately £4.6bn at CET1 level and a further deduction of approximately £1.4bn at Total capital level. However, we have identified management actions that would be taken in the event that the

Impacts of Basel 3

CRD IV draft requirements remain unchanged, and as a result we are highly confident that no capital deduction would be required.

- Excess minority interest has been calculated on a CRD IV basis and included in our full impact capital base on the assumption that supervisory regimes outside the EU that are implementing Basel 3, and are currently considered equivalent supervisory and regulatory regimes, will continue to be considered equivalent regimes under CRD IV.

RWAs

- It is assumed that EU corporates, pension funds and sovereigns are exempt from CVA volatility charge.
- It is assumed all Central Counterparties will implement Committee on Payment and Settlement Systems' and the Technical Committee of the International Organization of Securities' "Principles for Financial Market Infrastructures" and hence will be deemed to be "Qualifying". The final determination of Qualifying status will be made by the appropriate Regulatory Authority.
- The proforma RWA increase from Basel 3 includes 1250% risk weighting of securitisation positions while proforma capital includes add back of Basel 2 50/50 securitisation deductions.
- Proforma RWAs for definition of default assume that national discretion over 180 days definition of default remains for UK retail mortgages.
- "Other" CRD IV impact to RWAs include adjustments for withdrawal of national discretion of definition of default relating to non UK mortgage retail portfolios (£1.4bn), Deferred Tax Assets (£2.3bn), Material Holdings (£2.3bn), other counterparty credit risk (£6.4bn) and other items.
- RWAs are sensitive to market conditions. Pro forma impact on RWAs for all periods reflects market conditions as at 31 December 2012.

Impacts of Basel 3

Table 57: CRD IV regulatory capital

Table 57 shows the components of regulatory capital presented on both a first year transitional and end-point basis as at 31 December 2012. In addition, the impact of IFRS changes as at 1 January 2013 are included at the end of the table. This disclosure has been prepared using the format set out in Annex VI of the EBA consultation paper 'Draft Implementing Technical Standards on Disclosure for Own Funds by Institutions'. As the rules are not yet finalised the regulatory treatment adopted in this table remains subject to change.

Common Equity Tier 1 (CET1) capital: instruments and reserves	31.12 .12 Transitional position £m	Transitional impacts £m	31.12.12 Full end point position £m
Capital instruments and the related share premium accounts	12,268	-	12,268
Retained earnings	35,620	-	35,620
Independently reviewed interim profits	1,845	-	1,845
Accumulated other comprehensive income (and other reserves)	3,830	-	3,830
Minority Interests (amount allowed in consolidated CET1)	2,450	(909)	1,541
Common Equity Tier 1 capital before regulatory adjustments	**56,013**	**(909)**	**55,104**
Common Equity Tier 1 capital: regulatory adjustments			
Additional value adjustments	(1,150)	-	(1,150)
Intangible assets (net of related tax liability)	-	(7,622)	(7,622)
Deferred tax assets that rely on future profitability excluding those arising from temporary differences	(126)	(1,131)	(1,257)
Fair value reserves related to gains or losses on cash flow hedges	(2,082)	-	(2,082)
Negative amounts resulting from the calculation of expected loss amounts	-	(1,729)	(1,729)
Gains or losses on liabilities at fair value resulting from own credit	804	(308)	496
Defined-benefit pension fund assets	(1,804)	-	(1,804)
Direct and indirect holdings by an institution of own CET1 instruments	(187)	-	(187)
Regulatory adjustments applied to CET1 in respect of amounts subject to pre-CRR treatment:			
Regulatory Adjustments relating to unrealised gains and losses:	(677)	677	-
of which unrealised gains on available for sale debt securities	*(528)*	*528*	-
of which unrealised gains on available for sale equity	*(110)*	*110*	-
of which property revaluation reserve	*(39)*	*39*	-
Adjustments to CET1 capital with regard to additional filters and deductions required pre CRR - Pension Deficit Reduction Amount (DRA)	(641)	641	-
Total regulatory adjustments to Common equity Tier 1	**(5,863)**	**(9,472)**	**(15,335)**
Common Equity Tier 1 capital [1]	**50,150**	**(10,381)**	**39,769**

[1] In the event that the July 2011 CRD IV rules relating to maturity restrictions on hedging remain unchanged, there would be a requirement to reduce the fully loaded CET1 position by approximately £4.6bn to £35.2bn and at total capital level by a further approximate £1.4bn to £53.6bn. However, we have identified management actions that would be taken in the event that the CRD IV draft requirements remain unchanged, and as a result we are highly confident that no capital deduction would be required.

Impacts of Basel 3

Table 57 (continued)

Additional Tier 1 (AT1) capital: instruments	31.12.12 Transitional position £m	Transitional impacts £m	31.12.12 Full end point position £m
Capital instruments and the related share premium accounts issued by Barclays Bank PLC	9,257	(9,257)	-
of which: classified as equity under IFRS	*5,868*	*(5,868)*	-
of which: classified as liabilities under IFRS	*3,389*	*(3,389)*	-
Qualifying AT1 capital (including minority interests) issued by subsidiaries and held by third parties	338	(124)	214
Amount of qualifying items subject to phase out from AT1	(960)	960	-
Additional Tier 1 capital before regulatory adjustments	**8,636**	**(8,422)**	**214**
Additional Tier 1 capital: regulatory adjustments			
Direct and indirect holdings of own AT1 Instruments	(16)	16	-
Residual amounts deducted from AT1 capital with regard to deduction from CET1 capital during the transitional period:			
of which intangible assets	(7,622)	7,622	-
of which shortfall of provisions to expected losses	(865)	865	-
Total regulatory adjustments to Additional Tier 1 capital	**(8,502)**	**8,502**	**-**
Additional Tier 1 capital	**133**	**80**	**214**
Tier 1 capital (T1 = CET1 + AT1)	**50,283**	**(10,301)**	**39,982**
Tier 2 (T2) capital: instruments and provisions			
Capital instruments and the related share premium accounts issued by Barclays Bank PLC	15,937	6,678	22,615
Of which grandfathered from AT1	637	5,737	6,374
Qualifying own funds instruments included in T2 capital (including minority interests) issued by subsidiaries and held by third parties	936	(654)	283
of which: instruments issued by subsidiaries subject to phase out			
Amount of qualifying items subject to phase out from T2	(329)	(2,964)	(3,293)
Credit risk adjustments	-	-	-
Tier 2 capital before regulatory adjustments	**16,544**	**3,060**	**19,605**
Tier 2 capital: regulatory adjustments			
Direct and indirect holdings of own T2 instruments and subordinated loans	(34)	10	(24)
Direct and indirect holdings of T2 instruments where the institution has a significant investment in those entities (net of eligible short positions)	-	-	-
Residual amounts deducted from T2 capital with regard to deduction from CET1 capital during the transitional period:	(865)	865	-
of which shortfall of provisions to expected losses	(865)	865	-
Amount to be deducted from T2 capital with regard to additional filters and deductions required pre CRR:	(920)	920	-
of which unrealised gains on available for sale equity	110	(110)	-
of which property revaluation reserve	39	(39)	-
of which connected lending of a capital nature	(98)	98	-
of which non material non qualifying holdings	(972)	972	-
Total regulatory adjustments to Tier 2 capital	**(1,818)**	**1,794**	**(24)**
Tier 2 capital	**14,726**	**4,854**	**19,581**
Total capital (TC = T1 + T2) [1]	**65,009**	**(5,447)**	**59,563**

[1] In the event that the July 2011 CRD IV rules relating to maturity restrictions on hedging remain unchanged, there would be a requirement to reduce the fully loaded CET1 position by approximately £4.6bn to £35.2bn and at total capital level by a further approximate £1.4bn to £53.6bn. However, we have identified management actions that would be taken in the event that the CRD IV draft requirements remain unchanged, and as a result we are highly confident that no capital deduction would be required.

Impacts of Basel 3

Table 57 (continued)

Capital instruments subject to phase-out arrangements	31.12 .12 Transitional position £m	Transitional impacts £m	31.12.12 Full end point position £m
Current cap on CET1 instruments subject to phase out arrangements	-	-	-
Amount excluded from CET1 due to cap	-	-	-
Current cap on AT1 instruments subject to phase out arrangements	8,635	(8,635)	-
Amount excluded from AT1 due to cap	960	(960)	-
Current cap on T2 instruments subject to phase out arrangements	2,964	(2,964)	-
Amount excluded from T2 due to cap	329	(329)	
Impacts of 1 January 2013 IFRS changes	**-**	**-**	**-**
IAS 19 Pensions	-	(744)	(744)
IFRS 10 Consolidation	(618)	-	(618)
Common Equity Tier 1 capital as at 1.1.13	**49,532**	**(11,126)**	**38,406**
Tier 1 capital (T1 = CET1 + AT1) as at 1.1.13	**49,665**	**(11,046)**	**38,620**
Total capital (TC = T1 + T2) as at 1.1.13	**64,391**	**(6,191)**	**58,200**

Implementation of Basel 3 – Leverage impacts

Barclays already measures and reports adjusted gross leverage as an internal measure of balance sheet leverage based on adjusted tangible assets divided by qualifying regulatory Tier 1 capital. The business operates within limits and targets for balance sheet usage at a Group and business unit level as part of its balance sheet management activities. As at 31 December 2012, the Group's adjusted gross leverage was 19x.

CRD IV introduces a non-risk based leverage ratio that is intended to act as a supplementary buffer to the risk based capital requirements. By 1 January 2018 Banks will be required to be above the proposed limit of 3% leverage (equivalent to 33x). Prior to that date there are no regulatory requirements to exceed this threshold, but banks will be required to publish their leverage ratio annually in the Pillar 3 disclosures once the rules come into force.

The CRD IV leverage ratios are higher than the adjusted gross leverage ratio, primarily due to the CRD IV ratio excluding netting of settlement balances and cash collateral against derivatives and including off balance sheet potential future exposures and undrawn commitments, which the adjusted gross leverage ratio (consistent with many other banks treatment) does not. The key adjustments to total assets under the CRD IV leverage ratio are as follows:

- **Netting adjustments:** netting permitted for regulatory purposes in relation to derivative and secured financing transaction (SFT) assets against corresponding liabilities
- **Regulatory deductions:** items (comprising goodwill and intangibles, deferred tax asset losses, own paper, cash flow hedge reserve, and pension assets) that deducted from the capital measure are also deducted from total assets to ensure consistency between the numerator and denominator of the ratio
- **Other adjustments**: includes adjustments required to change from an IFRS scope of consolidation to a regulatory scope of consolidation. The final rules with regards to scope of consolidation for leverage purposes are uncertain.
- **Potential Future Exposure on derivatives:** add on calculated by assigning standardised percentages to underlying values on derivative contracts in accordance with the CRD IV mark-to-market method which is aimed at creating an assessment of the potential future credit exposure
- **Undrawn Commitments:** regulatory add on relating to off balance sheet undrawn commitments based on a credit conversion factor of 10% for unconditionally cancellable commitments and 100% for other commitments

Leverage ratio calculation

To provide an indication of the potential impact on Barclays, we have estimated our proforma CRD IV leverage ratio as at 31 December 2012. The CRD IV requirements when implemented will be based upon a three month average.

Impacts of Basel 3

Table 58: Leverage ratio as at 31 December 2012

Exposure measure	Adjusted Gross Leverage £m	Pro forma CRD IV Leverage £m
Cash and balances at central banks	86,175	86,175
Trading portfolio assets	145,030	145,030
Financial assets designated at fair value	46,061	46,061
Derivative financial instruments	469,146	469,146
Loans and advances to banks and customers	466,218	466,218
Reverse repurchase agreements and other similar secured lending	176,956	176,956
Available for sale investments	75,109	75,109
Goodwill and intangible assets	7,915	7,915
Other assets	17,711	17,711
Total assets	**1,490,321**	**1,490,321**
Netting adjustments for derivatives and SFTs	(387,672)	(394,908)
Collateral on derivatives	(46,855)	
Net settlement balances and cash collateral	(71,718)	
Regulatory deductions and other adjustments	(9,409)	(21,665)
Adjusted total tangible assets	**974,667**	
Potential Future Exposure on derivatives		160,550
Undrawn commitments		179,134
End point CRD IV Leverage exposure measure		**1,413,433**
Transitional adjustments to assets deducted from regulatory Tier 1 Capital		490
Transitional CRD IV Leverage exposure measure		**1,413,923**

Leverage ratio [1]	Tier 1 Capital £m	Leverage	Leverage (%)
CRD IV transitional measure	50,282	x 28	3.6%
CRD IV adjusted full end point measure [2]	49,578	x 29	3.5%
CRD IV full end point measure [2]	39,983	x 35	2.8%
Adjusted gross leverage	51,634	x 19	5.3%

[1] **CRD IV transitional measure**: based on Tier 1 Capital, allowing for both transitional treatment of deductions from common equity Tier 1 and transitional relief for grandfathered ineligible Tier 1 instruments. This is the measure of Tier 1 capital what will apply for capital ratio requirements. Leverage ratio requirements will not be mandatory until 2018.

CRD IV adjusted full end point measure: based on Tier 1 Capital, not allowing for transitional treatment of deductions from common equity Tier 1 but adding back ineligible Tier 1 instruments.

CRD IV full end point measure: based on fully loaded definition of Tier 1 Capital, not allowing for either transitional treatment of deductions from common equity Tier 1 or transitional relief for grandfathering ineligible Tier 1 instruments. In practice, our expectation is that ineligible Additional Tier 1 Capital, which qualifies for grandfathering under the transitional relief, will be replaced with eligible capital over time.

[2] In the event that the July 2011 CRD IV rules relating to maturity restrictions on hedging remain unchanged, the fully loaded Tier 1 capital position would reduce by approximately £4.8bn to £35.2bn, increasing CRD IV leverage to 32x on an adjusted full end point basis and to 40x on a full end point basis. However, we have identified management actions that would be taken in the event that the CRD IV draft requirements remain unchanged, and as a result we are highly confident that no capital deduction would be required.

Barclays approach to managing risks

Barclays approach to managing risks - Strategy

Risk management strategy

This section contains qualitative disclosures most relevant to the Pillar 3 framework to avoid duplication. Full disclosures of risk management frameworks are available on pages 314 to 343 of the 2012 Annual Report. See page 119 for more information on coverage of topics in the 2012 Annual Report and Pillar 3 report.

Risk Factors section in Annual Report pages 108 to 115 describe the material risks which the Group believes could cause its future results of operations, financial condition and prospects to differ materially from current expectations.

Barclays has clear risk management objectives and a well-established strategy to deliver them, through core risk management processes.

At a strategic level, our risk management objectives are to:

- Identify the Group's significant risks;
- Formulate the Group's risk appetite and ensure that business profile and plans are consistent with it;
- Optimise risk/return decisions by taking them as closely as possible to the business, while establishing strong and independent review and challenge structures;
- Ensure that business growth plans are properly supported by effective risk infrastructure;
- Manage risk profile to ensure that specific financial deliverables remain possible under a range of adverse business conditions; and
- Help executives improve the control and co-ordination of risk taking across the business.

The Group's approach is to provide direction on: understanding the principal risks to achieving Group strategy; establishing risk appetite; and establishing and communicating the risk management framework. The process is then broken down into five steps: identify, assess, control, report and manage/challenge. Each of these steps is broken down further, to establish end-to-end activities within the risk management process and the infrastructure needed to support it (see panel below). The Group's risk management strategy is broadly unchanged in 2012.

Steps	Activity
Identify	▪ Establish the process for identifying and understanding business-level risks.
Assess	▪ Agree and implement measurement and reporting standards and methodologies.
Control	▪ Establish key control processes and practices, including limit structures, impairment allowance criteria and reporting requirements. ▪ Monitor the operation of the controls and adherence to risk direction and limits. ▪ Provide early warning of control or appetite breaches. ▪ Ensure that risk management practices and conditions are appropriate for the business environment.
Report	▪ Interpret and report on risk exposures, concentrations and risk-taking outcomes. ▪ Interpret and report on sensitivities and Key Risk Indicators. ▪ Communicate with external parties.
Manage and Challenge	▪ Review and challenge all aspects of the Group's risk profile. ▪ Assess new risk-return opportunities. ▪ Advise on optimising the Group's risk profile. ▪ Review and challenge risk management practices.

Our risk culture

We have defined our Purpose as 'helping people achieve their ambitions – in the right way'. This is underpinned by five core values: Respect, Integrity, Service, Excellence and Stewardship.

Barclays risk culture is based on a close alignment with our businesses to support understanding, trust and openness together with clear independence to ensure strong challenge, rigorous, analytical and objective decision making and consistency across the bank. Risk is a shared responsibility between business and risk teams with the business operating as a 'first line of defence'.

This culture is operationalised and embedded in our organisational structure. Independent risk teams are in place within each of our major businesses to support close working relationships with and knowledge of business teams taking on the risk. These teams ultimately report to a Chief Risk Officer within each business who in turn reports both to the Group Chief Risk Officer and their business Chief Executive.

Barclays approach to managing risks - Strategy

A separate Group Risk team, including individually identified Principal Risk Owners for each Principal Risk, strengthens oversight and looks across the Group to ensure that for each Principal Risk, an overall risk appetite has been clearly defined and that required standards of risk management are being consistently delivered.

Following operational events that were identified in 2012, the Board of Barclays is undertaking a review of its business practices (the Salz review) and culture. Barclays Board and Executive Committee will consider the review's recommendations carefully, with the intention of implementing them in full. Barclays will publish an account of how it specifically intends to implement them a short time after the conclusion of the Review. The broader work at Barclays oriented at changing the Bank's culture will be particularly informed by the Review's recommendations.

Group Risk is also aligning its vision to support the Chief Executive's vision of becoming the 'Go-To' bank for all its stakeholders. Group Risk's mission is to deliver effective and then efficient risk management that is consistent with Barclays commercial objectives, through providing functional capability and control as well as independent and appropriate challenge at every level, from a single transaction to an aggregate portfolio view, while ensuring 'no surprises'. To achieve this mission the following guiding principles will be followed:

- Effectiveness and expertise;
- Operational excellence;
- Transparency, consistency and control;
- Balance risk and reward; and
- Independence

Assigning responsibilities

Responsibility for risk management resides at all levels within the Group, from the Board and the Executive Committee down through the organisation to each business manager and risk specialist. Barclays distributes these responsibilities so that risk/return decisions are taken at the most appropriate level; as close as possible to the business, and subject to robust and effective review and challenge. The responsibilities for effective review and challenges reside with senior managers, risk oversight committees, the independent Group Risk function, the Board Risk Committee and, ultimately, the Board.

The Board is responsible for approving risk appetite (see page 80), which is the level of risk the Group chooses to take in pursuit of its business objectives. The Chief Risk Officer regularly presents a report to the Board summarising developments in the risk environment and performance trends in the key portfolios. The Board is also responsible for the Internal Control and Assurance Framework (Group Control Framework). It oversees the management of the most significant risks through the regular review of risk exposures and related key controls. Executive management responsibilities relating to this are set via the Group's Principal Risks Policy.

The Board Risk Committee (BRC) monitors the Group's risk profile against the agreed appetite. Where actual performance differs from expectations, the actions being taken by management are reviewed to ensure that the BRC is comfortable with them. After each meeting, the Chair of the BRC prepares a report for the next meeting of the Board. Barclays first established a separate Board Risk Committee in 1999 and all members are non-executive directors. The Finance Director and the Chief Risk Officer attend each meeting as a matter of course. The BRC receives regular and comprehensive reports on risk methodologies and the Group's risk profile including the key issues affecting each business portfolio and forward risk trends. The Committee also commissions in-depth analyses of significant risk topics, which are presented by the Chief Risk Officer or senior risk managers in the businesses.

The Chair of the Committee prepares a statement each year on its activities (see pages 56 to 58 of the 2012 Annual Report).

The Board Audit Committee receives quarterly reports on control issues of significance and a half-yearly review of the adequacy of impairment allowances, which it reviews relative to the risk inherent in the portfolios, the business environment, the Group's policies and methodologies and the performance trends of peer banks. The Chair of the Board Audit Committee also sits on the BRC.

See pages 52 to 55 of the 2012 Annual Report for additional details on the membership and activities of the Board Audit Committee.

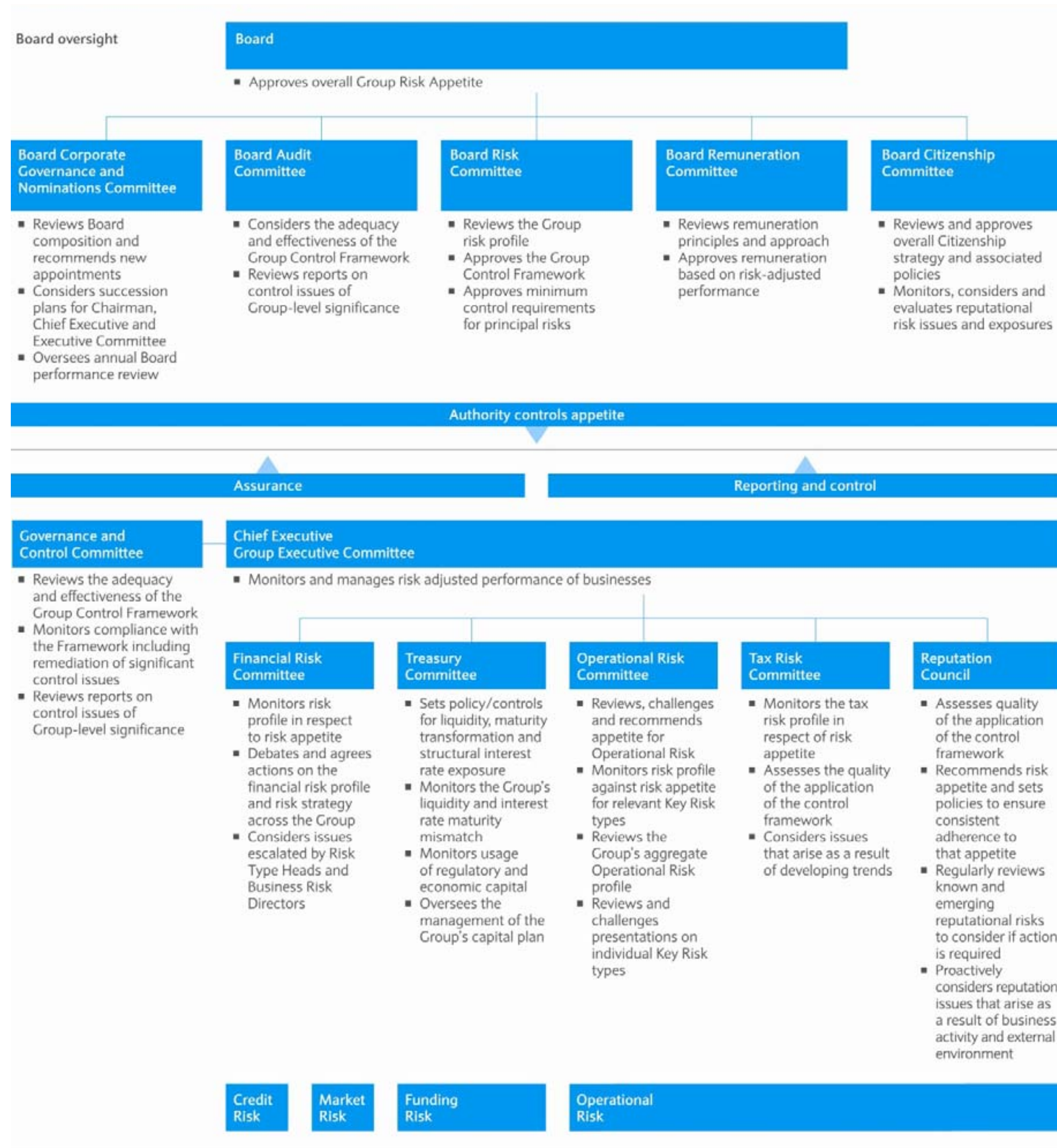
The Board Remuneration Committee receives a detailed report on risk management performance from the BRC which is considered in the setting of performance objectives in the context of incentive packages.

See pages 72 to 103 of the 2012 Annual Report for additional details on membership and activities of the Board Remuneration Committee.

Summaries of the relevant business, professional and risk management experience of the Directors of the Board are given on pages 67 to 69 of the 2012 Annual Report. The terms of reference for each of the principal Board Committees are available from the Corporate Governance section at: http://group.barclays.com/About-us/Management-structure/Corporate-governance.

Barclays approach to managing risks - Strategy

The Chief Risk Officer is a member of the Executive Committee and has overall day-to-day accountability for risk management under delegated authority from the Chief Executive. The Chief Executive must consult the Chairman of the Board Risk Committee in respect of the Chief Risk Officer's performance appraisal and compensation as well as all appointments to or departures from the role.



In order to strengthen the Board-level governance over conduct risk and reputation matters we have created a Board Conduct, Reputation and Operational Risk Committee in 2013. As a consequence the Board Risk Committee now has oversight of credit, market and funding risk matters and has been renamed the Board Financial Risk Committee.

The Chief Risk Officer manages the independent Group Risk function and chairs the Financial Risk Committee and the Operational Risk Committee, which monitor the Group's financial and non-financial risk profile relative to established risk appetite. Reporting to the Chief Risk Officer, and working in the Group Risk function, are risk-type heads for retail credit risk, wholesale credit risk, market risk, operational risk and fraud risk. Along with their teams, the risk-type heads are responsible for establishing a Group-wide framework for oversight of the risks and controls

Barclays approach to managing risks - Strategy

of their risk type. These risk-type teams liaise with each business as part of the monitoring and management processes.

In addition, each business has an embedded risk management function, headed by a Business Chief Risk Officer (BCRO). BCROs and their teams are responsible for assisting business heads in the identification and management of their business risk profiles and for implementing appropriate controls. These teams also assist Group Risk in the formulation of Group policies and their implementation across the businesses. The business risk directors report jointly to their respective business heads and to the Chief Risk Officer.

The risk type heads within the central Group Risk function and the BCROs within the businesses report to the Chief Risk Officer and are members of the Financial Risk Committee or Operational Risk Committee as appropriate.

For further details on the management of each of the Principal Risks, see pages 320 to 343 of the Annual Report.

Internal Audit is responsible for the independent review of risk management and the control environment. Its objective is to provide reliable, valued and timely assurance to the Board and Executive Management over the effectiveness of controls, mitigating current and evolving high risks and in so doing enhancing the controls culture within the Group. The Board Audit Committee reviews and approves Internal Audit's plans and resources, and evaluates the effectiveness of Internal Audit. An assessment by external advisers is also carried out periodically.

In addition to the committees shown in the chart, there is a Board Citizenship Committee which reviews emerging issues with potentially significant reputational impact and looks at contribution to growth in the real economy, creating jobs, supporting sustainable growth and supporting communities through investment programmes and efforts of employees.

Principal Risks policy

Risk management responsibilities are laid out in the Principal Risks policy, which covers the categories of risk in which Barclays has its most significant actual or potential risk exposures.

The Principal Risks Framework:

- creates clear ownership and accountability;
- ensures the Group's most significant risk exposures are understood and managed in accordance with agreed risk appetite (for financial risks) and risk tolerances (for non-financial risks); and
- ensures regular reporting of both risk exposures and the operating effectiveness of controls.

Each Principal Risk comprises individual Key Risk Types. The four[1] Principal Risks are: Credit, Market, Funding and Operational, each owned by a senior executive within the Group Risk function known as the Group Principal Risk Owner. The first three Principal Risks are risks that Barclays actively seeks to manage and have direct income implications. The fourth Principal Risk relates to operational risks, exposure to which arises directly from undertaking business processes in support of Barclays activities, and which the Group seeks to minimise. There was no material change to this policy in 2012.

The five risk management steps required by the Principal Risks Policy are: Identify, Assess, Control, Report, and Manage and Challenge (see page 76 for more detail).

Each Key Risk is owned by a senior individual known as the Group Key Risk Owner who is responsible for proposing a risk appetite statement and managing the risk in line with the Principal Risks Policy. This includes the documentation, communication and maintenance of a risk control framework which makes clear, for every business across the firm, the mandated control requirements in managing exposures to that Key Risk.

These control requirements are given further specification, according to the business or risk type, to provide a complete and appropriate system of internal control.

Business function heads are responsible for obtaining ongoing assurance that the key controls they have put in place to manage the risks to their business objectives are operating effectively. Six-monthly reviews support the regulatory requirement for Barclays to make an annual external statement about its system of internal controls.

Group Key Risk Owners report their assessments of the risk exposure and control effectiveness to Group-level oversight committees and their assessments form the basis of the reports that go to the Board Risk Committee (see chart above):

- Financial Risk Committee has oversight of Credit and Market Risks;
- Treasury Committee has oversight of Funding Risk; and,

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[1] Conduct Risk and Reputation Risk have been re-categorised as Principal Risks in 2013.

Barclays approach to managing risks - Strategy

- Operational Risk Committee has oversight of all Operational Risk types, with the exception of Tax Risk, which is primarily overseen by the Tax Risk Committee.

Each Group Key Risk Owner also undertakes an annual programme of risk-based conformance reviews.

Risk management in the setting of strategy

The planning cycle is centred on the medium-term planning (MTP) process, performed once a year. This sets out the Group's objectives in detailed plans which take account of the likely business environment. The risk functions at Group and business levels are heavily involved in this process.

In addition to supporting transaction decisions, the measurement and control of credit, market, operational and other risks have considerable influence on Barclays strategy. The Board is solely responsible for approving the MTP, the associated risk appetite statement, and the capital plans. As such, the business plans of Barclays must incur a level of risk that falls within the Board's tolerance, or be modified accordingly. The Board Risk Committee (BRC) has been in place since 1999 and is devoted to review the firm's risk and make appropriate recommendations to the Board.

For details of the activities of the Board and the BRC in 2012 see pages 42 and 56 to 58 of the Annual Report.

The risk appetite and the Group-wide stress testing processes, described below, are closely linked to the MTP process and also support strategic planning and capital adequacy. The risk appetite process ensures that senior management and the Board understand the Plan's sensitivities to key risk types, and includes a set of mandate and scale limits to ensure the Group stays within appetite. Stress testing informs management on the impact to the business of detailed scenarios. Integral to the Group-wide stress testing process is a set of actions that management would take to mitigate the impact of a stress.

One of the main objectives of managing risk is to ensure that Barclays achieves an adequate balance between capital requirements and resources. The capital planning cycle is fully integrated within strategic planning.

MTP process

The MTP process, performed annually, requires each business unit to present its plans for business performance over the coming three years. Achieving the planned performance in each business is dependent upon the ability of the business to manage its risks. It is an iterative process featuring weekly reviews at the most senior levels as the plan is updated until final agreement. The output includes a detailed statement of the Group's strategy over the medium-term, as well as detailed financial projections.

Risk managers support the MTP by providing robust review and challenge of the business plans to ensure that the financial projections are internally consistent; achievable given risk management capabilities and that they present a suitable balance between risk and reward. This culminates in the Risk Executive Dialogue process in which the Chief Risk Officer and senior management in each of our businesses discuss the findings from the risk reviews, and changes to the business plans are mandated as necessary.

The business plans are prepared with reference to a consistent set of economic assumptions which are reviewed within Group Risk to ensure that they appropriately reflect emerging risk trends. They are used as baseline scenarios in the stress testing and risk appetite processes.

The output from the business plan forms the basis of all strategic processes. In particular, the plans comprise projections of capital resources and requirements given profit generation, dividend policy and capital issuance. Risk variables are also considered, most importantly in the forecasting of the Group's impairment charge, and in sensitivity analyses of the plans (which include risk appetite and stress testing).

Risk Appetite

Risk appetite is defined as the level of risk that Barclays is prepared to sustain whilst pursuing its business strategy, recognising a range of possible outcomes as business plans are implemented. Barclays framework combines a top-down view of its capacity to take risk with a bottom-up view of the business risk profile associated with each business area's medium-term plans. The appetite is ultimately approved by the Board.

Barclays has run a risk appetite process since 2004. The process is comprised of 'Financial Volatility' and 'Mandate and Scale'. The strategy and business activities are reflected in key performance metrics, which are dependent in large part on risk performance.

Barclays approach to managing risks - Strategy

Financial Volatility

Financial Volatility is defined as the level of potential deviation from expected financial performance that Barclays is prepared to sustain at relevant points on the risk profile. When setting appetite, management and the Board articulate the Group's strategy and summarise objectives in terms of key financial metrics. The Group's risk profile is assessed via a 'bottom-up' analysis of the Group's business plans to establish the volatility of the key metrics. If the projections entail too high a level of risk (i.e. breach the top-down financial objectives at the through-the-cycle, moderate or severe level), management will challenge each area to re-balance the risk profile to bring the bottom-up risk appetite back within top-down appetite. Performance against risk appetite usage is measured and reported to the Executive Committee and the Board regularly throughout the year.

Our top-down appetite is quantified through an array of financial performance and capital metrics which are reviewed on an annual basis. For 2012, the strategic metrics in the table below are set at three levels: budget, and stressed 'one in seven' and 'one in twenty-five'.

Measure relevant to strategy and risk	Link between strategy and risk profile
Profit before tax, Return on Equity, Return on RWAs	Fundamental economic and business indicators, which best describe the focus of our shareholders in terms of profitability and ability to use capital resources efficiently.
Loan loss rate (LLR)	Describes our credit risk profile and whether impairment is within our appetite.
Core Tier 1 and Leverage	Monitors our capital adequacy in relation to our capital plan.
Cash Dividends	Measures the risks of not being able to continue paying appropriate cash dividends.

To measure the risk entailed by the business plans, management estimates potential earnings volatility from each business under various scenarios:

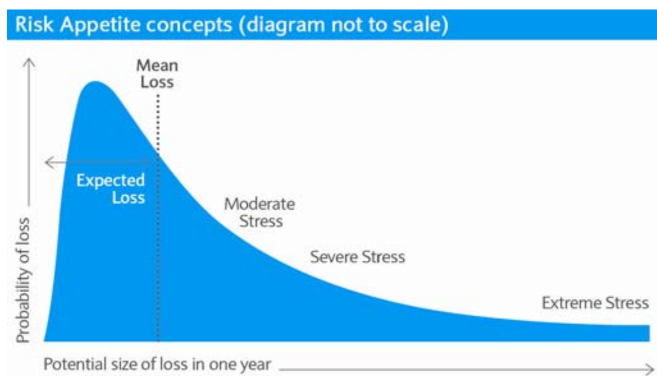
- through-the-cycle: the average losses based on measurements over many years;
- 1 in 7 (moderate) loss: the worst level of losses out of a random sample of 7 years; and
- 1 in 25 (severe) loss: the worst level of losses out of a random sample of 25 years.

These scenarios are defined more generically through a level of probability of occurrence rather than through a specific set of economic variables like in stress tests.

These potentially larger but increasingly less likely levels of loss are illustrated in the risk appetite concepts chart below. Since the level of loss at any given probability is dependent on the portfolio of exposures in each business, the statistical measurement for each key risk category gives the Group clearer sight and better control of risk-taking throughout the enterprise. Specifically, this framework enables it to:

- improve management confidence and debate regarding the Group's risk profile;
- re-balance the risk profile of the MTP where breaches are indicated, thereby achieving a superior risk-return profile;
- identify unused risk capacity, and thus highlight the need to identify further profitable opportunities; and
- improve executive management control and co-ordination of risk-taking across businesses.

Barclays approach to managing risks - Strategy



In summary, the stress levels represent the risk tolerance of Barclays in terms of its key objectives. These objectives act as constraints on risk performance and imply maximum levels of acceptable losses that are tracked quarterly and reported to the Board. Any breaches must be approved and remedial actions mandated.

Mandate and Scale

The second element to the setting of risk appetite in Barclays is an extensive system of Mandate and Scale limits, which is a risk management approach that seeks to formally review and control business activities to ensure that they are within Barclays mandate (i.e. aligned with expectations), and are of an appropriate scale (relative to the risk and reward of the underlying activities). Barclays achieves this by using limits and triggers to avoid concentrations which would be out of line with external expectations, and which may lead to unexpected losses of a scale that would be detrimental to the stability of the relevant business line or the Group. These limits are set by the independent risk function, formally monitored each month and subject to Board-level oversight.

For example, in our commercial property finance and construction portfolios, a comprehensive series of limits are in place to control exposure within each business and geographic sector. To ensure that limits are aligned to the underlying risk characteristics, the Mandate and Scale limits differentiate between types of exposure. There are, for example, individual limits for property investment and property development, and for senior and subordinated lending.

Barclays uses the Mandate and Scale framework to:

- limit concentration risk;
- keep business activities within Group and individual business mandate;
- ensure activities remain of an appropriate scale relative to the underlying risk and reward; and
- ensure risk-taking is supported by appropriate expertise and capabilities.

As well as Group-level Mandate & Scale limits, further limits are set by risk managers within each business unit, covering particular portfolios.

Interaction of Risk Appetite with Business Strategy

The strategy and business activities are reflected in key performance metrics, which are dependent in large part on risk performance. Risk appetite, as described above, helps to ensure that the strategy is adaptable to various degrees of financial stress.

Each year our MTP process ensures that our appetite takes account of the strategy (detailed on page 314 of the 2012 Annual Report).

For further information on Risk Factors and the Operating and Business Environment, refer to pages 108 to 115 in the 2012 Annual Report.

Stress testing

Group-wide stress tests are an integral part of the annual MTP process and annual review of risk appetite to ensure that the Group's financial position and risk profile provide sufficient resilience to withstand the impact of severe economic stress.

The Board Risk Committee agrees the range of scenarios to be tested and the independent Group Risk function leads the process. Macroeconomic stress test scenarios are designed to be both severe and plausible and are tested against the FSA's scenario framework to ensure that they are appropriately conservative.

The following diagram summarises the process for designing and agreeing the scenarios to be run. The process includes Group Risk consultation with economists in the businesses. This ensures relevance of scenarios to our businesses and a consistent interpretation of the scenarios across the Group.

Barclays approach to managing risks - Strategy

At the Group level, stress test scenarios capture a wide range of macroeconomic variables that are relevant to assess the impact of the stress scenario on our portfolios. This includes for example, GDP, unemployment, asset prices, foreign exchange rates and interest rates. Economic parameters are set using expert judgement and historical and quantitative analysis to ensure coherence and appropriate severity.

The stress testing process is detailed and comprehensive using bottom-up analysis performed by each of Barclays businesses. It includes all aspects of the Group's balance sheet across all risk types and is forward looking over a five year period. Our stress testing approach combines running statistical models with expert judgement to ensure the results accurately reflect the impact of the stress.

The businesses' stress test methodologies and results are subject to a detailed review and challenge both within the businesses (including review and sign-off by business Chief Risk Officers) and by Head Office Functions. The stress test results are presented for review by the Executive Committee and Board Risk Committee, and are also shared with the Board and the FSA. The results of our H2 2012 internal Group-wide stress test exercise show that the Group's profit before tax remains positive under the modelled severe global stress scenario, with the Group remaining well capitalised above the required regulatory minimum level.

A key objective of the Group-wide stress test process is to identify and document management actions that would be taken to mitigate the impact of stress. The bottom-up process ensures all levels of management are informed of the impact of the stress scenarios and are aware of appropriate management actions to be taken when a stress event occurs.

In addition, the framework also includes reverse stress testing techniques which aim to identify the circumstances under which our business model would become no longer viable, leading to a significant change in business strategy. Examples include extreme macroeconomic downturn scenarios (such as a break-up of the Euro area) or specific idiosyncratic events.

Reverse stress testing is used to help support ongoing risk management and is fully integrated into our risk appetite framework. For example, our reverse stress testing methodology includes identifying tail risks associated with specific (low likelihood) circumstances, and identifying appropriate mitigating actions.

Barclays also uses stress testing techniques at portfolio and product level to support risk management. For example, portfolio management in the US cards business employs stressed assumptions of unemployment to determine profitability hurdles for new accounts. In the UK mortgage business, affordability thresholds incorporate stressed estimates of interest rates. In the Investment Bank, global scenario testing is used to gauge potential losses that could arise in conditions of extreme market stress. Stress testing is also conducted on positions in particular asset classes, including interest rates, commodities, equities, credit and foreign exchange.

Information on the Group's stress testing specifically relating to liquidity risk is set out on pages 172 to 174 of the 2012 Annual Report. Further information on market risk stress testing is provided on pages 156 and 157 of the 2012 Annual Report.

Measurement of capital requirements

Regulatory capital requirements are calculated on the basis of Pillar 1 and Pillar 2 of the Basel framework. Pillar 1 capital covers credit, market and operational risks. The calculation methods (including formulae and ratings per exposure category) are specified by Basel 2 rules. Pillar 2 capital can also be held against the three risk types above, but mainly covers other types of risk. Barclays uses its own internal economic capital framework and stress testing processes to help determine Pillar 2 capital, though the final decision rests with the regulator.

Barclays calculates economic capital requirements based on its own internal framework, which is regularly enhanced and benchmarked to external reference points. It therefore represents the Group's view of the risk profile of the firm. While it is used to support the assessment of Pillar 2 regulatory requirements, its main purpose is to drive business decision-making. The Group assigns economic capital primarily within the following risks: retail and wholesale credit risk, market risk, operational risk, fixed assets, private equity and pension risk.

More information on economic capital can be found on page 171 of the Annual Report.

Barclays approach to managing risks – Credit risk

Credit risk management

Credit risk is the risk of suffering financial loss should any of the Group's customers, clients or market counterparties fail to fulfil their contractual obligations to the Group. The granting of credit is one of the Group's major sources of income and, as the most significant risk, the Group dedicates considerable resources to its control.

Credit risk management is discussed in detail on pages 321 to 331 of the Annual Report.

Overview

The credit risk that the Group faces arises mainly from wholesale and retail loans and advances together with the counterparty credit risk arising from derivative contracts entered into with our clients. Other sources of credit risk arise from trading activities, including debt securities; settlement balances with market counterparties, available for sale assets and reverse repurchase loans.

Credit risk management objectives are to:

- maintain a framework of controls to ensure credit risk-taking is based on sound credit risk management principles;
- identify, assess and measure credit risk clearly and accurately across the Group and within each separate business, from the level of individual facilities up to the total portfolio;
- control and plan credit risk-taking in line with external stakeholder expectations and avoiding undesirable concentrations;
- monitor credit risk and adherence to agreed controls; and
- ensure that risk-reward objectives are met.

Organisation and structure

Barclays has structured the responsibilities of credit risk management so that decisions are taken as close as possible to the business, whilst ensuring robust review and challenge of performance, risk infrastructure and strategic plans. The credit risk management teams in each business are accountable to the business risk directors in those businesses who, in turn, report to the heads of their businesses and also to the Chief Risk Officer.

The responsibilities of the credit risk management teams in the businesses include: sanctioning new sources of risk; monitoring risk against limits and other parameters; ensuring all elements of post sanction fulfilment are completed in line with terms of the sanction; maintaining robust systems, data gathering, quality, storage and reporting methods for effective credit risk management; and performing effective turnaround and workout scenarios via dedicated restructuring and recoveries teams.

Credit risk approval is undertaken by experienced credit risk professionals operating within a clearly defined delegated authority framework, with only the most senior credit officers entrusted with the higher levels of delegated authority. The largest credit exposures are approved at the Credit Committee which is managed by Group Risk. In the wholesale portfolios, credit risk managers are organised in sanctioning teams by geography, industry and/or product.

The role of the Group Risk function is to provide Group-wide direction, oversight and challenge of credit risk-taking. Group Risk sets the Credit Risk Control Framework, which provides a structure within which credit risk is managed together with supporting Group Credit Risk Policies. Group Risk also provides technical support, review and validation of credit risk measurement models across the Group.

Barclays approach to managing risks – Credit risk

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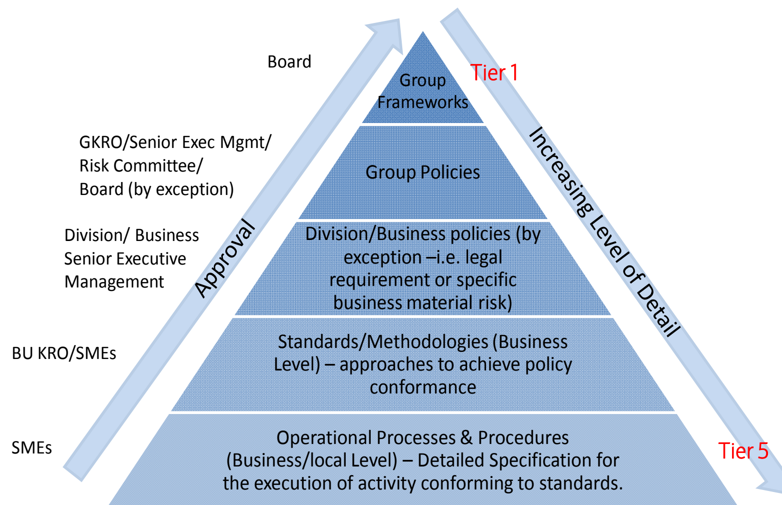


Group credit risk policies currently in force include:

- Model Risk Policy to specify guidelines and standards for models and their use in estimating credit risk
- Maximum Exposure Guidelines to limit the exposures to an individual customer or counterparty;
- Country risk policies to specify Risk Appetite by country and avoid excessive concentration of credit risk in individual countries;
- Aggregation Policy to set out the circumstances in which counterparties should be grouped together for credit risk purposes;
- Expected loss policies to set out the approaches for the calculation of the Group's expected loss, i.e. measure of anticipated loss for exposures;
- Forbearance and Loss Recognition policy for setting the standards for forbearance programmes within retail portfolios; and
- Impairment and provisioning policies to ensure that measurement of impairment accurately reflects incurred losses and that clear governance procedures are in place for the calculation and approval of impairment allowances.

Group Risk also manages and approves the Mandate and Scale limits and triggers which mitigate concentration risk and define appetite in risk sensitive areas of the portfolio such as commercial property finance.

The principal committees that review credit risk management, approve overall Group credit policy and resolve all significant credit policy issues are the Board Risk Committee, the Financial Risk Committee, the Wholesale Credit Risk Management Committee and the Retail Credit Risk Management Committee. Senior Group and business risk management are represented on the Financial Risk Committee, the Wholesale Credit Risk Management Committee and the Retail Credit Risk Committee.

On a semi-annual basis, the Credit Risk Impairment Committee (CRIC) obtains assurance on behalf of the Group that all businesses are recognising impairment in their portfolios accurately, promptly and in accordance with policy, accounting standards and established governance.

CRIC is chaired by the Group Credit Risk Director and reviews the movements in impairment, including those already agreed at Credit Committee, as well as potential credit risk loans, loan loss rates, asset quality metrics and impairment coverage ratios.

CRIC makes twice-yearly recommendations to the Board Audit Committee on the adequacy of Group impairment allowances. Impairment allowances are reviewed relative to the risk in the portfolio, business and economic trends, current policies and methodologies, and the Group's position relative to peer banks.

Barclays approach to managing risks – Credit Risk (IRB approach)

Internal Ratings Based (IRB) approach

This approach relies on the bank's internal models to derive risk weights. The IRB approach is divided into two alternative applications, Advanced and Foundation:

- Advanced IRB (AIRB): Barclays uses its own estimates of probability of default (PD), loss given default (LGD) and credit conversion factor to model a given risk exposure;
- Foundation IRB: Barclays applies its own PD as for Advanced, but it uses standard parameters for the LGD and the credit conversion factor. The Foundation IRB approach is specifically designed for wholesale credit exposures. Hence retail, equity, securitisation positions and non-credit obligations asset exposures are treated under Standardised or AIRB.

Measurement, reporting and internal ratings under the IRB approach

The principal objective of credit risk measurement is to produce the most accurate possible quantitative assessment of the credit risk to which the Group is exposed, from the level of individual facilities up to the total portfolio. Integral to this is the calculation of internal ratings, which are used in many aspects of credit risk management and in the calculation of regulatory and economic capital. The key building blocks of this process are:

- Probability of default (PD);
- Exposure at default (EAD); and
- Loss given default (LGD).

See Table 7 on page 13 for a summary of the coverage of the IRB approach.

For example, Barclays can assign an expected loss over the next 12 months to each customer by multiplying these three factors. We calculate probability of default (PD) by assessing the credit quality of borrowers and other counterparties. For the sake of illustration, suppose a customer has a 5% probability of defaulting over a 12-month period.

The exposure at default (EAD) is our estimate of what the outstanding balance will be if the customer does default. Supposing the current balance is £200,000, our models might predict a rise to £250,000 by then. Should customers default, some part of the exposure is usually recovered. The part that is not recovered, together with the economic costs associated with the recovery process, comprise the loss given default (LGD), which is expressed as a percentage of EAD. Supposing the LGD in this case is estimated to be 40%, the expected loss for this customer is: 5% x £250,000 x 40% or £5,000.

To calculate probability of default (PD), Barclays assesses the credit quality of borrowers and other counterparties and assigns them an internal risk rating. Multiple rating methodologies may be used to inform the overall rating decision on individual large credits, such as internal and external models, rating agency ratings and other market information. For smaller credits, a single source may suffice such as the result from an internal rating model. Barclays recognises the need for two different expressions of PD depending on the purpose for which it is used. For the purposes of calculating regulatory and economic capital, long-run average through-the-cycle (TTC) PDs are required. However, for the purposes of pricing and existing customer management, PDs should represent the best estimate of probability of default given the current position in the credit cycle. Hence, point-in-time (PIT) PDs are also required.

Each PD model outputs an estimate of default probability that is PIT or TTC. Bespoke conversion techniques, appropriate to the portfolio in question, are then applied to convert the model output to pure PIT and TTC PD estimates. In deriving the appropriate conversion, industry and location of the counterparty and an understanding of the current and long-term credit conditions are considered. Both PIT and TTC PD estimates are recorded for each client.

Within Barclays, the calculation of internal ratings differs between wholesale and retail customers. For wholesale portfolios, the rating system is constructed to ensure that a client receives the same rating regardless of the part of the business with which it is dealing. To achieve this, a model hierarchy is adopted which requires users to adopt a specific approach to rating each counterparty depending upon the nature of the business and its location. A range of methods are utilised for estimating wholesale counterparty PDs. These include bespoke grading models developed within the Group (internal models), vendor models such as MKMV Credit Edge and RiskCalc, and a conversion of external alphabet ratings from either S&P or Moody's. Retail models, especially those used for capital purposes, are almost exclusively built internally using Barclays data. In many cases bureau data is used to complement internal data. In addition, in some low data/low default environments, external developments may also be utilised.

A key element of the Barclays wholesale framework is the PD Masterscale (see page 33). This scale has been developed to distinguish meaningful differences in the probability of default risk throughout the risk range. In contrast to wholesale businesses, retail areas rarely bucket exposures into generic grades for account management purposes (although they may be used for reporting purposes). Instead, accounts are managed at a more granular and bespoke level.

Barclays approach to managing risks – Credit Risk (IRB approach)

Exposure at default (EAD) represents the expected level of usage of the credit facility should default occur. At the point of default, the customer exposure can vary from the current position due to the combined effects of additional drawings, repayment of principal and interest and fees. EAD parameters are all derived from internal estimates and are determined from internal historical behaviour. The lower bound of EAD for regulatory capital purposes is the current balance at calculation of EAD. For derivative instruments, exposure in the event of default is the estimated cost of replacing contracts where counterparties have incurred obligations which they have failed to satisfy.

Should a customer default, some part of the exposure is usually recovered. The part that is not recovered, the actual loss, together with the economic costs associated with the recovery process, comprise the loss given default (LGD), which is expressed as a percentage of EAD. The Group estimates an average LGD using historical information. The level of LGD depends principally on: the type of collateral (if any); the seniority or subordination of the exposure; the industry in which the customer operates (if a business); the length of time taken for the recovery process and the timing of all associated cash flows; and the work-out expense. The outcome is also dependent on economic conditions that may determine, for example, the prices that can be realised for assets, whether a business can readily be refinanced or the availability of a repayment source for personal customers. For the purposes of regulatory capital an adjustment is made to the modelled LGD to account for the increased losses experienced under downturn conditions, giving a downturn LGD.

Page 33 shows the relationship between the financial statements description and external ratings on listed or unlisted debt securities. The relationship between internal and external ratings changes through time, and therefore a comparison is only indicative.

Applications of internal ratings

The three components described – the PD, EAD and LGD – are building blocks used in a variety of applications that measure credit risk across the entire portfolio. These parameters can be calculated to represent different aspects of the credit cycle:

- PD estimates can be calculated on a through-the-cycle (TTC) basis, reflecting the predicted default frequency in an average 12 month period across credit cycle, or on a point-in-time (PIT) basis, reflecting the predicted default frequency in the next 12 months
- LGD and EAD estimates can be calculated as downturn measures, reflecting behaviour observed under stressed economic conditions, or as business-as-usual (BAU) measures, reflecting behaviour under actual conditions

These parameters, in suitable combination, are used in a wide range of credit risk measurement and management. We use internal ratings for the following purposes:

- Credit approval: PD models are used in the approval process in both retail and wholesale portfolios. In high-volume retail portfolios, application and behaviour scorecards are frequently used as decision making tools. In wholesale and some retail mortgage portfolios, PD models are used to direct applications to an appropriate credit sanctioning level
- Credit grading: originally introduced in the early 1990s to provide a common measure of risk across the Group. Wholesale credit grading now employs a 21 point scale of default probabilities. These are shown in Table 22 on page 33. Risk-reward and Pricing: PD, EAD and LGD metrics are used to assess the profitability of deals and portfolios and to allow for risk-adjusted pricing and strategy decisions
- Risk appetite: measures of expected loss and the potential volatility of loss are used in the Group's Risk Appetite framework
- Impairment calculation: under IAS 39, many of our collective impairment estimates incorporate the use of our PD and LGD models, adjusted as necessary
- Collections and recoveries: model outputs are used to identify segments of the portfolio where collection and recovery efforts should be prioritised
- Economic capital (EC) calculation: most EC calculations use the same PD and EAD inputs as the regulatory capital (RC) process. The process also uses the same underlying LGD model outputs as the RC calculation, but does not incorporate the same economic downturn adjustment used in RC calculations
- Risk management information: Group Risk and the business units generate risk reports to inform senior management on issues such as the business performance, Risk Appetite and consumption of EC. Model outputs are used as key indicators in those reports

The control mechanisms for the rating system

Each of the business risk teams is responsible for the design, oversight, continuous monitoring and performance of the individual credit rating models for PD, LGD and EAD. Each customer or facility is allocated an estimated PD, LGD and an EAD, which is used in the credit rating system for a particular customer within each asset class. Group-wide risk framework with underlining policies, standards and operational processes in each of these business areas are set by Group Risk and are governed through a series of committees with responsibility for effectively measuring and quantifying Barclays risk modelling and credit measurement methodologies.

Barclays approach to managing risks – Credit Risk (IRB approach)

Model governance standards apply to ratings models to ensure that principal risks faced by Barclays are appropriately managed under the Credit Risk Control Framework. The Group Model Risk Policy (GMRP) is managed by the independent Group Risk function. The GMRP sets Group-wide minimum standards for model development and the implementation process. This includes model documentation, data quality requirements, validation and testing requirements, implementation testing, model use and model monitoring and reporting. The GMRP also sets the governance processes for all models used in the Group, which includes model performance and risk to be monitored, which help to identify and if necessary further investigate any potential issues at an early stage. Specifically, models must:

- Be built to represent real-world interactions as closely and transparently as possible.
- Have their intended use, performance and limitations communicated to all relevant users and stakeholders.
- Be documented to allow others to assess choice of methodology, to replicate key analyses and to assess the validity of assumptions.
- Implemented and continuously maintained ensuring use in the manner intended.
- Be regularly challenged, tested and verified to pass the tests for "fit for purpose" and continued use.
- Be monitored regularly to prove that they measure and perform as intended.
- Be subject to increased requirements and tighter controls as materiality increases.
- Be assessed and reported as individual model risk and aggregate model risk.
- Have any-related material issues put forward to the relevant committee for discussion and resolution.
- Be subject to governance to ensure that the above principles are followed.

To apply the governance standards, an independent unit reviews and validates the models. Reports are then taken through a technical and business committee, where model owners, practitioners and technical experts discuss performance issues. Depending on the models' materiality the model is taken further to more senior committees.

To ensure that the governance process is effective, and that management time is focused on the more material models, each model is assigned a materiality rating. The GMRP defines the materiality ranges for all model types, based on an assessment of the impact that a model error would have on the Group. For instance, the materiality measure for wholesale PD, LGD and EAD models is EL(Expected Loss). An EL above £50m defines a model as "Materiality A", while an EL above £25 defines it as "Materiality B". The final level of model sign-off is based on materiality, with all of a business unit's models initially being approved in business unit committees. The more material models are also approved at the Group Material Models Technical Committee, and the most material models require further approval by the Executive Models Committee, a sub-committee of Group Executive Committee.

Although the final level of model sign-off will vary, depending on model materiality, the standards required by the GMRP do not change with the materiality level. This process ensures that the most significant models are subject to the most rigorous review, and that senior management has a good understanding of the most material models in the Group.

The GMRP sets detailed standards that a model must meet during development and subsequent use. For new models, documentation must be sufficiently detailed to allow an expert to understand all aspects of model development such that they could reproduce the model. It must include a description of the data used for model development, the methodology used (and the rationale for choosing such a methodology), a description of any assumptions made, and details of the strengths and weaknesses of the model.

All new models are subject to validation and independent review before they can be signed off for implementation. The model validation exercise must demonstrate that the model is fit for purpose and provides accurate estimates. This includes deep-dive validation using model documentation and data to replicate analysis and testing of production data and systems. The independent review ensures that the model development has followed a robust process and that the standards of the GMRP have been met, as well as ensuring that the model satisfies business and regulatory requirements. This includes challenging model methodology, documentation, model assumptions and confirmation that policy requirements are met with the model owner. In addition, the most material models are subject to independent review by Group Risk. Once implemented, all models are subject to post-implementation review. This is to ensure that the model has been implemented correctly and produces output as predicted for a range of test cases.

All implemented models within the Group are subject to ongoing performance monitoring to ensure that any deficiencies are identified early, and that remedial action can be taken before the decision-making process is affected. For instance:

- The models can be reweighted to reflect a different influencing factors distribution
- Buffers can be put in place to drive more conservative capital calculations, and taking account of the impact on decision processes involving risk, pricing and reporting.

Barclays approach to managing risks – Credit Risk (IRB approach)

As part of this process, model owners set performance triggers and define appropriate actions for their models in the event that a trigger level is breached. Trigger levels are agreed for various models and sub-business units which reflect the current levels plus an agreed margin.

In addition to regular monitoring, models are subject to an annual validation process to ensure that they will continue to perform as expected, and that assumptions used in model development are still appropriate. In line with initial sign-off requirements, annual validations are also formally reviewed at the appropriate technical committee.

Within Barclays Investment Bank, where models are used to value positions within the trading book, the positions are subject to regular independent price testing. Prices are compared with direct external market data where possible. When this is not possible, analytical techniques are used, such as industry consensus pricing services. These services enable peer banks to compare structured products and model-input parameters on an anonymous basis. The conclusions and any exceptions to this exercise are communicated to senior levels of business management.

Externally developed models are subject to the same governance standards as internal models, and must be approved for use following the validation and independent review process. External models are also subject to the same standards for ongoing monitoring and annual validation requirements.

Through their day-to-day activities, key senior management in Group Credit Risk, the businesses and the business risk teams have a good understanding of the operation and design of the rating systems used.

The respective business risk heads or equivalents are responsible for supplying a robust rating system.

The bank ensures that senior executives at Group level (including the Chief Risk Officer, credit risk director and wholesale and retail credit risk directors) as well as in the businesses (including CEOs and managing directors in the relevant areas) understand the operation and design of the rating system used to assess and manage credit risk. This enables them to carry out their responsibilities effectively.

Ratings process

Barclays has established procedures in each business for using the rating system and the spectrum of rating models available to rate an individual customer. The procedures identify the specific customers, industries and asset classes that are covered by each rating model. This helps to ensure that each customer is rated with the most appropriate model.

A rating may deviate from the model-based only if the rating officer has additional information, for instance on the customer, the specific economic environment of an industry, country specific political events, etc. which affects the model estimated rating. In every such case, the rating officer must document and apply the override accordingly.

Some of the models used on wholesale customers, e.g. corporate, institutional and sovereign models used in the rating process are shared across businesses and are customer specific. For retail exposures, the ratings models are unique to the business and product type e.g. mortgages, credit cards, and consumer loans.

Ratings process: Wholesale approaches

To estimate ratings for wholesale customers a range of internal, external and bespoke models have been built or acquired, remodelled, and adjusted to enable the process of estimation. These models encompass both statistical and expert judgement models, using qualitative and quantitative information.

To construct ratings for institutions, corporates, specialised lending, purchased corporate receivables and equity exposures, we use external models, rating agencies and internally constructed models. The applicability of each of these approaches to our customers has been validated by us to internal rating standards (see "The control mechanisms for the rating system" section above). The data used in validating these primary indicators are representative of the population of the bank's actual obligors and exposures and its long-term experience.

Internally built PD models are widely used. We employ a range of methods in the construction of these models. The basic types of PD modelling approaches used are:

- Structural
- Expert lender
- Statistical

Structural models incorporate in their specification the elements of the industry-accepted Merton framework to identify the distance to default for a counterparty. This relies upon the modeller having access to specific time series data or data proxies for the portfolio. Data samples used to build and validate these models are typically constructed by appropriately combining data sets from internal default observations with comparable externally obtained data sets from commercial providers such as rating agencies and industry data gathering consortia.

Barclays approach to managing risks – Credit Risk (IRB approach)

Expert lender models are used for parts of the portfolio where the risk drivers are specific to a particular counterparty, but where there is insufficient data to support the construction of a statistical model. These models utilise the knowledge of credit experts that have in depth experience of the specific customer type being modelled.

For any of the portfolios where we have a low number of default observations we adopt specific rules to ensure that the calibration of the model meets the current Basel and FSA criteria for conservatism. For example, the FSA have recently imposed a 45% floor for unsecured Sovereign LGD exposure.

Statistical models such as behavioural and application scorecards are used for our high volume portfolios such as Small/Medium Enterprises (SME). The model builds typically incorporate the use of large amounts of internal data, combined with supplemental data from external data suppliers. Wherever external data is sourced to validate or enhance internally held data, similar data quality standards to those applicable to the management of internal data are enforced.

In wholesale portfolios, the main approaches to calculating LGD aim to establish the effects of drivers (including industry, collateral coverage, recovery periods, seniority and costs) by looking at Barclays historical experience, supplemented with other external information where necessary. Estimates built using historical information are reviewed to establish whether they can be expected to be representative of future loss rates, and adjusted if necessary.

In a similar fashion, wholesale EAD models estimate the potential utilisation of headroom based on historical information also considering the future outlook of client behaviour.

Typically, modellers do not reconfigure external data before using it as input to the model estimation or validation procedure.

Ratings process: Retail approaches

Our retail banking and cards operations have long and extensive experience of using credit models in assessing and managing risks. As a result, models play an integral role in customer approval and management decisions.

Models utilised include PD models, mainly in the form of application and behavioural statistical scorecards, as well as LGD and EAD models.

Application scorecards are derived from historically observed performance of new clients. They are built using customer demographic and financial information, supplemented by credit bureau information where available. Through statistical techniques (known as regression analysis), the relationship between these candidate variables and the default marker is quantified to produce output scores reflecting a PD. These scores are used primarily for new customer decisioning but are, in some cases, also used to allocate a PD to new customers for the purpose of capital calculation.

Behavioural scorecards are derived from the historically observed performance of existing clients as well as being supplemented by the same data as is used for application scoring. The techniques used to derive the output are the same as for application scoring. The output scores are used for existing customer management activities as well as for allocating a PD to existing customers for the purpose of capital calculation.

It is Barclays practice to embed Basel 2 models as extensively as possible in the portfolio management process. We expect greater convergence over time as the rolling out of the Advanced IRB approach to remaining portfolios under the Standardised approach continues. However, in some cases there are sound business reasons for having models other than regulatory models for risk management.

EAD models within retail portfolios are split into two main methodological categories. The general methodology is to derive product level credit conversion factors (CCFs) from historical balance migrations. These are frequently further segmented at a delinquency bucket level. The most sophisticated EAD models are based on behavioural factors, determining customer level CCFs from characteristics of the individual facility.

Retail LGD models are built using bespoke methods chosen to best model the operational recovery process and practises. In a number of secured portfolios, LGD drivers are parameterised with market factors, which can be updated to capture market trends. For most unsecured portfolios, where recoveries are not based on collateral, statistical models are often used combining historical and projected cash flow data to estimate ultimate recoveries and LGDs. In all instances, cash flows are discounted to the point of default by using bespoke country and product level factors. For capital calculations, customised economic downturn adjustments are made to adjust losses to stressed conditions.

In situations where data scarcity precludes the statistically robust derivation of certain model parameters, appropriate assumptions are typically used which, wherever possible, are validated against internal and external experience.

Barclays approach to managing risks – Credit Risk (IRB approach)

Most retail models within Barclays are built in-house. Whilst most models are statistically or empirically derived, some expert lender models (similar to those described in the wholesale context) are used, particularly where data limitations preclude a more sophisticated approach.

Where models are used in the calculation of regulatory capital, the definition of default is in line with the regulatory definition of default requirements i.e. for UK portfolios the default definition is 180 days past due for personal lending and 90 days for business and wholesale loans, as well as other evidence of potential failure to pay.

The tables below shows key characteristics of significant models at Group level that drive the capital calculation.

- Table 59 for credit risk model characteristics shows modelled variables to calculate RWAs (PD, LGD, and EAD) at portfolio level, with number of models and their significance in terms of RWAs, model method or approach, numbers of years of data used, Basel asset class of the of the customer or client, and regulatory thresholds applied. It is Barclays policy to validate the models on an annual basis.
- Table 60 for counterparty credit risk and market risk model characteristics in the trading book shows modelled variables to calculate RWAs (for example VaR) at group level, with the number of models and their significance in terms of RWAs, model method or approach, date of model validation, market risk data used, and regulatory thresholds applied.

Barclays approach to managing risks – Credit Risk (IRB approach)

Table 59: AIRB credit risk models selected features

Component modelled	Portfolio	Number of significant models and size of associated portfolio (RWAs)	Model description and methodology	Number of years loss data	Basel asset classes measured	Applicable industry-wide regulatory thresholds
PD	Investment Bank and Corporate Bank - Large Corporates	Two models; £24.0bn	1. Model uses a Merton-based methodology. 2. Regression model. Inputs include client accounts data.	>10 years	Corporates	PD floor of 0.03%
	Investment Bank and Corporate Bank - Large Corporates, FI, and Sovereigns	One model; £24.0bn	"Rating Agency Equivalent" model converts agency ratings into estimated equivalent long-run historical default rates.	>10 years	Corporate, Financial Institutions and Sovereigns	PD floor of 0.03% for corporates and institutions
	Barclays Corporate - Mid Corporates	One model; £6.3bn	Regression model. Inputs include account behaviour/conduct data.	>10 years	Corporates	PD floor of 0.03%
	UK RBB - Home Finance	One model; £14.9bn	Statistical scorecards estimated using regression techniques. They are calibrated against long-run industry default data.	6-10 years	Residential Mortgages	PD floor of 0.03%
	UKRBB - Business Banking	Two models; £6.6bn	1. Local Business PD: Statistical scorecards calibrated against long-run default data. 2. Financial and Behavioural (FAB) PD behavioural scorecard model estimated using regression techniques. Inputs include conduct data at acccount level.	>10 years	Other Retail	PD floor of 0.03%
	Barclaycard - UK	One model; £9.1bn	Statistical scorecards estimated using regression techniques. They are calibrated against internal default data.	< 3years	Retail QRRE	PD floor of 0.03%
	Europe RBB - Spain Mortgages	One model; £4.1bn	Statistical scorecards calibrated against long-run industry default data.	6-10 years	Residential Mortgages	PD floor of 0.03%
	Africa RBB - Absa Home Loans (excluding Private One accounts)	One model; £4.9bn	Statistical scorecards calibrated against long-run industry default data.	>10 years	Residential Mortgages	PD floor of 0.03%
LGD	Investment Bank - Large Corporates, Financial Institutions and Sovereigns	One model; £49.0bn	Regression model that produces a downturn LGD (for regulatory capital) and a long run average LGD. Inputs include collateral and recoveries data.	3-5 years	Central government or central banks, Institutions, Corporates	A 45% floor for sovereign exposures is applicable as at year-end 2012.
	Barclays Corporate - Large Corporates, Mid Corporates UK RBB - Business Banking	One model; £37.3bn	Statistical model that predicts utilisation of undrawn exposure. It incorporates expert judgement input for off-balance sheet products.	3-5 years	Corporates Other Retail	
	UK RBB - Home Finance	One model; £14.9bn	Data driven estimates of loss and probability of possession are complemented with expert judgment where appropriate.	>10 years	Residential Mortgages	LGD floor of 10% at portfolio level.
	Barclaycard - UK	One model; £9.1bn	Statistical models combining regression and other forecasting techniques.	< 3years	Retail QRRE	
	Europe RBB - Spain Mortgages	One model; £4.1bn	Data driven estimates of loss and probability of possession are complemented with expert judgment where appropriate.	6-10 years	Residential Mortgages	LGD floor of 10% at portfolio level.
	Africa RBB - Absa Home Loans (excluding Private One accounts)	One model; £4.9bn	Data driven estimates of loss and probability of possession are complemented with expert judgment where appropriate.	>10 years	Residential Mortgages	LGD floor of 10% at portfolio level.
EAD	Investment Bank - Large Corporates, Financial Institutions and Sovereigns	One model; £30.5bn	Regression based model predicts Credit Conversion Factors that are used to derive EAD. They are calibrated and adjusted to different customer categories.	3-5 years	Central government or central banks, Institutions, Corporates	
	Barclays Corporate - Large Corporates, Mid Corporates UK RBB - Business Banking	One model; £37.9bn	Statistical model that predicts utilisation of undrawn exposure. It incorporates expert judgement input for off-balance sheet products.	3-5 years	Corporates Other Retail	
	UK RBB - Home Finance	One model; £14.9bn	Rule-based calculation validated using historical data.	>10 years	Residential Mortgages	EAD must be at least equivalent to current balance utilisation at account level.
	Barclaycard - UK	One model; £9.1bn	Statistical scorecards estimated using regression techniques. They are calibrated against internal default data.	< 3years	Retail QRRE	EAD must be at least equivalent to current balance utilisation at account level.
	Europe RBB - Spain Mortgages	One model; £4.1bn	Rule-based calculation validated using historical data.	6-10 years	Residential Mortgages	EAD must be at least equivalent to current balance utilisation at account level.
	Africa RBB - Absa Home Loans (excluding Private One accounts)	One model; £4.9bn	Historic data is used to determine a credit conversion factor, which is applied to the non-defaulted in appropriate cohorts to forecast EAD.	3-5 years	Residential Mortgages	EAD must be at least equivalent to current balance utilisation at account level.

Barclays approach to managing risks – Credit Risk (IRB approach)

Table 60: Market risk models selected features

Component modelled	Number of significant models and size of associated portfolio (RWAs)	Model description and methodology	Date model updated/validated	Number of years market data	Applicable regulatory thresholds for the industry
VaR	1 model; £12.6bn	Equally-weighted historical simulation of potential daily P&L arising from market moves	Model last reviewed by Executive Models Committee in January 2012. Model is subject to monthly monitoring by Investment Bank	2 year lookback	Regulatory VaR is computed with 10 day holding period and 99% confidence level
SVaR	1 model; £15.5bn	Same methodology as used for VaR model	Model last reviewed by Executive Models Committee in January 2012. Model is subject to monthly monitoring by Investment Bank	1 year period of significant stress, updated quarterly	Regulatory SVaR is computed with 10 day holding period and 99% confidence level
IRC	1 model; £7.3bn	Monte Carlo simulation of P&L arising from ratings migrations and defaults	Model last reviewed by Executive Models Committee in January 2012. Model is subject to monthly monitoring by Investment Bank	Model does not rely on historical data	IRC is computed with one year holding period and 99.9% confidence level
APR	1 model; £2.2bn	Monte Carlo simulation of P&L arising from ratings migrations and defaults and market-driven movements in spreads and correlations	Model last reviewed by Group Material Models Technical Committee in December 2012. Model is subject to monthly monitoring by Investment Bank.	Model does not rely on historical data	APR is computed with one year holding period and 99.9% confidence level. As required in CRD3, the APR charge is subject to a floor set with reference to standard rules charge
EAD on derivatives subject to counterparty credit risk charge	1 model; £30.1bn	Monte Carlo simulation of market factors and revaluation of derivative positions to assess expected exposure to counterparties on default	Model last reviewed by Group Material Models Technical Committee in May 2012. Model is subject to monthly monitoring by Investment Bank.	3 year lookback	Model is subject to some regulatory-specified parameters

Barclays approach to managing risks – Counterparty credit risk

Counterparty credit risk

Derivative Counterparty credit exposures

The Group buys and sells financial instruments that are traded or cleared on an exchange, including interest rate swaps, futures and options on futures. Holders of exchange traded instruments provide margin daily with cash or other security at the exchange, to which the holders look for ultimate settlement.

The Group also buys and sells financial instruments that are traded over the counter, rather than on a recognised exchange. These instruments range from standardised transactions in derivative markets, to trades where the specific terms are tailored to the requirements of the Group's customers. In many cases, industry standard documentation is used, most commonly in the form of a master agreement, with individual transaction confirmations. The existence of a signed master agreement is intended to give the Group protection in situations where a counterparty is in default.

Counterparty credit exposure arises from the risk that parties are unable to meet their payment obligations under certain financial contracts such as derivatives, securities financing transactions (e.g. repurchase agreements), or long settlement transactions.

Internal capital for counterparty credit risk is assessed and allocated based on the economic capital for wholesale credit risk calculation. The magnitude of the exposure is determined by considering the current mark to market of the contract, the historic volatility of the underlying asset and the time to maturity. This allows calculation of a Credit Equivalent Exposure (CEE) for such exposures. The total economic capital for a portfolio of such exposures is then calculated in a manner similar to a book of loans.

'Wrong-way risk' in a trading exposure arises when there is significant correlation between the underlying asset and the counterparty, which in the event of default would lead to a significant mark to market loss. When assessing the credit exposure of a wrong-way trade, analysts take into account the correlation between the counterparty and the underlying asset as part of the sanctioning process.

Adjustments to the calculated CEE are considered on a case by case basis. In the case of specific wrong-way risk trades, which are self-referencing or reference other entities within the same counterparty, specific approval by a senior credit officer is required.

See "Credit Risk Mitigation" section on page 95 for policies governing collateral management.

Where the Group calculates the exposure under the Standardised approach and the Internal Model Method, the impact of both netting and collateral is integral to the calculation of the exposure. These contract exposures are therefore only available on a net basis. Where the Group uses the mark to market approach, it is possible to identify the impact of netting and collateral.

Netting and collateral arrangements

Credit risk from derivatives is mitigated where possible through netting agreements whereby derivative assets and liabilities with the same counterparty can be offset. Group policy requires all netting arrangements to be legally documented. The ISDA Master Agreement is the Group's preferred agreement for documenting over the counter (OTC) derivatives. It provides the contractual framework within which dealing activities across a full range of OTC products are conducted and contractually binds both parties to apply close-out netting across all outstanding transactions covered by an agreement if either party defaults or other predetermined events occur. The majority of the Group's OTC derivative exposures (excluding those cleared via a central clearing counterparty) are covered by ISDA master netting and ISDA Credit Support Annex (CSA) collateral agreements.

Collateral is obtained against derivative assets, depending on the creditworthiness of the counterparty and/or nature of the transaction. Any collateral taken in respect of OTC trading exposures will be subject to a 'haircut' which is negotiated at the time of signing the collateral agreement. A haircut is the valuation percentage applicable to each type of collateral and will be largely based on liquidity and price volatility of the underlying security. The collateral obtained for derivatives is either cash, direct debt obligation government (G14+) bonds denominated in the domestic currency of the issuing country, debt issued by supranationals or letters of credit issued by an institution with a long-term unsecured debt rating of A+/A3 or better. Where the Group has ISDA master agreements, the collateral document will be the ISDA CSA. The collateral document must give Barclays the power to realise any collateral placed with it in the event of the failure of the counterparty, and to place further collateral when requested or in the event of insolvency, administration or similar processes, as well as in the case of early termination.

Under IFRS, netting is permitted only if both of the following criteria are satisfied:

- the entity has a legally enforceable right to set off the recognised amounts; and
- the entity intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Barclays approach to managing risks – Counterparty credit risk

Under US GAAP, netting is also permitted, regardless of the intention to settle on a net basis, where there is a counterparty master agreement that would be enforceable in the event of bankruptcy.

Derivative counterparty credit risk measurement (Credit Value Adjustments)

Barclays participates in derivative transactions, and is therefore exposed to counterparty credit risk (or 'counterparty risk'). This is the risk that a counterparty will fail to make the future payments agreed in the derivative contract. This is considered as a separate risk to the volatility of the mark to market payment flows. Modelling this counterparty risk is an important part of managing credit risk on derivative transactions.

The counterparty risk arising under derivative transactions is taken into account when reporting the fair value of derivative positions. The adjustment to the value is known as Credit Value Adjustment. It is the difference between the value of a derivative contract with a risk free counterparty and that of a contract with the actual counterparty. This is equivalent to the cost of hedging the counterparty risk, which is replicated by purchasing and selling credit default swaps (CDS) on the counterparty to create a hedge position that mirrors the Expected Exposure profile for the counterparty.

Credit Value Adjustment for derivative positions are calculated as a function of the 'Expected Exposure', which is the average of future hypothetical exposure values (or mark to market) for a single transaction or group of transactions by the same counterparty, and the CDS spread for a given horizon.

In order to calculate the Expected Exposure, the expected mark to market is calculated using Monte Carlo simulations of risk factors that may affect the valuation of the derivative. These simulations include credit mitigants such as exposure netting, collateral, mandatory break clauses and set-off clauses. Counterparties with appropriate credit mitigants will generate a lower Expected Exposure profile compared to counterparties without credit mitigants in place for the same derivative transactions.

Credit Risk Mitigation

Barclays employs a range of techniques and strategies to actively mitigate credit risks to which it is exposed. These can broadly be divided into three types:

- Netting and set-off;
- Collateral; and
- Risk transfer.

Barclays has detailed policies in place to ensure that credit risk mitigation is appropriately recognised and recorded. The recognition of credit risk mitigation is subject to a number of considerations, including ensuring legal certainty of enforceability and effectiveness, ensuring the valuation and liquidity of the collateral is adequately monitored, and ensuring the value of the collateral is not materially correlated with the credit quality of the obligor.

All three types of credit risk mitigation may be used by different areas of the Group for exposures with a full range of counterparties. For instance, Investment Bank, Corporate Banking and other business areas may all take property, cash or other physical assets as collateral for exposures to retailers, property companies or other client types.

Netting and set-off

In many jurisdictions in which Barclays operates, credit risk exposures can be reduced by applying netting and set-off. In exposure terms, this credit risk mitigation technique is used mainly in derivative and repo transactions with financial institutions.

For derivative transactions, Barclays will often seek to enter into standard master agreements with counterparties (e.g. ISDA). These master agreements allow for netting of credit risk exposure to a counterparty resulting from a derivative transaction against Barclays obligations to the counterparty in the event of default, to produce a lower net credit exposure. These agreements may also reduce settlement exposure (e.g. for foreign exchange transactions) by allowing for payments on the same day in the same currency to be set off against one another.

In the majority of its portfolios Barclays uses the Internal Model Method (IMM) to calculate counterparty credit risk exposures.

Collateral

The Group has the ability to call on collateral in the event of default of the borrower or other counterparty, comprising:

- Home loans: a fixed charge over residential property in the form of houses, flats and other dwellings;
- Wholesale lending: a fixed charge over commercial property and other physical assets, in various forms;
- Credit cards, unsecured and other retail lending: includes charges over motor vehicle and other physical assets; second lien charge over residential property, which is subordinate to first charge held either by the Group or by

Barclays approach to managing risks – Credit risk mitigation

another party; and finance lease receivables, for which typically the Group retains legal title to the leased asset and has the right to repossess the asset on the default of the borrower;

- Derivatives: Barclays also often seeks to enter into CSAs with counterparties with which Barclays has master agreements in place. These annexes to master agreements provide a mechanism for further reducing credit risk, whereby collateral (margin) is posted on a regular basis (typically daily or weekly) to collateralise the mark to market exposure of a derivative portfolio;
- Reverse repurchase agreements: collateral typically comprises highly liquid securities which have been legally transferred to Barclays subject to an agreement to return them for a fixed price; and
- Financial guarantees and similar off-balance sheet commitments: cash collateral may be held against these arrangements.

In exposure terms, the main portfolios that Barclays takes collateral for are home loans and reverse repurchase agreements with financial institutions.

The Group may also obtain collateral in the form of floating charges over receivables and inventory of corporate and other business customers. The value of this collateral varies from period to period depending on the level of receivables and inventory. It is impracticable to provide an estimate of the amount (fair value or nominal value) of this collateral. The Group may in some cases obtain collateral and other credit enhancements at a counterparty level, which are not specific to a particular class of financial instrument. The fair value of the credit enhancement gained has been apportioned across the relevant asset classes.

Assets other than cash are subject to regular revaluation to ensure they continue to achieve appropriate mitigation of risk. Customer agreements often include requirements for provision of additional collateral should valuations decline or credit exposure increase (for example due to market moves impacting a derivative exposure).

The carrying value of non-cash collateral reflects the fair value of the physical assets limited to the carrying value of the asset where the exposure is over-collateralised. In certain cases where active markets or recent valuations of the assets are not available, estimates are used. For assets collateralised by residential or commercial property (and certain other physical assets), where it is not practicable to assess current market valuations of each underlying property, values reflect historical fair values updated for movements in appropriate external indices.

For assets collateralised by traded financial instruments, values reflect mark to market or mark to model values of those assets, applying a haircut where appropriate. For further information on loan-to-value ratios in principal home loans portfolios, refer to pages 129 to 135 in the 2012 Annual Report.

The net realisable value from a distressed sale of collateral obtained by the Group upon default or insolvency of a counterparty will in some cases be lower than the carrying value recognised above. Assets obtained are normally sold, generally at auction, or realised in an orderly manner for the maximum benefit of the Group, the borrower and the borrower's other creditors in accordance with the relevant insolvency regulations. For business customers, in some circumstances, where excess funds are available after repayment in full of the outstanding loan, they are offered to any other, lower ranked, secured lenders. Any additional funds are returned to the customer. Barclays does not, as a rule, occupy repossessed properties for its business use or use assets obtained in its operations.

When property is taken as collateral it is monitored to ensure that the current value is not less than its value at origination. Monitoring is undertaken at least once every three years for residential property, and annually for commercial property. More frequent monitoring is carried out where the property sector is subject to significant deterioration.

Deterioration is monitored principally by geography. Specific exercises to monitor property values may be undertaken where the property sector in a given geography has been subject to significant deterioration and where Barclays has a material concentration of property collateral.

Monitoring may be undertaken either at the level of an individual property or at a portfolio level. Monitoring on a portfolio level refers to a more frequent process of indexing collateral values on each individual loan, using a regional or national index, and updating LGD values. Where an appropriate local index is not available, property values are monitored on an individual basis as part of the annual review process for the loan.

For larger loans, property valuation is reviewed by an independent valuer at least every 3 years, and an independent valuer also reviews the property valuation where information indicates that the value of the property may have declined materially relative to general market prices. In addition, trigger points are defined under which property values must be reviewed.

Liens over fluctuating assets such as inventory and trade receivables, known as floating charges, over the assets of a borrower are monitored annually. The valuation of this type of collateral takes into account the ability to establish objectively a price or market value, the frequency with which the value can be obtained (including a professional appraisal or valuation), and the volatility or a proxy for the volatility of the value of the collateral.

Additional revaluations are usually performed when a loan is moved to EWL or WL. More detail of when a corporate account may be moved to an EWL or WL may be found on pages 323 to 325 of the 2012 Annual Report. Exceptions

Barclays approach to managing risks – Credit risk mitigation

to this may be considered where it is clear a revaluation is not necessary, for instance where there is a very high margin of security or a recent valuation has been undertaken. Conversely, a material reduction in the value of collateral held represents an increase in credit risk and will often cause a loan to be placed on the EWL or WL.

Any one of these events may also trigger a test for impairment, depending on individual circumstances of the loan. When calculating impairment, the difference between an asset's carrying amount and the present value of all estimated cash flows discounted at the original effective interest rate will be recognised as impairment. Such cash flows include the estimated fair value of the collateral which reflects the results of the monitoring and review of collateral values as detailed above and valuations undertaken as part of our impairment process.

Whether property values are updated as part of the annual review process, or by indexation of collateral values, the updated collateral values feed into the calculation of risk parameters (for example Loss Given Default) which, in turn, feed into identified and unidentified impairment calculations at each balance sheet date. See Allowance for Impairment and Other Credit Provisions section on pages 323 to 325 of the 2012 Annual Report for more detail.

Trends in loan loss rates incorporate the impact of any decrease in the fair value of collateral held.

Where Barclays calculates regulatory capital under advanced IRB regulations the benefit of collateral is generally taken by adjusting LGDs. For standardised portfolios the benefit of collateral is taken using the financial collateral comprehensive method: supervisory volatility adjustments approach.

Risk Transfer

A range of instruments including guarantees, credit insurance, credit derivatives and securitisation can be used to transfer credit risk from one counterparty to another. This mitigates credit risk in two main ways:

- Firstly, if the risk is transferred to a counterparty which is more credit worthy than the original counterparty, then overall credit risk will have been reduced.
- Secondly, where recourse to the first counterparty remains, both counterparties must default before a loss materialises. This will be less likely than the default of either counterparty individually so credit risk is reduced.

Risk transfer can also be used to reduce risk concentrations within portfolios lowering the impact of stress events.

Risk transfer transactions are undertaken with consideration to whether the collateral provider is correlated with the exposure, the credit worthiness of the collateral provider and legal certainty of enforceability and effectiveness. Where credit risk mitigation is deemed to transfer credit risk this exposure is appropriately recorded against the credit risk mitigation provider.

The balances shown represent the notional value of the guarantees held by the Group issued by corporate and financial institutional counterparties. In addition, the Group obtains guarantees from customers in respect of personal loans and smaller business loans, which are not reflected in the above table.

In exposure terms, risk transfer is used most extensively as a credit risk mitigation technique for wholesale loans and derivative financial instruments.

For instruments that are deemed to transfer credit risk, in advanced IRB portfolios the protection is recognised by using the PD and LGD of the protection provider.

Barclays approach to managing risks – Market risk

Market risk management

Market risk is the risk of the Group's earnings or capital being reduced due to:

- The Group being impacted by changes in the level or volatility of positions in its trading books. This includes changes in the interest rates, credit spreads, commodity prices, equity prices and foreign exchange levels ('traded market risk').
- The Group being unable to hedge its banking book balance sheet at prevailing market levels ('non-traded market risk').
- The Group's defined benefit obligations increasing or the value of the assets backing these defined benefit obligations decreasing due to changes in both the level and volatility of prices ('pension risk').

Group-wide view of market risk

Barclays defines three sources of market risk: traded market risk, non-traded risk and pension risk. Traded risk in the businesses resides primarily in Investment Bank including investment banking services at Absa Capital, while non-traded market risk resides mainly in Retail and Business Banking, Corporate Banking, Wealth and Investment Management and Treasury. Pensions risk is monitored centrally with the cost borne across businesses.

Barclays market risk objectives are to:

- understand and control market risk by robust measurement, limit setting, reporting and oversight;
- facilitate business growth within a controlled and transparent risk management framework;
- ensure that traded market risk in the businesses resides primarily in Investment Bank including Absa Capital; and
- minimise non-traded market risk.

Barclays banking book operations generate non-traded market risk, primarily through interest rate risk arising from the sensitivity of net interest margin to changes in interest rates. Banking businesses, such as RBB or Corporate Banking, engage in internal derivative trades with Treasury to remove this interest rate risk. The businesses remain susceptible to market risk from three key sources:

- prepayment risk: balance run-off may be faster or slower than expected due to economic conditions or customer's response to interest rates. This can lead to a mismatch between the anticipated balance of products provided to customers and the hedges executed with Treasury;
- recruitment risk: the volume of new business may be lower or higher than expected requiring the business to unwind or execute hedging transactions with Treasury at different rates than expected; and
- residual risk and margin compression: the business may retain a small element of interest rate risk to facilitate the day-to-day management of customer business. Additionally, in the current low rate environment, Barclays managed rate deposits are exposed to margin compression. This is because for any further fall in base rate Barclays must absorb an increasing amount of the rate move in its margin.

Treasury acts as a central internal clearing house for non-behavioural interest rate risk, netting off positions between businesses where possible. Treasury is subject to market risk limits which ensure the majority of the interest rate risk in Treasury is passed to the Investment Bank. Treasury is permitted to retain limited interest rate risks to facilitate the day-to-day management of hedges with the banking businesses.

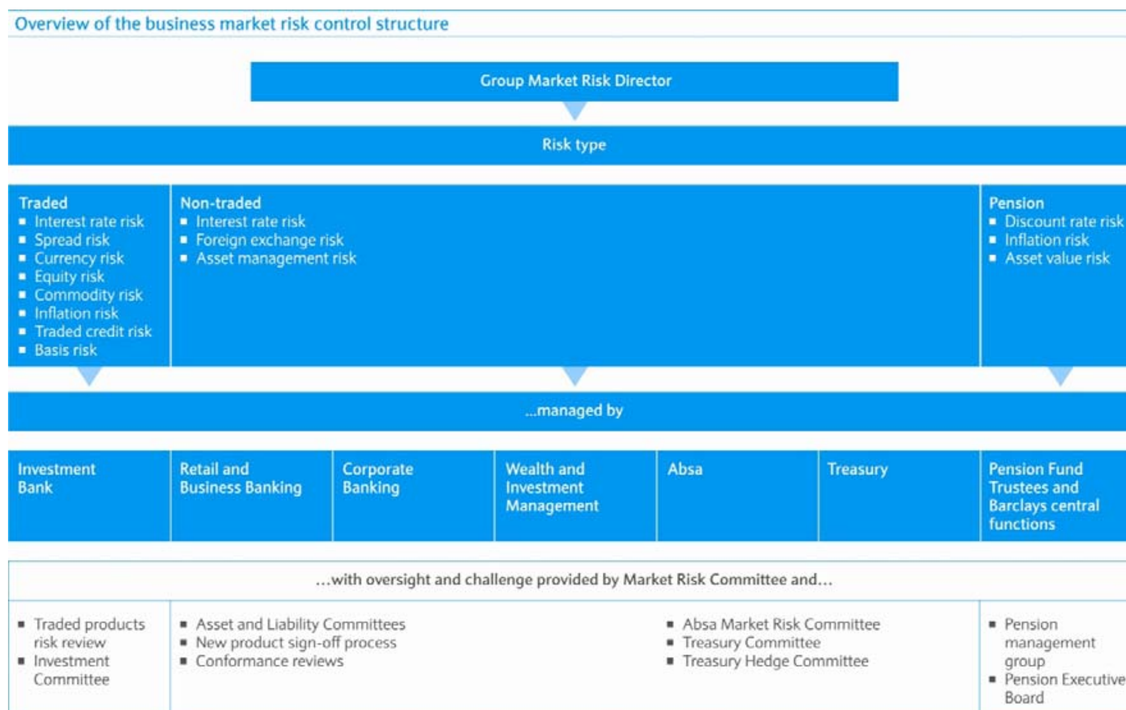
Investment Bank manages the interest rate risk it receives from Treasury as part of its day-to-day rates trading operations consistent with its client-facing activities. The positions will contribute both to market risk limits and regulatory capital requirements to the extent they are retained by the Investment Bank. Investment Bank manages the risk arising from these internal trades within the VaR, stress and position limits set by Risk in the same manner as external, client-facing transactions are managed.

The Management Daily Value at Risk (see traded market risk) metrics disclosed in this annual report relate to the trading books in Investment Bank and Absa, and some banking books in Investment Bank. Interest rate risk in the banking book is typically measured through net interest margin measures such as annual earnings at risk, which is disclosed below.

Organisation and structure

The Board Risk Committee reviews and approves market risk appetite for the group. The Group Market Risk Director is responsible for the Barclays Market Risk Control Framework and, under delegated authority from the Chief Risk Officer, sets a limit framework within the context of the approved market risk appetite. Market risk reports summarise Barclays market risk exposures against agreed limits and are distributed to the principal risk owners.

Barclays approach to managing risks – Market risk



The Market Risk Committee approves and makes recommendations concerning the market risk profile across Barclays Group. This includes approving the Barclays Market Risk Control Framework and Group Market Risk Policies; reviewing issues, limits and utilisation; and proposing risk appetite levels to the Board. The Committee is chaired by the Group Market Risk Director and attendees include the Chief Risk Officer, respective business aligned risk managers and senior managers from Group Market Risk as well as Internal Audit.

The head of each business is accountable for all market risks associated with its activities. The head of the market risk team covering each business is responsible for implementing the risk control framework for market risk. The control frameworks for traded, non-traded and pensions risk are all governed by the Market Risk Control Framework, which sets out how market risk should be identified, measured, controlled, reported and reviewed. The Framework also outlines and references Group Market Risk policies.

Market risk oversight and challenge is provided by business committees, Group committees including the Market Risk Committee and Group Market Risk. The chart above gives an overview of the business control structure.

Traded market risk

Traded market risk arises primarily as a result of client facilitation in wholesale markets. This involves market making, risk management solutions and execution of syndications. Mismatches between client transactions and hedges result in market risk due to changes in asset prices. At Investment Bank and Absa, trading risk is measured for the trading book, as defined for regulatory purposes, and certain banking books.

Trading book positions in the Investment Bank and Absa generate market risk capital requirements, in line with the regulatory requirements set out in the Capital Requirements Directive ('CRD III') and the FSA's Prudential Sourcebook for Banks, Building Societies and Investment Firms ('BIPRU'). Positions which cannot be included in the trading book are included within the banking book and generate risk capital requirements in line with this treatment.

Barclays maintains a Trading Book Policy Statement ('TBPS') which defines the minimum requirements a business must meet to run trading positions and the process by which positions are allocated to trading or banking books. Trading intent is a key element in deciding whether a position should be treated as a trading or banking book exposure.

Currently all trading books must be managed by either Investment Bank or separately by Absa Capital. Businesses with trading books are required to document their implementation of trading book standards which define how the Barclays-wide TBPS requirements will be implemented. The requirements also consider some of the points raised by the Fundamental Review of the Trading Book consultation paper. In particular, businesses are expected to evidence trading intent, e.g. by setting and enforcing risk and position limits and defining the consequences of breaching these limits.

Positions in the trading book are subject to market risk capital. Market risk capital is computed using internal models (VaR, SVaR, IRC, APR) where the position is amenable to market risk modelling and is model approved by the FSA for capital. Otherwise the market risk capital requirement is calculated using standard rules as defined by the FSA in

Barclays approach to managing risks – Market risk

BIPRU. If any of the criteria specified in the TBPS are not met for a position, then that position must be allocated to the banking book.

Risk measurement

Figure 4: Management of positions in the trading book

Barclays uses a range of complementary technical approaches to measure and control traded market risk including: Daily Value at Risk (DVaR), Expected Shortfall, primary and secondary stress testing and combined scenario stress testing. The risk management process also involves a trade approval process and additional control mechanisms where necessary such as position limits.

Daily Value at Risk (DVaR) is an estimate of the potential loss arising from unfavourable market movements, if the current positions were to be held unchanged for one business day. For internal market risk management purposes, the Investment Bank uses a historical simulation methodology with a two-year equally weighted historical period, at the 95% confidence level for all trading portfolios and certain banking books.

As defined by the FSA, a green model is consistent with a good working DVaR model and is achieved for models that have four or fewer back-testing exceptions in a 12-month period. Back-testing counts the number of days when a loss (as defined by the FSA) exceeds the corresponding DVaR estimate, measured at the 99% confidence level. For the Investment Bank's DVaR model, green model status was maintained for 2012.

The DVaR model is regularly assessed and reviewed internally by Group Executive Models Committee and within the Investment Bank.

When reviewing DVaR estimates the following considerations should be taken into account:

- Historical simulation uses the most recent two years of past data to generate possible future market moves, but the past may not be a good indicator of the future;
- The one day time horizon does not fully capture the market risk of positions that cannot be closed out or hedged within one day;
- DVaR is based on positions as at close of business and consequently intra-day risk, the risk from a position bought and sold on the same day, is not captured; and
- DVaR does not indicate the potential loss beyond the DVaR confidence level.

These drawbacks are common to Value at Risk models. In order to partly mitigate these issues, Barclays also calculates Expected Shortfall based on the same two year historical simulation data set as used to calculate DVaR. Expected Shortfall is the average of all one day hypothetical losses beyond the 95% confidence level DVaR.

Stress testing provides an estimate of potential significant future losses that might arise from extreme market moves or scenarios. Primary stress tests apply stress moves to key liquid risk factors for each of the major trading asset classes, namely:

- Interest rates – shock to the level and structure of interest rates and inflation across currencies;
- Credit – impact on traded corporate credit exposures, including across rating grades, geography, sectors and products;
- Foreign exchange – impact of unfavourable moves in currency prices and volatility;
- Equity – shocks to share prices including exposures to specific markets and sectors;
- Emerging Markets – stresses across specific countries including corporate and sovereign credit, interest rates and currency shocks;

Barclays approach to managing risks – Market risk

- Commodities – adverse commodity price changes across both physical and derivative markets; and
- Securitised Products – stresses to securitised structures and hedges.

See page 335 in the 2012 Annual Report for a summary of sources of market risk by business line

Secondary stress tests apply stress moves to less liquid risks, e.g. equity volatility skew. Secondary stresses are aggregated by the same set of asset classes shown above and assuming a severe flight to quality scenario. The asset class stress scenarios are frequently calibrated to previously observed market shocks.

Combined scenarios apply simultaneous shocks to several risk factors, reflecting extraordinary, but plausible macro scenarios. This is assessed by applying respective changes in foreign exchange rates, interest rates, credit spreads, commodities and equities to the portfolio. E.g. impact of a rapid and extreme slowdown in the global economy.

The annual Group-wide stress testing exercise aims to simulate the dynamics of exposures across Barclays Group and cover all risk factors. The exercise is also designed to measure the impact to Barclays fundamental business plan, and is used to manage the wider group's strategy.

Where necessary, market risk managers also apply specific position limits, e.g. on currency open positions, in order to limit certain activities and for monitoring exposure. The Investment Bank also applies a trade approval process designed to assess the impact of potential new transactions on the firm's risk profile.

Trading book regulatory capital models

In 2011, the Investment Bank implemented new regulatory risk models to comply with the CRD III revisions to the market risk capital requirement. These were Stressed VaR (SVaR), Incremental Risk Charge (IRC) and the All Price Risk (APR). All three models were approved by the FSA for calculation of regulatory capital for designated trading book portfolios. The SVaR approval matches the scope of the DVaR model as used for regulatory capital calculations.

SVaR is an estimate of the potential loss arising from a 12 month period of significant financial stress. SVaR uses the DVaR methodology based on inputs calibrated to historical data from a continuous 12 month period that maximises the DVaR based capital at a 99% one-tailed confidence limit.

IRC is computed on all fixed income positions subject to specific market risk (excluding the correlation trading portfolio). It calculates the incremental risk arising from rating migrations and defaults, beyond what is already captured in specific market risk DVaR, to a 99.9% confidence level over a one year holding period.

APR covers the correlation trading portfolio and is intended to capture all risk factors relevant to corporate nth-to-default and tranched credit derivatives. As for IRC, the capital requirement is based on a 99.9% confidence interval over a one year holding period.

When reviewing estimates produced by the CRD III models the following considerations should be taken into account:

- SVaR uses the same methodology as the DVaR model and hence is subject to the same considerations as this model. In addition, SVaR is calibrated to a specific 12 month historical stress period which may not reflect a stress period that could arise in the future;
- In common with DVaR, neither IRC nor APR indicate the potential loss beyond the specified confidence level, and they do not measure risk from trades which are bought and sold in between weekly runs; and
- Both IRC and APR are computed to a 1-in-1,000 year confidence level which cannot be backtested on a similar historical basis as with other regulator models.

Risk control

Market risk is controlled through the use of an appropriate limit framework. Limits are set at the total Investment Bank portfolio level, risk factor level (e.g. interest rate risk) and business line level (e.g. Emerging Markets). Stress limits and many book limits, such as foreign exchange and interest rate sensitivity limits, are also used to control risk appetite.

The total DVaR, risk factor DVaR, primary and secondary stress limits are approved by Board Risk Committee ('BRC'). The more granular limit framework is set by risk managers to comply with the overall risk appetite and anticipated business opportunities. Compliance with limits is monitored by the independent Risk department in the Investment Bank with oversight provided by Group Market Risk.

Throughout 2012, Group Market Risk continued its ongoing programme of conformance tests on the Investment Bank's market risk management practices. These visits review the current market risk profile and potential market risk developments, as well as verifying conformance with Barclays Market Risk Control Framework.

Risk reporting

Barclays Investment Bank's market risk managers produce a number of detailed and summary market risk reports daily, weekly, fortnightly and monthly for business and risk managers. These are also sent to Group Market Risk for

Barclays approach to managing risks – Market risk

review, a risk summary is presented at the Market Risk Committee and the Investment Bank's Traded Positions Risk Review.

Non-traded interest rate risk

Non-traded interest rate risk arises from the provision of retail and wholesale (non-traded) banking products and services, when the interest rate repricing date for loans (assets) is different to the repricing date for deposits (liabilities). This includes current accounts and equity balances which do not have a defined maturity date and an interest rate that does not change in line with Base rate changes. The risk resides mainly in Retail and Business Banking, Corporate Banking and Group Treasury. Barclays objective is to minimise non-traded interest rate risk and this is achieved by transferring interest rate risk from the business to a local or Group Treasury, which in turn hedges the net exposure via Investment Bank with the external market. Limits exist to ensure no material risk is retained within any business or product area.

Risk measurement

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, DVaR, risk factor stress testing, scenario stress testing).

Annual Earnings at Risk (AEaR) measures the sensitivity of net interest income over the next 12-month period. It is calculated as the difference between the estimated income using the current yield curve and the lowest estimated income following a parallel increase or decrease in interest rates, subject to a minimum interest rate of 0%.

The main model assumptions are:

- The balance sheet is kept at the current level i.e. no growth is assumed;
- Balances are adjusted for an assumed behavioural profile. This includes the treatment of fixed rate loans including mortgages.

Economic Value of Equity (EVE) calculates the change in the present value of the banking book for a parallel upward and downward rate shock. This calculation is a present value sensitivity while AEaR is an income sensitivity. Economic Capital (EC) consistent models are used to measure: recruitment risk, the risk from customers not taking up their fixed rate loan offer; and prepayment risk, the risk of a customer deciding not to carry on with their fixed rate loan. Behavioural profiles are also used when modelling the balance sheet.

A combination of DVaR, stress limits, net open position and specific currency or tenor limits are in place for all local Treasury activities.

Risk control

Non-traded market risk is controlled through the use of limits on the above risk measures. Limits are set at the total business level and then cascaded down. The total business level limits for AEaR, EVE, EC, DVaR and stress are agreed by the Group Market Risk Committee. Compliance with limits is monitored by the respective business market risk team with oversight provided by Group Market Risk.

The interest rate risk for balances with no defined maturity date and an interest rate that is not linked to the base rate is managed by Group Treasury. A series of continuous rolling hedges are used to mitigate the interest rate risk in the banking book.

Risk reporting

Each business area is responsible for their respective market risk reports. A combination of daily and monthly risk reports are produced and used by the business. These are also sent to Group Market Risk for review and inclusion in the Group Daily Market Risk Report. A risk summary is also presented at Market Risk Committee and respective Asset and Liability Committees.

Pension Risk

Barclays maintains a number of defined benefit pension schemes for past and current employees. The ability of the pension fund to meet the projected pension payments is maintained principally through investments. Pension risk arises because the estimated market value of the pension fund assets might decline; or their investment returns might reduce; or the estimated value of the pension liabilities might increase. Barclays monitors the market risks arising from its defined benefit pension schemes, and works with the trustees to address shortfalls. In these circumstances, Barclays could be required or might choose to make extra contributions to the pension fund. Financial details of the pension fund are in Note 37 on page 296 of the 2012 Annual Report.

Asset management Structural Risk

Asset management structural risk arises where the fee and commission income earned by asset management products is affected by a change in market levels, primarily through the link between income and the value of assets under management. Asset management structural risk mainly resides in Barclays Wealth. It is Barclays policy that businesses monitor and regularly assess potential hedging strategies.

Barclays approach to managing risks – Securitisations

This section discloses information about Barclays securitisation activities distinguishing between the various functions performed in supporting its customers and managing its risks. It includes traditional securitisations as well as synthetic transactions effected through the use of derivatives.

For the purposes of Pillar 3 disclosures on page 57, securitisation is defined as a transaction or scheme where the payments are dependent upon the performance of a single exposure or pool of exposures and where the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme. Such transactions are ordinarily undertaken to transfer risk for Barclays or on behalf of a client.

Barclays also undertakes funding transactions for the purposes of generating term liquidity. The nature of these transactions means they are not considered under the UK FSA BIPRU 9 securitisation framework. For that reason, these types of transactions are excluded from the quantitative disclosures on page 57. Other types of transactions, for instance certain government-guaranteed transactions, are also outside of the framework and not disclosed in this section.

Objectives of securitisation activities

In the course of its business, Barclays has undertaken securitisations of its own originated assets as well as the securitisation of third party assets via special purpose vehicles, sponsored conduit vehicles and shelf programmes.

Barclays has securitised its own originated assets in order to manage the Group's credit risk position and to generate term liquidity for the Group balance sheet. In addition, Barclays has warehoused assets prior to securitising them at clients' request. Barclays also participates in primary securitisations in Commercial Mortgage-Backed Securities (CMBS), Agency CMBS and Asset-Backed Securities (ABS), and distributes bonds to clients.

Further, Barclays makes a secondary market for a range of European and American securitised products, including Agency Residential Mortgage-Backed Securities (RMBS), Non-Agency RMBS, CMBS and ABS. Barclays also provides derivative transactions to securitisations sponsored by itself and third parties. These transactions are included in Barclays trading book and form part of its market-making activities in interest rate and foreign exchange products.

The role and involvement of Barclays in securitisations in 2012

Barclays adopts the following roles in the securitisation processes in which it is involved:

Originator of assets prior to securitisation

Barclays originate or purchase commercial mortgage loans or asset-backed loans for the purpose of securitisation. The securities are then sold to investors through a broker dealer subsidiary.

Providing residential mortgage warehousing facilities for third-party assets prior to securitisation or exit via whole-loan sale

Barclays provides warehouse financing to third party residential mortgage whole loan originators, largely for agency eligigle loans that can be securitised by the Federal National Mortgage Association ("Fannie Mae"), the Federal Home Loan Mortgage Corporation ("Freddie Mac"), or the Government National Mortgage Association ("Ginnie Mae").

Executor of securitisation trades including bond marketing and syndication

Barclays transacts primarily as a principal in investment-grade asset-backed securities (ABS) and commercial mortgage-backed securities (CMBS) with institutional investors and other broker-dealers. Products include consumer ABS (e.g. credit card, student loan and auto), non-traditional ABS (e.g. timeshares, cell towers, whole business securitisations), asset-backed collateralised debt obligations (ABS CDO), CMBS bonds, commercial real estate collateralised debt obligations (CRE CDO), and Fannie Mae delegated underwriting and servicing bonds (DUS).

Barclays may also originate and purchase commercial mortgage loans for the purpose of securitisation for sale to investors. The Group also transacts directly with government-sponsored entities as placement agent to structure and underwrite or distribute new issues.

The bank may also trade all non-agency prime, alternative-A (Alt-A), and subprime mortgage-backed securities issued by financial institutions on behalf of private label mortgage originators. Products include non-agency pass-through securities, adjustable-rate mortgages (ARMs) and collateralised mortgage obligations (CMOs). The bank can also create re-securitisations of Real Estate Mortgage Investment Conduits (Re-REMICs) of mortgage-backed securities.

Purchaser of third-party securitisations to support client franchise

Barclays may purchase third party securitisations, acting as an investor. In such transactions the Group would not be defined as an originator or sponsor for regulatory purposes.

Barclays approach to managing risks – Securitisations

Sponsoring conduit vehicles

Barclays acts as Managing Agent and Administrative Agent of two multi-seller Asset-Backed Commercial Paper (ABCP) conduits, Sheffield and Salisbury, through which interests in securitisations of third-party-originated assets are funded via the issuance of asset backed commercial paper. Barclays also funds on its own balance sheet securitisations similar to the ones funded via its sponsored conduits.

From a regulatory perspective, Barclays would be defined primarily as a sponsor of these conduits. In relation to such conduit activity, Barclays may provide all or a portion of the backstop liquidity to the commercial paper, programme-wide credit enhancement and, as appropriate, interest rate and foreign currency hedging facilities. Barclays receives fees for the provision of these services. Barclays currently provides liquidity and programme-wide credit enhancement to two multi-seller conduits: Sheffield Receivables Corporation and Salisbury Receivables Company.

Surrey and Sussex are ABCP conduits (Sussex is part of Surrey) for balance sheet management. The programme size is $6bn, however, the liquidity is equivalent to the face amount of the ABCP outstanding. This amount ($1.3bn) is fully supported by Barclays.

The Conduits are vehicles that hold securities classified as available for sale, measured at fair value with changes in fair value recognised through other comprehensive income (OCI) and non-securities classified as loans and receivables, measured at amortised cost on their stand-alone financial statements. They fund the assets through the issuance of asset-backed commercial paper.

The key distinctions between Sheffield/Salisbury and Surrey/Sussex is that the former two conduits are partially supported (by BBPLC) programmes established to support the firm's client lending platform, i.e. conduit financing is one of the firm's various products offered to clients, whereas the latter are established as conduits for balance sheet management purposes.

Funding transactions to generate term liquidity

Secured funding forms a component of the Group's diversified funding sources providing access to secured market counterparties and complementing the diversification of funding by maturity, currency and geography. Barclays issues asset-backed securities (ABS) and covered bonds that are secured primarily by customer loans and advances. In 2012, Barclays raised secured term funding (including both private and public issuances).

The Group currently manages four primary, on-balance sheet asset-backed funding programmes to obtain term financing for mortgage and credit card lending. The UK regulated covered bond and the residential mortgage master trust securitisation programmes both utilise assets originated by the Group's UK residential mortgage business. The third programme is a credit card master trust securitisation and uses receivables from the Group's UK credit card business. The fourth programme is the first securitisation programme backed by US domiciled credit card receivables registered with the SEC in Q4 2012.

Securitisation risks, monitoring and hedging policies

Securitisation exposures are subject to Barclays Credit Risk policies and procedures. This includes the requirement to review each exposure on an annual basis, following a detailed initial analysis, with particular focus on the underlying asset performance, key risk drivers and the impact or potential impact on such exposure. Changes to the credit risk profile of securitisation exposures will also be identified through ongoing performance monitoring (including ratings movement which feed the internal risk systems). In addition, periodic stress tests of a sample population of the portfolio as part of ongoing risk management are conducted as well as in response to Group wide or Regulatory requests. This process is also applied to re-securitisation exposures.

Securitisation and re-securitisation exposures benefit from the relative seniority of the exposure in the capital structure. Due to lack of availability in the Credit Default Swap market for individual asset-backed securities, there are no material CDS hedge counterparties relating to the securitisation and re-securitisation population.

In addition to credit risk, the securitised assets (including those underlying re-securitisations) are subject to liquidity risk, interest rate risk and, in some instances, FX risk. The nature and scale of these risks varies from transaction to transaction - for example, individual retail exposures have very limited liquidity in their own right, but are marketable as a pool or in securitised form. All securitised (and re-securitised) assets are also subject to a degree of operational risk associated with documentation and the collection of cash flows.

In providing warehouse financing, Barclays is exposed to mark-to-market (if counterparty defaults on related margin call) and potential risk related to representations and warranties should it be later discovered that the underlying loans were not underwritten to agency agreed criteria. Such risks are mitigated by daily collateral margining and ready agency bids. Market risk is also mitigated by employing forward trades.

Rating methodologies and ECAIs used for securitisations

Barclays employs ratings issued by External Credit Assessment Institutions (ECAIs) to risk weight its securitisation exposure where appropriate. The ECAIs used are Standard & Poor's, Moody's, Fitch and DBRS.

Barclays approach to managing risks – Securitisations

For each Asset-Backed Commercial Paper (ABCP) transaction, the Internal Assessment Approach (IAA) framework mirrors ECAI methodology, which also include Moody's and S&P, who rate the Sheffield and Salisbury programmes.Under the IAA framework, the securitisation exposure must be internally rated, and the bank's internal assessment process must meet certain requirements in order to map its own internal rating to an ECAI. Stress testing on a securitisation structure is performed as prescribed by an ECAI methodology for the relevant ratings level, and is at least as conservative as the published methodology. Stress factors may include, among other factors, asset yields, principal payment rates, losses, delinquency rates and interest rates.

In determining an internal rating, collateral risks are the primary driver and are addressed through the transaction structure and modelled statistical confidence. The analysis reflects Barclays view on the transaction, including dilution risk, concentration and tenor limits, as well as qualitative aspects such as counterparty risk and important ancillary issues (operational and legal risks). The adequacy and integrity of the servicer's systems and processes for underwriting, collections policies and procedures are also reviewed. Barclays conducts a full due diligence review of the servicer for each transaction. Each transaction is reviewed on, at least, an annual basis with a focus on the performance of underlying assets. The results of any due diligence review and the financial strength of the seller/servicer, are also factored into the analysis. Ratings of the transaction are reaffirmed with the most up to date ECAI methodologies. Any transaction which deviates from the current methodology is amended accordingly.

Approaches to calculating RWAs

RWAs reported for securitised and re-securitised banking book and trading book assets at 31 December 2012 are calculated in line with UK FSA rules and guidance, as well as European CRA regulation. Barclays has approval to use, and therefore applies, the IRB Approach for the calculation of RWAs. Conduit vehicles are consolidated for accounting but not for regulatory purposes.

Summary of the accounting policies for securitisation activities

Certain Group-sponsored entities have issued debt securities or have entered into funding arrangements with lenders in order to finance specific assets. Such entities will typically be considered to be special purpose entities (SPEs) for accounting purposes. SPEs are consolidated when the substance of the relationship between the Group and that entity indicates control. Primary indicators of control include, amongst other things, an assessment of the Group's exposure to the risks and benefits of the assets of the SPE.

This assessment of risks and benefits is based on arrangements in place and the assessed risk exposures at inception. This initial assessment is reconsidered at a later date if:

- the Group acquires additional interests in the entity;
- the contractual arrangements of the entity are amended such that the relative exposure to risks and benefits change; or
- if the Group acquires control over the main operating and financial decisions of the entity.

Typically the securitised assets will have been included on the Group balance sheet for a period prior to securitisation and it is necessary to consider whether those assets may be removed from the Group balance sheet. Assets which have been transferred to third parties (i.e. an unconsolidated Group entity), will remain on the Group balance sheet, and treated as financings, unless the following criteria apply:

- Substantially all the risks and rewards associated with the assets have been transferred, in which case, they are derecognised in full; or
- If a significant portion, but not all, of the risks and rewards have been transferred, the asset is derecognised entirely if the transferee has the ability to sell the financial asset, otherwise the asset continues to be recognised only to the extent of the Group's continuing involvement.

Assets may be transferred to a third party through a legal sale or an arrangement that meets the 'passthrough' criteria where the substance of the arrangement is principally that Barclays is acting solely as a cash collection agent on behalf of the eventual recipients.

Where the transfer applies to a fully proportionate share of all or specifically identified cash flows, the relevant accounting treatment is applied to that proportion of the asset.

When the above criteria support the case that the securitisation should not be accounted for as financing, the transaction will result in sale treatment or partial sale treatment to the extent the Group has no continuing involvement. Where the Group has continuing involvement the assets will continue to be recognised to the extent of the continuing involvement. Gains are recognised to the extent that proceeds that can be measured using observable market data exceed the assets derecognised.

Any retained interests, which will consist of loans and/or securities depending on the nature of the transaction, are valued in accordance with the Group's Accounting Policies, as set out in the 2012 Annual Report. To the extent that these interests are measured at fair value, they will be included within the fair value disclosures in to the financial statements in the Annual Report. As outlined in these disclosures, key valuation assumptions for retained interests of

Barclays approach to managing risks – Securitisations

this nature will include spreads to discount rates, default and recovery rates and prepayment rates that may be observable or unobservable.

In a synthetic securitisation transaction, the underlying assets are not sold into the relevant SPE. Instead, their performance is transferred into the vehicle through a synthetic instrument such as a credit default swap, a credit linked note or a financial guarantee. The accounting policies outlined above will apply to synthetic securitisations.

Barclays approach to managing risks – Operational risk

Operational risk management

Operational Risk is defined as the risk of direct or indirect impacts resulting from human factors, inadequate or failed internal processes and systems or external events. Recognising the impact operational risk may have on the Group a new Board Conduct, Reputation and Operational Risks Committee will be created in 2013.

Operational risks are inherent in the Group's business activities and are typical of any large enterprise. It is not cost effective to attempt to eliminate all operational risks and in any event it would not be possible to do so. Losses from operational risks of small significance are expected to occur and are accepted as part of the normal course of business. Those of material significance are rare and the Group seeks to reduce the likelihood of these in accordance with its risk appetite.

The Principal Risk comprises the following Key Risks: CyberSecurity Risk, External Suppliers, Fraud, Financial Reporting, Information, Legal, Product, Payments, People, Premises & Security, Regulatory, Taxation, Technology and Transaction Operations.

For definitions of these Key Risks see pages 112 to 115 in the 2012 Annual Report.

Overview

The management of Operational Risk has two key objectives:

- To minimise the impact of losses suffered in the normal course of business (expected losses) and to avoid or reduce the likelihood of suffering an extreme (or unexpected) loss; and
- To improve the effective management of the Barclays Group and strengthen its brand and external reputation.

Barclays is committed to the management and measurement of operational risk and was granted a waiver by the FSA to operate an Advanced Measurement Approach (AMA) for operational risk under Basel 2, which commenced in January 2008. The majority of the Group calculates regulatory capital using AMA, however, in specific areas we apply the Basic Indicator Approach. In certain joint ventures and associates, Barclays may not be able to apply the AMA.

Areas where the Group is working towards the rollout of AMA and the Basic Indicator Approach is applied are: the Africa RBB businesses, including Barclays Bank Mozambique and National Bank of Commerce (Tanzania); Barclays Bank PLC Pakistan; Barclays Investment and Loans India Limited; the new to bank business activities acquired from Lehman Brothers; and the portfolios of assets purchased from Woolworths Financial Services in South Africa, Citi Cards Portugal and Italy, Standard Life Bank, MBNA Corporate Cards, Upromise, RCI, Egg Cards, EdCon, Sallie Mae and Ameriprice.

Barclays works to benchmark its internal operational risk practices with peer banks and to drive the development of advanced operational risk techniques across the industry.

Organisation and structure

Operational Risk is one of four Principal Risks in the Barclays Principal Risks Policy and comprises a number of specific Key Risks defined as follows:

- CyberSecurity: Risk of loss or detriment to Barclays business and customers as a result of actions committed or facilitated through the use of networked information systems;
- External supplier: Inadequate selection and ongoing management of external suppliers;
- Financial reporting: Reporting mis-statement 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 Barclays information in accordance with its value and sensitivity;
- Legal: Failure to identify and manage legal risks;
- Product: Inadequate design, assessment and testing of products/ services;
- Payment process: Failure in operation of payments processes;
- People: Inadequate people capabilities, and/or performance/reward structures, and/or inappropriate behaviours;
- Premises & 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;
- Regulatory: Failure or inability to comply fully with the laws, regulations or codes applicable specifically to the financial services industry;
- Taxation: Failure to comply with tax laws and practice which could lead to financial penalties, additional tax charges or reputational damage;
- Technology: Failure to develop and deploy secure, stable and reliable technology solutions; and
- Transaction operations: Failure in the management of critical transaction processes.

Barclays approach to managing risks – Operational risk

These risks may result in financial and/or non-financial impacts including legal/regulatory breaches or reputational damage. For more information on Legal, Regulatory and Taxation risks please see pages 112 to 115 in the 2012 Annual Report)

The Operational Risk Framework comprises a number of elements which allow Barclays to manage and measure its Operational Risk profile and to calculate the amount of Operational Risk capital that Barclays needs to hold to absorb potential losses. The minimum, mandatory requirements for each of these elements are set out in the Group Operational Risk policies. This framework is implemented across the Group: vertically, through the organisational structure with all businesses required to implement and operate an Operational Risk framework that meets, as a minimum, the requirements detailed in these operational risk policies; and horizontally, with the Group Key Risk Owners required to monitor information relevant to their Key Risk from each Operational Risk framework element.

Barclays operates with a robust system of internal control that seeks to ensure that business is transacted and risk taken without exposure to unacceptable potential losses or reputational damage. To this end, Barclays has implemented the Group Internal Control and Assurance Framework (GICAF) which is aligned with the internationally recognised Committee of Sponsoring Organisations of the Treadway Commission Framework (COSO).

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. Operational risk managers are widely distributed throughout the Group and support these areas, assisting line managers in understanding and managing their risks.

The Operational Risk Director (or equivalent) for each business is responsible for ensuring the implementation of and compliance with Group Operational Risk policies.

The Group Operational Risk Director 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.

The Operational Risk Committee (ORC) is the senior executive body responsible for the oversight and challenge of Operational Risk in Barclays. Group Operational Risk Executive Committee (GOREC) is a sub-committee of the ORC, the output of which is presented to the Board Risk Committee (BRC).

In addition, Governance and Control Committees (G&CCs) in each business monitor control effectiveness. The Group G&CC receives reports from these committees and considers Group-significant control issues and their remediation. The Group G&CC presents to the Board Audit Committee (BAC).

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 to their business objectives and the effectiveness of key controls, control issues of Group-level significance, operational risk events and a review of scenarios and capital. Specific reports are prepared on a regular basis for ORC, BRC and BAC.

The Internal Audit function provides further independent review and challenge of the Group's operational risk management controls, processes and systems and reports to the Board and senior management.

Operational risk management framework

The Barclays Operational risk framework is a key component of GICAF and has been designed to meet a number of external governance requirements including Basel, the Capital Requirements Directive and Turnbull guidance as an evaluation framework for the purposes of Section 404(a) of the Sarbanes-Oxley Act. It also supports the Sarbanes-Oxley requirements.

The Operational risk framework includes the following elements:

Risk assessments

Barclays 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 effectively managed within business risk appetite. The businesses are then able to make decisions on what, if any, action is required to reduce the level of risk to Barclays. These risk assessments are monitored on a regular basis to ensure that each business continually understands the risks it faces.

Risk events

An operational risk event is any circumstance where, through the lack or failure of a control, Barclays has actually, or could have, made a loss. The definition includes situations in which Barclays could have made a loss, but in fact made a gain, as well as incidents resulting in reputational damage or regulatory impact only.

A standard threshold is used across the Group for reporting risk events and as part of our analysis we seek to identify where improvements are needed to processes or controls, to reduce the recurrence and/or magnitude of risk events.

Barclays also uses a database of external risk events which are publicly available and is a member of the Operational risk data eXchange (ORX), a not-for-profit association of international banks formed to share anonymous loss data

Barclays approach to managing risks – Operational risk

information. Barclays uses this external loss information to support and inform risk identification, assessment and measurement.

Key indicators

Key Indicators (KIs) are metrics which allow Barclays to monitor its operational risk profile. KIs include measurable thresholds that reflect the risk appetite of the business. KIs are monitored to alert management when risk levels exceed acceptable ranges or risk appetite levels and drive timely decision making and actions.

Key Risk Scenarios

By combining data from risk events, risk assessments and key indicators with that from audit findings, expert management judgement and other internal data sources, Barclays is able to generate Key Risk Scenarios (KRSs). These scenarios identify the most significant operational risks across the Group. The KRSs are validated at business and Group level to ensure that they appropriately reflect the level of operational risk the business faces.

Barclays shares and receives an anonymous sub-set of KRS information with member banks of ORX in order to compare and contrast scenario analysis with peers.

Insurance

As part of its risk management approach, the Group also uses insurance to mitigate the impact of some operational risks.

Operational risk appetite

Barclays approach to determining appetite for Operational risk combines both quantitative measures and qualitative judgement, in order to best reflect the nature of non-financial risks.

The monitoring and tracking of Operational risk measures is supplemented with qualitative review and discussion at senior management executive committees on the action being taken to improve controls and reduce risk to an acceptable level.

Operational risk appetite is aligned to the Group's Risk Appetite Framework.

Reporting

The ongoing monitoring and reporting of Operational risk is a key component of an effective Operational risk Framework. Reports are used by the Operational risk function and by business management to understand, monitor, manage and control operational risks and losses.

Operational risk measurement

The Operational risk capital model uses the outputs of the risk management tools to measure Barclays operational risk exposure, and in particular, Key Risk Scenarios. The model estimates the frequency and severity of operational risk losses for each risk type to provide a distribution of potential losses over a year for Barclays as a whole. This process takes into account the possibility of correlations i.e. impacts from different risks occurring together. The model generates a regulatory capital requirement, which is determined to a level of 99.9% confidence. Once the overall level of regulatory capital for the Group has been established it is allocated, on a risk sensitive basis, to businesses.

Appendix: Detailed credit risk IRB grades

This appendix provides a further analysis of the parameters driving the risk weighted asset calculations for the credit risk IRB (both AIRB and FIRB) exposures in the banking book. As the Basel 2 IRB calculation is a non linear function that uses parameters other than those driving Default grade (DG) such as Loss given default (LGD) and maturity. Therefore, right weights may sometimes be higher in the upper DG bands compared to those below.

Large exposure movements between DG bands are observed in the normal course of business, this is is due to the very granular nature of these bands.

Table 61: IRB banking book data for governments and central banks

Totals agree to FIRB and AIRB RWAs and EAD for Central governments or central bank lines in Table 10 on page 19. It differs from disclosures in Table 23 on page 34 as the latter includes counterparty credit risk.

Obligor Grade	EAD post-CRM	Average probability of default	Average loss given default	Risk weighted assets	Average risk weights
As at 31.12.12	£m	%	£m	£m	£m
Default grade 1	117,489	0.00%	45%	4,819	4%
Default grade 2	3,837	0.02%	45%	423	11%
Default grade 3	406	0.04%	42%	78	19%
Default grade 4	1,857	0.08%	45%	540	29%
Default grade 5	2,193	0.13%	30%	733	33%
Default grade 6	236	0.18%	45%	86	36%
Default grade 7	-	0.00%	0%	-	0%
Default grade 8	231	0.29%	44%	91	40%
Default grade 9	1	0.37%	5%	-	6%
Default grade 10	-	0.00%	0%	-	0%
Default grade 11	255	0.52%	50%	185	73%
Default grade 12	24	0.61%	45%	26	109%
Default grade 13	10	1.25%	45%	11	106%
Default grade 14	-	0.00%	0%	-	0%
Default grade 15	25	2.46%	68%	61	245%
Default grade 16	6	3.84%	52%	10	152%
Default grade 17	-	0.00%	0%	-	0%
Default grade 18	38	7.03%	45%	79	211%
Default grade 19	-	0.00%	0%	-	0%
Default grade 20	-	0.00%	0%	-	0%
Default grade 21	-	0.00%	0%	-	0%
In default	-	0.00%	0%	-	0%
Total	**126,608**	**0.01%**	**45%**	**7,142**	**6%**

As at 31.12.11	£m	%	£m	£m	£m
Default grade 1	87,045	0.00%	10%	528	1%
Default grade 2	36,351	0.02%	12%	991	3%
Default grade 3	15,573	0.03%	12%	548	4%
Default grade 4	288	0.06%	10%	14	5%
Default grade 5	1,741	0.11%	7%	77	4%
Default grade 6	4	0.15%	40%	1	23%
Default grade 7	-	0.00%	0%	-	0%
Default grade 8	124	0.26%	10%	12	10%
Default grade 9	181	0.33%	29%	51	28%
Default grade 10	253	0.40%	40%	141	56%
Default grade 11	11	0.51%	59%	15	133%
Default grade 12	6	0.75%	50%	8	123%
Default grade 13	-	0.00%	0%	-	0%
Default grade 14	-	0.00%	0%	-	0%
Default grade 15	3	2.60%	3%	-	9%
Default grade 16	-	0.00%	0%	-	0%
Default grade 17	-	0.00%	0%	-	0%
Default grade 18	-	0.00%	0%	-	0%
Default grade 19	-	0.00%	0%	-	0%
Default grade 20	-	0.00%	0%	-	0%
Default grade 21	8	20.96%	30%	13	166%
In default	-	0.00%	0%	-	0%
Total	**141,588**	**0.02%**	**10%**	**2,399**	**2%**

Appendix: Detailed credit risk IRB grades

Table 62: IRB banking book data for institutions

Totals agree to FIRB and AIRB RWAs and EAD for the Institutions lines in Table 10 on page 19. It differs from disclosures in Table 23 on page 34 as the latter includes counterparty credit risk.

Obligor Grade	EAD post-CRM	Average probability of default	Average loss given default	Risk weighted assets	Average risk weights
As at 31.12.12	£m	%	£m	£m	£m
Default grade 1	70	0.00%	45%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	19,975	0.03%	37%	2,158	11%
Default grade 4	1,513	0.07%	45%	323	21%
Default grade 5	1,257	0.12%	46%	373	30%
Default grade 6	569	0.19%	16%	95	17%
Default grade 7	33	0.22%	45%	11	33%
Default grade 8	64	0.28%	50%	38	60%
Default grade 9	67	0.35%	39%	26	39%
Default grade 10	215	0.42%	43%	104	48%
Default grade 11	9	0.55%	59%	7	76%
Default grade 12	86	0.70%	59%	128	150%
Default grade 13	-	0.00%	0%	-	0%
Default grade 14	1	1.84%	37%	1	75%
Default grade 15	1	2.52%	45%	2	127%
Default grade 16	-	0.00%	0%	-	0%
Default grade 17	-	0.00%	0%	-	0%
Default grade 18	-	0.00%	0%	-	0%
Default grade 19	14	9.23%	53%	35	246%
Default grade 20	5	15.00%	36%	9	166%
Default grade 21	-	0.00%	0%	-	0%
In default	116	100.00%	59%	195	168%
Total	23,995	0.54%	38%	3,505	15%
As at 31.12.11	£m	%	£m	£m	£m
Default grade 1	118	0.00%	20%	1	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	27,802	0.04%	24%	2,009	7%
Default grade 4	800	0.07%	47%	211	26%
Default grade 5	353	0.14%	46%	104	30%
Default grade 6	155	0.16%	47%	52	34%
Default grade 7	152	0.23%	45%	69	45%
Default grade 8	1,008	0.28%	20%	191	19%
Default grade 9	13	0.39%	45%	6	48%
Default grade 10	144	0.44%	47%	79	55%
Default grade 11	5	0.58%	59%	4	80%
Default grade 12	111	0.74%	28%	66	59%
Default grade 13	10	1.29%	46%	10	107%
Default grade 14	1	1.81%	55%	1	126%
Default grade 15	-	2.60%	64%	1	214%
Default grade 16	-	3.70%	45%	1	145%
Default grade 17	-	5.35%	44%	1	154%
Default grade 18	26	7.07%	60%	68	258%
Default grade 19	1	9.99%	60%	2	247%
Default grade 20	3	13.52%	60%	8	279%
Default grade 21	-	0.00%	0%	-	264%
In default	57	100.00%	62%	28	49%
Total	30,759	0.25%	25%	2,912	9%

Appendix: Detailed credit risk IRB grades

Table 63: IRB banking book data for corporates

Totals differ from FIRB and AIRB RWAs and EAD for the Corporates lines in Table 10 on page 19. This is because exposures treated under the slotting approach are not included in the below. They also differ from disclosures in Table 23 on page 34 as the latter includes counterparty credit risk.

Obligor Grade	EAD post-CRM	Average probability of default	Average loss given default	Risk weighted assets	Average risk weights
As at 31.12.12	£m	%	£m	£m	£m
Default grade 1	700	0.01%	45%	23	3%
Default grade 2	460	0.02%	45%	40	9%
Default grade 3	38,168	0.03%	28%	4,485	12%
Default grade 4	18,767	0.07%	34%	4,001	21%
Default grade 5	14,693	0.12%	30%	3,890	26%
Default grade 6	7,121	0.17%	34%	2,498	35%
Default grade 7	5,123	0.22%	39%	2,356	46%
Default grade 8	3,829	0.27%	39%	1,946	51%
Default grade 9	5,867	0.35%	40%	3,310	56%
Default grade 10	4,641	0.45%	40%	2,789	60%
Default grade 11	3,659	0.55%	43%	2,651	72%
Default grade 12	13,484	0.87%	38%	10,191	76%
Default grade 13	3,703	1.35%	40%	3,322	90%
Default grade 14	5,645	1.82%	34%	4,862	86%
Default grade 15	7,368	2.62%	38%	8,876	120%
Default grade 16	3,283	3.72%	28%	2,767	84%
Default grade 17	2,142	5.29%	31%	2,170	101%
Default grade 18	1,536	7.45%	25%	1,467	95%
Default grade 19	1,412	10.00%	29%	1,559	110%
Default grade 20	695	14.15%	33%	1,047	151%
Default grade 21	1,047	28.62%	34%	1,907	182%
In default	2,821	100.00%	43%	3,881	138%
Total	146,164	2.95%	33%	70,038	48%

As at 31.12.11	£m	%	£m	£m	£m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	36,413	0.03%	26%	4,117	11%
Default grade 4	22,921	0.07%	31%	4,291	19%
Default grade 5	15,882	0.12%	32%	4,207	26%
Default grade 6	8,597	0.17%	31%	2,770	32%
Default grade 7	6,771	0.22%	39%	3,015	45%
Default grade 8	5,707	0.28%	37%	2,877	50%
Default grade 9	6,076	0.35%	41%	3,512	58%
Default grade 10	6,041	0.45%	37%	3,624	60%
Default grade 11	4,227	0.55%	41%	3,018	71%
Default grade 12	13,398	0.90%	39%	10,402	78%
Default grade 13	5,413	1.36%	35%	4,629	86%
Default grade 14	4,072	1.87%	38%	4,016	99%
Default grade 15	6,396	2.46%	40%	7,949	124%
Default grade 16	3,388	3.74%	41%	4,202	124%
Default grade 17	2,350	5.34%	34%	2,737	116%
Default grade 18	2,703	7.55%	25%	2,735	101%
Default grade 19	1,827	10.05%	35%	2,680	147%
Default grade 20	835	14.60%	40%	1,526	183%
Default grade 21	1,387	26.66%	29%	2,235	161%
In default	3,642	100.00%	43%	3,837	105%
Total	158,046	3.40%	33%	78,379	50%

Appendix: Detailed credit risk IRB grades

Table 64: IRB data for secured retail

Totals agree to FIRB and AIRB RWAs and EAD for the Secured by real estate collateral lines in Table 10 on page 19. The grades shown in this table differ from those in Table 24 on page 37 as the latter show expected loss bands.

Obligor Grade As at 31.12.12	EAD post-CRM £m	Average probability of default %	Average loss given default £m	Risk weighted assets £m	Average risk weights £m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	7,334	0.03%	17%	163	2%
Default grade 4	7,676	0.07%	22%	412	5%
Default grade 5	8,809	0.12%	25%	833	9%
Default grade 6	3,950	0.18%	21%	434	11%
Default grade 7	5,058	0.21%	18%	466	9%
Default grade 8	2,948	0.28%	14%	260	9%
Default grade 9	18,324	0.37%	9%	1,079	6%
Default grade 10	17,774	0.45%	13%	1,766	10%
Default grade 11	17,307	0.55%	11%	1,692	10%
Default grade 12	52,459	0.80%	12%	7,511	14%
Default grade 13	8,039	1.34%	14%	1,819	23%
Default grade 14	4,540	1.81%	15%	1,367	30%
Default grade 15	3,738	2.52%	17%	1,971	53%
Default grade 16	2,558	3.57%	15%	1,138	45%
Default grade 17	2,551	5.29%	18%	1,647	65%
Default grade 18	1,398	7.57%	13%	823	59%
Default grade 19	704	9.37%	17%	573	81%
Default grade 20	786	15.11%	18%	835	106%
Default grade 21	1,982	46.20%	20%	2,078	105%
In default	3,275	100.00%	22%	2,549	78%
Total	**171,210**	**3.33%**	**14%**	**29,416**	**17%**

As at 31.12.11	£m	%	£m	£m	£m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	3,002	0.03%	9%	33	1%
Default grade 4	6,864	0.06%	16%	183	3%
Default grade 5	11,391	0.12%	23%	780	7%
Default grade 6	7,503	0.17%	20%	552	7%
Default grade 7	2,114	0.23%	11%	116	5%
Default grade 8	4,015	0.28%	10%	228	6%
Default grade 9	25,821	0.35%	10%	1,715	7%
Default grade 10	21,279	0.45%	11%	1,838	9%
Default grade 11	21,749	0.55%	12%	2,340	11%
Default grade 12	35,104	0.79%	12%	4,889	14%
Default grade 13	8,055	1.28%	14%	1,912	24%
Default grade 14	3,936	1.85%	14%	1,189	30%
Default grade 15	2,802	2.53%	14%	1,037	37%
Default grade 16	3,079	3.54%	15%	1,446	47%
Default grade 17	1,971	5.39%	13%	1,077	55%
Default grade 18	2,646	7.51%	14%	1,815	69%
Default grade 19	644	9.47%	13%	443	69%
Default grade 20	753	14.56%	16%	708	94%
Default grade 21	2,266	45.87%	19%	2,146	95%
In default	3,617	100.00%	26%	2,290	63%
Total	**168,611**	**3.63%**	**14%**	**26,737**	**16%**

Appendix: Detailed credit risk IRB grades

Table 65: IRB data for revolving retail

Totals agree to FIRB and AIRB RWAs and EAD for the Secured by real estate collateral lines in Table 10 on page 19. The grades shown in this table differ from those in Table 25 on page 37 as the latter show expected loss bands.

Obligor Grade As at 31.12.12	EAD post-CRM £m	Average probability of default %	Average loss given default £m	Risk weighted assets £m	Average risk weights £m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	6,572	0.03%	79%	142	2%
Default grade 4	3,118	0.07%	79%	143	5%
Default grade 5	2,549	0.12%	79%	178	7%
Default grade 6	1,762	0.17%	80%	170	10%
Default grade 7	1,298	0.22%	82%	162	12%
Default grade 8	1,071	0.27%	82%	158	15%
Default grade 9	1,694	0.35%	81%	296	17%
Default grade 10	1,244	0.45%	82%	272	22%
Default grade 11	1,005	0.55%	81%	255	25%
Default grade 12	4,384	0.88%	81%	1,595	36%
Default grade 13	1,376	1.36%	85%	727	53%
Default grade 14	1,559	1.82%	87%	1,049	67%
Default grade 15	1,425	2.54%	88%	1,235	87%
Default grade 16	2,168	3.85%	83%	2,190	101%
Default grade 17	861	5.26%	89%	1,255	146%
Default grade 18	498	7.39%	90%	889	179%
Default grade 19	282	9.88%	89%	599	213%
Default grade 20	290	14.30%	89%	748	258%
Default grade 21	357	40.00%	88%	1,092	306%
In default	1,820	100.00%	63%	956	53%
Total	35,333	6.66%	81%	14,111	40%
As at 31.12.11	£m	%	£m	£m	£m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	5,067	0.03%	81%	101	2%
Default grade 4	3,602	0.07%	73%	130	4%
Default grade 5	2,894	0.12%	73%	160	6%
Default grade 6	1,626	0.17%	74%	122	7%
Default grade 7	1,357	0.22%	75%	127	9%
Default grade 8	691	0.27%	79%	79	11%
Default grade 9	1,579	0.34%	78%	214	14%
Default grade 10	1,343	0.45%	76%	222	17%
Default grade 11	640	0.56%	78%	128	20%
Default grade 12	3,429	0.85%	77%	943	28%
Default grade 13	1,363	1.36%	77%	537	39%
Default grade 14	1,775	1.84%	73%	830	47%
Default grade 15	1,462	2.53%	77%	906	62%
Default grade 16	2,321	3.76%	74%	1,840	79%
Default grade 17	1,526	5.30%	77%	1,571	103%
Default grade 18	1,197	7.39%	77%	1,533	128%
Default grade 19	698	9.91%	78%	1,072	154%
Default grade 20	914	13.93%	79%	1,703	186%
Default grade 21	770	38.44%	82%	1,689	219%
In default	1,911	100.00%	65%	1,002	52%
Total	36,165	7.76%	76%	14,909	41%

Appendix: Detailed credit risk IRB grades

Table 66: IRB data for SME exposures

Totals agree to FIRB and AIRB RWAs and EAD for the Secured by real estate collateral lines in Table 10 on page 19. The grades shown in this table differ from those in Table 25 on page 37 as the latter show expected loss bands.

Obligor Grade As at 31.12.12	EAD post-CRM £m	Average probability of default %	Average loss given default £m	Risk weighted assets £m	Average risk weights £m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	602	0.03%	32%	46	8%
Default grade 4	414	0.07%	26%	38	9%
Default grade 5	259	0.12%	29%	34	13%
Default grade 6	242	0.18%	29%	37	15%
Default grade 7	243	0.22%	40%	58	24%
Default grade 8	212	0.27%	35%	48	23%
Default grade 9	392	0.35%	39%	103	26%
Default grade 10	388	0.44%	39%	115	30%
Default grade 11	305	0.55%	39%	109	36%
Default grade 12	1,397	0.89%	43%	627	45%
Default grade 13	590	1.38%	50%	303	51%
Default grade 14	685	1.85%	42%	406	59%
Default grade 15	890	2.61%	48%	611	69%
Default grade 16	661	3.74%	44%	461	70%
Default grade 17	430	5.39%	45%	325	76%
Default grade 18	252	7.54%	50%	220	88%
Default grade 19	348	9.97%	43%	274	79%
Default grade 20	251	14.29%	48%	257	102%
Default grade 21	245	29.82%	48%	330	135%
In default	691	100.00%	25%	2,064	299%
Total	9,497	10.16%	40%	6,466	68%

As at 31.12.11	£m	%	£m	£m	£m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	684	0.03%	34%	60	8%
Default grade 4	476	0.07%	29%	48	10%
Default grade 5	327	0.12%	37%	53	16%
Default grade 6	346	0.17%	35%	61	18%
Default grade 7	241	0.22%	39%	53	22%
Default grade 8	265	0.28%	40%	66	25%
Default grade 9	455	0.35%	43%	126	28%
Default grade 10	605	0.44%	42%	187	31%
Default grade 11	371	0.55%	41%	133	36%
Default grade 12	2,058	0.89%	44%	934	45%
Default grade 13	801	1.37%	48%	430	54%
Default grade 14	931	1.85%	46%	585	63%
Default grade 15	1,018	2.62%	46%	688	68%
Default grade 16	901	3.76%	46%	642	71%
Default grade 17	516	5.39%	47%	395	77%
Default grade 18	355	7.48%	49%	302	85%
Default grade 19	551	9.98%	44%	443	80%
Default grade 20	321	14.82%	49%	337	105%
Default grade 21	303	31.34%	54%	454	150%
In default	1,011	100.00%	34%	1,902	188%
Total	12,536	11.00%	43%	7,899	63%

Appendix: Detailed credit risk IRB grades

Table 67: IRB data for other unsecured retail exposures

Totals agree to FIRB and AIRB RWAs and EAD for the Secured by real estate collateral lines in Table 10 on page 19. The grades shown in this table differ from those in Table 25 on page 37 as the latter show expected loss bands.

Obligor Grade As at 31.12.12	EAD post-CRM £m	Average probability of default %	Average loss given default £m	Risk weighted assets £m	Average risk weights £m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	49	0.03%	62%	3	7%
Default grade 4	39	0.09%	44%	4	10%
Default grade 5	119	0.11%	53%	18	15%
Default grade 6	30	0.17%	84%	10	33%
Default grade 7	31	0.23%	89%	13	41%
Default grade 8	58	0.28%	80%	25	43%
Default grade 9	163	0.34%	82%	81	50%
Default grade 10	351	0.46%	58%	146	42%
Default grade 11	262	0.54%	74%	155	59%
Default grade 12	1,500	0.93%	76%	1,186	79%
Default grade 13	665	1.35%	79%	634	95%
Default grade 14	1,143	1.84%	68%	1,033	90%
Default grade 15	1,643	2.57%	57%	1,337	81%
Default grade 16	898	3.66%	68%	1,116	124%
Default grade 17	489	5.31%	67%	518	106%
Default grade 18	352	7.68%	62%	358	102%
Default grade 19	158	9.52%	63%	175	111%
Default grade 20	412	15.36%	60%	514	125%
Default grade 21	258	42.36%	76%	464	180%
In default	1,054	100.00%	79%	635	60%
Total	**9,674**	**14.66%**	**69%**	**8,425**	**87%**

As at 31.12.11	£m	%	£m	£m	£m
Default grade 1	-	0.00%	0%	-	0%
Default grade 2	-	0.00%	0%	-	0%
Default grade 3	49	0.03%	62%	4	8%
Default grade 4	80	0.08%	59%	11	14%
Default grade 5	140	0.11%	55%	24	17%
Default grade 6	49	0.17%	85%	16	33%
Default grade 7	49	0.23%	89%	20	41%
Default grade 8	87	0.27%	83%	38	44%
Default grade 9	197	0.34%	82%	99	50%
Default grade 10	402	0.46%	58%	172	43%
Default grade 11	285	0.54%	73%	168	59%
Default grade 12	1,521	0.94%	75%	1,203	79%
Default grade 13	684	1.37%	71%	599	88%
Default grade 14	1,130	1.83%	63%	959	85%
Default grade 15	1,421	2.55%	56%	1,171	82%
Default grade 16	845	3.71%	72%	938	111%
Default grade 17	488	5.34%	69%	537	110%
Default grade 18	723	7.35%	70%	845	117%
Default grade 19	172	9.51%	66%	204	118%
Default grade 20	468	15.35%	60%	601	128%
Default grade 21	291	41.40%	72%	497	171%
In default	1,315	100.00%	79%	1,118	85%
Total	10,396	16.54%	69%	9,224	89%

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Location of Barclays risk disclosure reports

In our 2012 risk disclosures (Annual Report and Pillar 3 disclosures) we have aimed to develop our approach to risk reporting to ensure disclosure is transparent, appropriately located and easily navigable:

- To provide the user with insight into the key areas of management focus and the material risks and uncertainties we face, we present our Risk Factors.
- To help the user assess the level of risk across our businesses and portfolios, and how the level of risk has changed over time, we have consolidated quantitative information under Risk Performance.
- To allow the user to go deeper and find out more about the major risk policies which underlie our Risk Performance, we have consolidated policy-based qualitative information in the Risk Management section
- We have aimed to provide clear cross-referencing between the Risk Factors, Risk Performance and Risk Management sections within the Annual Report, and between the Annual Report and accompanying regulatory information in the Pillar 3 Report.

RISK OVERVIEW

Together, these provide the user with a comprehensive presentation of the risk profile of Barclays' operations, on both an accounting and a regulatory basis as appropriate, and provide detailed information on the way in which Barclays executes its management of risk.

Risk Overview		Pillar 3 Report	Annual Report	
			Risk review	Risk management
These pages provide a comprehensive overview of Barclays approach to risk management	Business Conditions and the General Economy		108	
	Material Risks and Uncertainties		108-115	
	Barclays Risk Management Strategy			314-320
	Our Risk Culture			314
	Assigning Responsibilities			316
	Principal Risks Policy			137
	Risk Management in the Setting of Strategy			317-320
	Modelling of Risk	86-93		86-93

Credit Risk		Pillar 3 Report	Annual Report	
			Risk review	Risk management
Credit risk is the risk of suffering financial loss should the Group's customers, clients or market counterparties fail to fulfil their contractual obligations.	Principal risks: Credit risk overview		108-110	
	Analysis of Maximum Exposure and Collateral and other Credit Enhancement held		116-117	329-330
	Balance Sheet Concentrations of Credit Risk	24-26	118-121	330-331
	Balance Sheet Credit Quality	29-38, 110-116	122-123	330-331
	Analysis of Loans and Advances and Impairment	38-41	124-128	323-325
	Retail Credit Risk		129-135	326-327
	Wholesale Credit Risk		136-141	326-327
	Barclays Credit Market Exposures		142	
	Exposures to Eurozone Countries		143-154	
	Analysis of Securitisations	57-63, 103-106		
	Maturity of Credit Exposures	27-28		
	Capital Requirements for Credit Risk	19-20, 23		
	Counterparty Credit Risk exposure and RWAs	46-50		
	RWAs and Credit Risk exposure by business and Basel asset class	21-23		

Market Risk		Pillar 3 Report	Annual Report	
			Risk review	Risk management
Market risk is the risk of the Group suffering financial loss due to the Group being unable to hedge its balance sheet at prevailing market levels.	Principal risks: Market risk overview	98-102	111	332-333
	Analysis of Traded Market Risk Exposures	52-54	155-156	333-336
	Analysis of Non-Traded Market Risk Exposures	55	156-159	336
	Foreign Exchange Risk		160	
	Other Market Risks	102	161	
	Analysis of Securitisations	57-63, 103-106		
	Capital Requirements for Market Risk	52		

Location of Barclays risk disclosure reports

Funding Risk - Capital		Pillar 3 Report	Annual Report	
			Risk review	Risk management
Capital risk is the risk that the Group is unable to maintain appropriate capital ratios.	Principal risks: Funding risk overview		111-112	340-341
	Capital Composition	15-17	163	
	Movement in Total Regulatory Capital	6	164	
	Risk Weighted Assets by Risk Type and Business	8, 23, 47, 52, 65	165	
	Movement in Risk Weighted Assets	7	165-166	
	Impact of Basel 3	68-74	166-168	
	Adjusted Gross Leverage		168-169	
	Implementation of Basel 3 – Leverage Impacts	74	169-170	
	Economic Capital		171	

Funding Risk - Liquidity		Pillar 3 Report	Annual Report	
			Risk review	Risk management
Liquidity risk is the risk that the Group is unable to meet its obligations as they fall due as a result of a sudden, and potentially protracted, increase in net cash outflows.	Principal risks: Funding risk overview		111-112	337-339
	Liquidity Risk Stress Testing		172-174	
	Liquidity Pool		175-176	
	Funding Structure		176-179	
	Encumbrance		180-182	
	Credit Ratings		182-183	
	Liquidity Management at Absa Group		183	
	Contractual Maturity of Financial Assets and Liabilities		183-186	

Operational Risk		Pillar 3 Report	Annual Report	
			Risk review	Risk management
Operational risk is the risk of direct or indirect impacts resulting from human factors, inadequate or failed internal processes and systems or external events.	Principal risks: Operational risk overview	107-109	112	342-343
	Operational Risk Profile	66	187	
	Supervision and Regulation		190-195	
	Capital Requirements for Operational Risk	65		

Reputation Risk		Pillar 3 Report	Annual Report	
			Risk review	Risk management
Reputation risk is the risk of damage to Barclays brand arising from any association, action, or inaction which is perceived by stakeholders to be inappropriate or unethical	Reputation risk		188	

Reputation Risk		Pillar 3 Report	Annual Report	
			Risk review	Risk management
Conduct Risk is the risk that detriment is caused to our customers, clients or counterparties because of the inappropriate execution of our business activities. Conduct Risk, being a material risk faced by the Group, has been categorised as a new Principal Risk in 2013	Conduct risk		189	