

BARCLAYS PLC  
Form 6-K  
March 30, 2010

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, DC 20549**

**FORM 6-K**

**REPORT OF FOREIGN PRIVATE ISSUER  
PURSUANT TO RULE 13A-16 OR 15D-16  
UNDER THE SECURITIES EXCHANGE ACT OF 1934**

March, 2010

**Barclays PLC and  
Barclays Bank PLC**  
(Names of Registrants)

**1 Churchill Place  
London E14 5HP  
England**  
(Address of Principal Executive Offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F x    Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes    No x

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b):

This Report is a joint Report on Form 6-K filed by Barclays PLC and Barclays Bank PLC. All of the issued ordinary share capital of Barclays Bank PLC is owned by Barclays PLC.

This Report comprises:

Edgar Filing: BARCLAYS PLC - Form 6-K

Information given to The London Stock Exchange and furnished pursuant to  
General Instruction B to the General Instructions to Form 6-K.

EXHIBIT INDEX

Consolidated Basel II Pillar 3 Disclosure for 2009

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**SIGNATURES**

Pursuant to the requirements of the Securities Exchange Act of 1934, each of the registrants has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BARCLAYS PLC  
(Registrant)

Date: March 30, 2010

By: /s/ Patrick Gonsalves  
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Patrick Gonsalves  
Deputy Secretary

BARCLAYS BANK PLC  
(Registrant)

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Date: March 30, 2010

By: /s/ Patrick Gonsalves

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Patrick Gonsalves  
Joint Secretary

**Barclays PLC**  
**Consolidated Basel II Pillar 3 Disclosure for 2009**

## **Notes about this report**

### **Overview of Basel II and Pillar 3**

Since 2008, Barclays has applied the Basel II framework as part of its capital management strategy. The accord is made up of three pillars:

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Pillar 1 covers the calculation of risk-weighted assets for credit risk, market risk and operational risk.

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Pillar 2 allows firms and supervisors to take a view on whether the firm should hold additional capital to cover the three Pillar 1 risk types, or to cover other risks. A firm's own internal models and assessments support this process.

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Pillar 3 covers external communication of risk and capital information by banks. Basel II also provides for different approaches to calculating capital requirements.

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The first is the Standardised approach, where the risk weights used to assess requirements against credit exposures are consistent across the industry.

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The second approach is the Internal Ratings Based approach (IRB) which relies on the bank's internal

models to derive the risk weights. Throughout this report the tables distinguish between these two approaches. The IRB approach is further sub-divided into two alternative applications, Advanced and Foundation:

- Under 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. This is similar to the Basel I framework, but with a more detailed classification of asset types to enable better risk sensitivity.
- Under 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.

Barclays lead regulator is the UK Financial Services Authority (FSA). Pillar 3 principles can be found within its "Prudential Sourcebook for Banks, Building Societies and Investment Firms" ("BIPRU" Section 11).

The report is prepared once a year, except in exceptional circumstances, in accordance with the Group's Pillar 3 Policy. It is available from the Barclays investor relations web site ([www.investorrelations.barclays.com](http://www.investorrelations.barclays.com)).

#### **Presentation of risk data, verification and sign-off**

This document discloses Barclays assets both in terms of exposures and capital requirements. For the purposes of this document, credit exposure is defined as the estimate of the amount lost in the event of a default 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, as published in the Annual Report, is reported as a drawn balance only. This is one of the reasons why exposure values in the Pillar 3 report can differ from asset values as reported in the published accounts.

Where this document discloses credit exposures or capital requirements, Barclays has followed the scope and application of its Pillar 1 capital adequacy calculations. Where figures for impairment or losses are disclosed within this document, Barclays has followed the IFRS definitions used in the Barclays Annual Report. Throughout this report, tables show credit exposures or capital requirement 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 are not explicit, such as in industry and geographic analyses, Barclays shows the exposure class splits on the same basis as its Annual Report.

The 2009 Pillar 3 disclosure describes the Group's credit risk exposures covering both the Standardised and the Internal Ratings Based (IRB) approaches. In many cases, a material factor in the year on year movements is the change in treatment of credit risk portfolios, from the Standardised to the IRB approach. Where this is the case, this is noted in the commentary to the disclosures. The process of transferring portfolios to the IRB approach is expected to remain a significant driver of year on year movements for the next year. In addition, some year on year movements have been driven by updates in regulatory guidance, changes in regulatory treatment of certain portfolios and reclassifications of data. These cases are noted where relevant.

This report was verified and approved internally by Barclays in line with its Pillar 3 policy. There are no requirements for external auditing of these disclosures.

#### **Basis 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<sup>st</sup> December 2009. The consolidation basis used is the same as that used for regulatory capital adequacy. Certain overseas subsidiaries operate under local regulatory capital regimes which are recognised as equivalent by the FSA. In these cases, Barclays has used these local capital calculations in its Group consolidation. The scope of consolidation is similar to that used for statutory accounting reporting for most of the Group's activities (see Appendix for differences). Barclays had no subsidiaries outside the scope of regulatory consolidation which had capital resources less than their required minimum at 31<sup>st</sup> December 2009.

## Capital Risk Management

Capital adequacy is the degree to which capital resources on the Group's balance sheet are sufficient to cover the businesses' capital requirements now and in the foreseeable future. The Group's authority to operate as a bank is dependant upon the maintenance of adequate capital resources. Capital risk management is the process for reviewing capital requirements to enable the Group to:

- Meet minimum regulatory requirements in the UK and in other jurisdictions such as the United States and South Africa where regulated activities are undertaken;

- Support its credit rating and maintain cost of funds;

- Support its growth.

Barclays ensures that it is sufficiently capitalised by continually assessing its capital resources and requirements given current financial projections. This takes into account material risks to the projections as the strategies employed to manage those risks.

### Capital risk management organisation and structure

Treasury Committee manages compliance with the Group's capital management objectives. The Committee reviews actual and forecast capital requirements and resources on a monthly basis. The Risk Oversight Committee (GROC) and the Board Risk Committee (BRC) annually review and set risk appetite and analyse the impacts of stress scenarios in order to understand and manage the Group's projected capital adequacy. More generally they are responsible for the risk management processes of the bank.

### Measurement of capital requirements

Barclays capital management considers both economic and regulatory capital.

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 II 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 (described below) 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.

### Management of capital resources

The Group's objective in managing its capital resources is to maintain sufficient and adequate capital resources given current and future requirements. This is achieved via a number of activities, described below.

The Group manages requirements for capital from organic and inorganic growth which ensures that resources remain in excess of minimum regulatory requirements and internal targets (which provide a buffer above minimum requirements). Robust governance and operational processes are in place to support this.

Barclays continuously assesses market capacity for any planned capital issuance, both in business-as-usual and stressed conditions. Even during the severe crisis of 2008 and 2009 the Group has demonstrated that it can raise debt and equity capital from investors, without capital investments by the UK Government.

The Group manages its capital resources to ensure that those Group entities that are subject to local capital adequacy regulation in individual jurisdictions meet their minimum capital requirements. Local management ensures compliance with minimum regulatory capital requirements by reporting to local Asset and Liability Committees with oversight by Treasury Committee, as required. Injections of capital resources into Group entities are approved by Treasury Committee, under authorities delegated from the Group Executive Committee. The Group's policy is for capital held in Group entities in excess of local regulatory requirements to be repatriated to Barclays Bank PLC in the form of dividends and/or capital repatriation, subject to local regulatory requirements, exchange controls and tax implications. Other than as indicated above, the Group is not aware of any material impediments to the prompt transfer of capital resources or repayment of intra-group liabilities when due.

Regulators have set a range of minimum levels for regulatory capital ratios. There are also limits relating to the structure and quality of capital resources. Barclays ensures that Barclays maintain sufficient buffers above these regulatory minima at all times. The adequacy of these buffers is assessed via the medium-term planning (MTP) process, the risk appetite setting process and Group-wide stress testing (these processes are described below).

**Activities to support the management of capital requirements and resources**

**Managing capital risk ensures that Barclays achieves an adequate balance between capital requirements and resources. Barclays uses several tools to ensure that capital risk is properly assessed and mitigated. The main elements are summarised below.**

The

*medium-term planning process*

(MTP), 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. 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.

The plans comprise projections of capital resources and requirements given profit generation, dividend policy and capital issuance. This serves to verify profits will produce sufficient capital given requirements, and that the bank will satisfy internal objectives and regulatory guidance relating to the structure and quality of capital resources.

The Group's

*Risk Appetite framework*

is embedded within its decision-making processes, and is used to understand the relationship between risk and reward. This understanding helps the Board's assessment of the medium-term plans for which it is responsible. The aim of this framework is to achieve the Group's financial performance objectives without exposing the Group to levels of risk that are outside of its appetite.

The framework considers Risk Appetite from two perspectives:

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Financial Volatility is defined as the level of risk Barclays is prepared to accept in order to achieve its objectives where risk relates to an amount of loss at a given confidence level

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Mandate and Scale comprises a range of limits and triggers with the aim of avoiding risk concentrations. During the annual MTP process, the Group sets its appetite for Financial Volatility arising from volatility in revenues, costs and impairment over the forecast horizon. The aim of this framework is to enable returns to be maximised without exposing the Group to levels of risk that are outside of its appetite. The Group defines Risk Appetite as the level of risk it is prepared to accept in order to achieve its objectives where risk relates to an amount of loss at a given confidence level.

The appetite is expressed in terms of a set of objectives in a business-as-usual (BAU) environment as well as in stress environments (currently 1-in-7 and 1-in-25 statistical confidence levels as determined by our economic capital models). For example, at a given level of stress these objectives could be expressed as:

- The minimum profit that Barclays is willing to accept in stress environments

- The maximum loan loss rate (credit losses as a proportion of loans) that the Group will tolerate

- The target return on equity

- Minimum Group regulatory capital ratios

- Capacity for dividend payment

- Ability to achieve an appropriate level of growth in the loan book.

The central Group Risk function verifies that the objectives can be attained under the medium-term plans by forecasting stressed financial results over the next year. The Board is responsible for approving Risk Appetite and the Board Risk Committee monitors the Group's risk profile against the agreed appetite.

The Mandate and Scale framework operates through limits and triggers, which work in tandem with clearly defined lending criteria for specific sectors, industries and products, in order to maintain asset quality.

Barclays uses the Mandate and Scale framework to:

- Limit concentration risk and manage large exposures

- Keep lending within Group and individual business mandate

- Ensure activities remain of an appropriate scale relative to the underlying risk and reward

- Ensure risk-taking is supported by appropriate expertise and capabilities

The Board Risk Committee is responsible for approving the Group's Mandate and Scale limits and triggers annually and ratifying any changes. Mandate and Scale frameworks are currently in place for retail and wholesale credit risk and for traded and non-traded market risk.

The *Group-wide stress testing process* forecasts the Group's projected capital requirements and resources in a range of stress scenarios. This enables the Group to ensure it can meet its minimum regulatory capital requirements in a stressed environment, meaning that Barclays capital planning buffer is adequate. It also allows senior management to gain a better understanding of how portfolios are likely to react to changing economic conditions and how the Group can best anticipate and mitigate them. The Group-wide stress testing process contributes to the strategic planning of the Group and forms a key component of the internal capital adequacy assessment process (ICAAP).

The components of the stress testing process are:

- A central view of the likely direction of the economy, and a baseline set of financial projections. These are produced as part of the medium-term planning process.

- A stress scenario combining an array of economic and financial parameters, for instance GDP, interest rates, and credit spreads.

- A narrative to ensure understanding of the scenario.

Managing capital risk ensures that Barclays achieves an adequate balance between capital requirements and resources.



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A set of financial projections, including detailed capital plans under stress. The effect of mitigating actions are clearly identified and supported.

The analysis of the stress losses is done by risk managers and relevant experts within the business units. Group centre functions provide scenario parameters, coordinate the process, perform the review and challenge of the analysis (including any models and assumptions used) and prepare a capital plan based on the results. In this manner, the process combines subject matter expertise from the businesses with robust challenge from Group centre. Mitigating actions identified as part of the process are also incorporated in the Group's ongoing contingency plans should a stress develop similar in severity to the scenarios.

A

*reverse stress test*

, which shows the amount of losses that would lead to the complete consumption of the capital buffer, is presented to the Treasury Committee on a regular basis. This framework is continuously developed to allow the committees and management to better understand the events that would lead to such losses, and ensure that capital levels are sufficient to mitigate them.

The Group has used its

*economic capital framework*

in its business decision-making process since 1995. This creates a high degree of senior management awareness of the relationship between risk and capital. This use of economic capital is designed to optimise economic profit generation whilst balancing the need to manage the Group's capital ratios within regulatory capital constraints. The importance and visibility of economic capital ensures that models are continuously reviewed and refined, and that our portfolio of businesses evolves to support our strategy of balanced growth.

Specifically, Barclays uses economic capital to satisfy the following objectives:

.  
Capital adequacy assessment

.  
Communication of risks on a like-for-like basis

.  
Measurement of risk-adjusted performance

.  
Senior management compensation

.  
Strategic planning

.  
Pricing transactions

.  
Supporting growth decisions

Barclays ensures it manages the  
*effects of foreign exchange volatility*

in the requirements for, and resources denominated in local currency capital.

The Group has capital resources and risk weighted assets denominated in foreign currencies. Changes in foreign exchange rates result in changes in the sterling equivalent value of foreign currency denominated capital resources and risk weighted assets. As a result, the Group's regulatory capital ratios are sensitive to foreign currency movements.

The Group's capital ratio hedge strategy is to minimise the volatility of the capital ratios caused by foreign exchange rate movements. To achieve this, the Group aims to maintain the ratio of foreign currency Core Tier 1, Tier 1 and Total Capital resources to foreign currency RWAs the same as the Group's capital ratios. The Group's foreign currency capital resources include investments in subsidiaries and branches, intangible assets, non-controlling interest, deductions from capital and debt capital instruments.

Managing capital risk ensures that Barclays achieves an adequate balance between capital requirements and resour

The Group's investments in foreign currency subsidiaries and branches create Core Tier 1 capital resources denominated in foreign currencies. Changes in the sterling value of the investments due to foreign currency movements are captured in the currency translation reserve, resulting in a movement in Core Tier 1 capital.

To create foreign currency Tier 1 and Total Capital resources additional to the Core Tier 1 capital resources, the Group issues, where possible, debt capital in non-sterling currencies. This is primarily achieved by the issuance of debt capital from Barclays Bank PLC, but can also be achieved by subsidiaries issuing capital in local currencies.

In some circumstances, investments in foreign currency subsidiaries and branches are hedged. In these circumstances, foreign currency capital resources are not created. Hedging decisions take into account the impact on capital ratios, the strategic nature of the investment, the cost of hedging, the availability of a suitable foreign exchange market and prevailing foreign exchange rates. Depending on the value of foreign currency net investments, it is not always possible to maintain the ratio of Core Tier 1 capital to RWAs consistent with the Group's Core Tier 1 ratio in all currencies, leaving some capital ratio sensitivity to foreign currency movements.

The investment of proceeds from the issuance of equity accounted foreign currency preference shares also contributes to foreign currency capital resources. If a preference share issuance is redeemed, the cumulative movement from the date of issuance in the currency translation reserve will be offset by an equal and opposite movement in reserves reflecting the revaluation of the preference shares to prevailing foreign exchange rates. Issuance of a replacement Tier 1 instrument in the same currency will maintain the hedge of the Tier 1 ratio.

## Barclays Capital Adequacy

### Capital Resources

The following table represents the Group's capital position at 31 December 2009. Details on capital resources, including share capital, reserves and non-controlling interests are found in notes i to l in the annual report. Details on the terms and conditions of subordinated liabilities are contained in note 27 of the 2009 Annual Report.

**Table 1: Tier 1 and Tier 2 Capital Resources**

	<b>As at 31.12.09</b>	<b>As at 31.12.08</b>
	£m	£m
<b>Tier 1 (excluding innovative tier 1)</b>		
Called up share capital	2,853	2,093
Eligible reserves	44,408	31,156
Non-controlling interests	8,609	8,172
Tier 1 Notes	1,017	1,086
Less: Intangible assets	(8,345)	(9,964)
Less: Deductions from Tier 1 capital - Expected loss in excess of impairment on IRB approach portfolios	(25)	(159)
Less: Deductions from Tier 1 capital - Other	(5,604)	(877)
<b>Total qualifying tier 1 capital (excluding innovative tier 1)</b>	<b>42,913</b>	<b>31,507</b>
<b>Innovative Tier 1 Capital</b>	<b>6,724</b>	<b>7,087</b>
<b>Tier 2</b>		
Revaluation reserves	26	26
Available for sale equity gains	309	122

Collectively assessed impairment allowances	2,443	1,654
Non-controlling interests	547	607
Qualifying subordinated liabilities		
Undated loan capital	1,350	5,401
Dated loan capital	15,657	14,215
<b>Total innovative tier 1 capital and tier 2 capital</b>	<b>27,056</b>	<b>29,112</b>
Less: Deductions from Tier 2 capital - Expected loss in excess of impairment on IRB approach portfolios	(25)	(159)
Less: Deductions from Tier 2 capital - Other	(5,604)	(877)
<b>Total innovative tier 1 capital and tier 2 capital after deductions</b>	<b>21,427</b>	<b>28,076</b>
Less: Regulatory deductions from the total of tier 1 and tier 2 capital		
Investments not consolidated for supervisory purposes	(624)	(403)
Less: Other deductions	(256)	(453)
<b>Total deductions from the total of tier 1 and tier 2 capital</b>	<b>(880)</b>	<b>(856)</b>
<b>Total net capital resources</b>	<b>63,460</b>	<b>58,727</b>

The Capital Requirements Directive requires Tier 1 capital to be calculated excluding innovative capital. This is the basis on which we have disclosed the Group's Tier 1 capital above. The FSA's capital requirements permit the inclusion of innovative Tier 1 capital subject to a limit of 15% of the total Tier 1 capital. Innovative capital in excess of the 15% limit can be included in Tier 2 capital.

#### Minimum Capital Requirements and Risk Weighted Assets (RWA) analysis

Capital requirements can be converted into RWAs by multiplying them by 12.5. The following table shows a breakdown of the Group's RWAs by risk type.

**Table 2: Minimum capital requirement and risk weighted assets**

<b>As at 31.12.09</b>	<b>Capital Requirement</b>	<b>RWA</b>
<b>Risk Type</b>	<b>£m</b>	<b>£m</b>
Standardised Approach Credit Risk	7,242	90,525
Advanced and Foundation IRB Approach Credit Risk	12,922	161,529
Counterparty Credit Risk	3,636	45,450
Total Credit Risk	23,800	297,504
Market Risk	4,362	54,526
Operational Risk	2,450	30,623
<b>Total</b>	<b>30,612</b>	<b>382,653</b>
<b>As at 31.12.08</b>	<b>Capital Requirement</b>	<b>RWA</b>
<b>Risk Type</b>	<b>£m</b>	<b>£m</b>
Standardised Approach Credit Risk	8,877	110,975
Advanced and Foundation IRB Approach Credit Risk	12,475	155,937
Counterparty Credit Risk	5,672	70,902
Total Credit Risk	27,024	337,814
Market Risk	5,230	65,372

Operational Risk	2,409	30,116
<b>Total</b>	<b>34,663</b>	<b>433,302</b>

The Group's minimum capital requirements decreased £4,051m in the year to 31st December 2009 mainly due to lower credit risk requirements. This was largely driven by a decline in the size of the balance sheet as well as by foreign exchange movements.

Note that the capital requirement for Standardised Approach Credit Risk is different from that shown in table 3. This small difference is accounted for by the inclusion of capital requirements against positions falling under the "aggregation plus" method in the table above.

#### Capital Requirements for credit risk

The following table represents the Group's credit risk capital requirement for exposures measured under the Standardised approach method. More details on the calculation of exposure and risk weighting under the Standardised approach may be found in the Credit Risk Management section of this document.

**Table 3: Minimum capital requirement for credit risk under the Standardised approach**

Standardised Credit Risk Exposure Class	Minimum Capital	
	As at 31.12.09	As at 31.12.08
	£m	£m
Central governments or central banks	191	129
Regional government or local authorities	11	1
Administrative bodies and non-commercial undertakings	6	5
Multilateral development banks	-	-
International organisations	-	-
Institutions	99	80
Corporates	3,328	3,837
Retail	1,732	1,791
Secured on real estate property	943	1,367
Past due items	450	295
Private Equity <sup>1</sup>	413	635
Covered bonds	-	-
Securitisation positions <sup>2</sup>	-	-
Short term claims on institutions and corporates	-	538
Collective investment undertakings	11	48
Other items	50	151
<b>Total Standardised Requirement</b>	<b>7,234</b>	<b>8,877</b>

Capital requirements decreased £1,643m in the year to 31st December 2009, driven mainly by lower capital requirements for corporates (£509m), short-term claims on institutions and corporates (£538m), and assets secured on real estate property (£424m). These movements were driven by reduction in balance sheet and migration of certain portfolios to the IRB approach. Short-term claims on institutions and corporates were reclassified into corporates and institutions following availability of greater granularity in data.

Notes on Table 3:

<sup>1</sup> In the above table, the "Private Equity" category is comprised of exposures that would fall under the "Items belonging to regulatory high risk categories" in the FSA rules.

<sup>2</sup> Securitisation positions under the Standardised approach are treated as capital deductions and are therefore not included in the table above.

**Table 4: Minimum capital requirement for credit risk under the IRB approach**

IRB Exposure Class	Minimum Capital	
	As at 31.12.09	As at 31.12.08
	£m	£m
Central governments or central banks	109	44
Institutions	242	692
Corporates	7,140	5,671
Retail		
- Small and medium enterprises (SME)	683	689
- Secured by real estate collateral	1,521	1,238
- Qualifying revolving retail	995	813
- Other retail	817	835
Equity - Simple Risk Weight Approach		
- Exchange traded exposures	34	48
- Private equity exposures	158	171
- Other exposures	-	-
Securitisation positions	299	1,273
Non-credit obligation assets	924	1,001
<b>Total IRB Requirement</b>	<b>12,922</b>	<b>12,475</b>

Minimum capital requirements under the IRB approach increased £447m in 2009, driven by increased corporate exposures. This was partly offset by a decrease in securitisation positions following reduced application of RWA relief trades and some changes in regulatory treatment. The capital requirement against retail credit risks increased by £441m mainly due to the roll out to Advanced IRB of certain portfolios.

#### Capital for Market Risk

Information on the management of market risk is found in the "Market Risk Management" section. Barclays market risk capital requirements comprise three elements;

- 1) Trading book positions where the market risk is measured under an FSA approved Daily Value at Risk (DVaR) model. A detailed description of the DVaR model and its controls may be found on page 123 of Barclays 2009 Annual Report.
- 2) Positions within overseas subsidiaries which operate under the capital requirements of their local regulators and are recognised as equivalent regimes by the FSA. In such cases, the FSA requires that the local capital requirement is aggregated with the Group total.
- 3) Trading book positions which have not yet met the conditions for inclusion within the approved DVaR model. Their capital requirement is calculated using Standardised rules.

**Table 5: Minimum capital requirement for market risk and counterparty risk**

Market Risk	Minimum Capital	
	As at 31.12.09	As at 31.12.08
	£m	£m
DVaR Model Based PRR <sup>1</sup>	1,280	1,778
Interest rate PRR	1,304	1,790
Equity PRR	184	84
Option PRR	24	2
Collective investment schemes PRR	101	162
Commodity PRR	87	75

Foreign exchange PRR	1	1
Local Regulatory Aggregated PRR	1,381	1,338
<b>Total Market Risk Capital Requirement</b>	<b>4,362</b>	<b>5,230</b>

<b>Concentration risk capital component</b>	-	-
<b>Counterparty risk capital component</b>	<b>3,636</b>	<b>5,672</b>

The total market risk requirement decreased £868m in the year to December 31<sup>st</sup> 2009 driven by lower DVaR model based PRR<sup>1</sup> and interest rate PRR. The reduction in the DVaR model based requirement was mainly due to a lower general market risk DVaR, and a decrease in specific risk due to a decrease in correlation risk. The decline in interest rate PRR followed a reduction in business activity.

Capital requirements for counterparty risk reduced by £2,036m as interest rate cuts and foreign exchange movements contributed to reducing the Group's exposure. In addition, Barclays received permission from the FSA to use the Internal Model Approach for power and gas trades which lowered requirements.

Note on Table 5:

<sup>1</sup>Position Risk Requirement (PRR)

### Capital for Operational Risk

The following table shows the Group's operational risk capital requirement. Barclays has approval from the FSA to calculate its operational risk capital requirement using a Basel II Advanced Measurement Approach (AMA). Recently acquired businesses are excluded from the approval. Barclays uses the Basic Indicator Approach or the Standardised approach while it transitions these areas to the Advanced Measurement Approach. More information about Barclays operational risk modelling may be found in the "Operational Risk Management" section of this report.

**Table 6: Minimum capital requirement for operational risk**

	Minimum Capital	
	As at 31.12.09	As at 31.12.08
<b>Operational Risk</b>	<b>£m</b>	<b>£m</b>
Operational Risk - Basic Indicator Approach	136	125
Operational Risk - Standardised Approach	26	22
Operational Risk - Advanced Measurement Approach	2,288	2,262
<b>Total Operational Risk Capital Requirement</b>	<b>2,450</b>	<b>2,409</b>

Barclays operational risk capital requirements increased by £41m during 2009. The two main drivers were updated external industry data (which are used in the capital requirement model) and foreign exchange movements, partially offset by the net effect of acquisitions and disposals.

### Credit Risk Management

#### Credit Risk Management Strategy

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 controlling it. The importance of credit risk is illustrated by noting that it accounts for over 60% of the Group's risk-based economic capital. 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. Barclays is also exposed to other credit risks arising from its trading activities, including debt securities, settlement balances with market counterparties and reverse repurchase agreements. Credit risk management objectives are:

- .  
To establish a framework of controls to ensure credit risk taking is based on sound credit risk management principles

- .  
To 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.

- .  
To control and plan credit risk taking in line with external stakeholder expectations and avoiding undesirable concentrations.

- .  
To monitor credit risk and adherence to agreed controls.

- .  
To 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 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 Policies.

Group Risk Policies currently in force include:

- .  
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 Group approaches for the calculation of Expected Loss, i.e. Group measure of anticipated loss for exposures

- .  
Repayment Plans policy for setting the standards for repayment plans and restructures within retail portfolios

- .  
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

The largest credit exposures are approved at the Group Credit Committee which is managed by Group Risk, under delegated authority from the Board Risk Committee. 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.

In addition, Group Risk provides technical support, review and validation of credit risk measurement models across the group.

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 Group Risk Oversight Committee, the Wholesale Credit Risk Management Committee and the Retail Credit Risk Management

Committee. Senior Group and business risk management are represented on the Group Risk Oversight Committee, the Wholesale Credit Risk Management Committee and the Retail Credit Risk Management 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 to impairment in the businesses, 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 our position relative to peer banks.

#### **Scope of permission to use standardised and advanced approaches**

The Advanced IRB approach uses internal estimates of probability of default (PD), loss given default (LGD) and credit conversion factor to model the exposure while the Foundation IRB approach uses proprietary PD and regulatory standard parameters for LGD and credit conversion factor. The Foundation IRB approach is only used for wholesale credit exposures and is not applicable to retail, equity, securitisation position and non-credit obligation asset exposures.

For exposures falling under the Standardised approach, the regulator supplies risk weights for all asset types. This is similar to the Basel I framework, but with a more detailed classification of asset types.

## **Credit Internal Ratings Based Approach**

### **Advanced IRB Wholesale Grade Disclosures**

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 (OTC derivatives, repurchase and reverse repurchase and stock borrow loan transactions).

#### **Measurement, reporting and internal ratings**

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 numerous aspects of credit risk management and in the calculation of regulatory and economic capital. The key component models are:

.

Probability of default (PD)

.

Exposure at default (EAD)

.

Loss given default (LGD)

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, for wholesale assets, market information such as credit spreads. 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, 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, TTC or a hybrid (e.g. a 50:50 blend). 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 the 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 they are dealing. To achieve this, a model hierarchy is adopted which requires 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, and a conversion of external alphabet ratings from rating agencies. 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 and in rare cases models developed by the credit bureau themselves are used in conjunction with internal models. In addition, in some low data/low default environments, external developments may also be used.

A key element of the Barclays Wholesale framework is the PD Masterscale. Multiple rating methodologies may be used to inform the rating decision on individual large credits, such as internal and external models, rating agency ratings, and for wholesale assets market information such as credit spreads. This scale has been developed to distinguish meaningful differences in the probability of default risk throughout the risk range. For smaller credits, a single source may suffice such as the result from an internal rating model. For retail clients PD models use application and behavioural scorecards which are derived from historically observed performance of new clients. They are built utilising customer demographic and financial information, supplemented by credit bureau information where available. Through statistical techniques the relationship between these candidate variables and the default marker is quantified to produce output scores reflecting a PD. Barclays internal credit grading differentiates credit risk into 21 grades as well as a category of "in default".

**Table 7: Internal default grade probabilities**

DG/ TTC Band	Default Probability			Financial statements description
	>=Min	Mid	<Max	
1	0.00%	0.01%	0.02%	Strong
2	0.02%	0.03%	0.03%	
3	0.03%	0.04%	0.05%	
4	0.05%	0.08%	0.10%	
5	0.10%	0.13%	0.15%	
6	0.15%	0.18%	0.20%	
7	0.20%	0.23%	0.25%	
8	0.25%	0.28%	0.30%	
9	0.30%	0.35%	0.40%	
10	0.40%	0.45%	0.50%	
11	0.50%	0.55%	0.60%	Satisfactory
12	0.60%	0.90%	1.20%	
13	1.20%	1.38%	1.55%	
14	1.55%	1.85%	2.15%	
15	2.15%	2.60%	3.05%	
16	3.05%	3.75%	4.45%	
17	4.45%	5.40%	6.35%	

18	6.35%	7.50%	8.65%	
19	8.65%	10.00%	11.35%	
20	11.35%	15.00%	18.65%	Higher risk
21	18.65%	30.00%	100.00%	

Exposure at default (EAD) represents the expected level of usage of the credit facility should default occurs. 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 with a positive value should counterparties fail to perform their obligations.

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 for each type of exposure 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 jurisdiction applicable and work-out expenses. 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'

#### **Applications of internal ratings**

The three components described above - the PD, EAD and LGD - are used in a variety of applications that measure credit risk across the entire portfolio. These parameters can be calculated incorporating different aspects of the credit cycle into the estimates:

- PD estimates can be calculated on a through-the-cycle (TTC) basis, reflecting the predicted default frequency in an average 12 month period across the 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 best modelled behaviour under actual conditions.

These parameters are used in a wide range of credit risk measurement and management and as our understanding and experience have developed, we have extended the use and sophistication of internal ratings into the following:

- **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 different credit sanctioning levels, so that credit risks are reviewed at appropriate levels.

- **Credit Grading:** originally introduced in the early 1990s to provide a common measure of risk across the Group using an eight point rating scale; wholesale credit grading now employs a 21 point scale of default probabilities.

Risk-Reward and Pricing: PD, EAD and LGD metrics are used to assess 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.

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 frequently used to segment portfolios allowing for suitably prioritised collections and recoveries strategies in retail portfolios.

Economic capital (EC) allocation: 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.

#### **The control mechanisms for the rating system**

Each of the business risk teams is responsible for the design, oversight and performance of the individual credit rating models - PD, LGD and EAD - that comprise the credit rating system for a particular customer within each asset class. Group-wide standards in each of these areas are set by Group Risk and are governed through a series of committees with responsibility for oversight, modelling and credit measurement methodologies.

Model governance standards apply to ratings models to minimise the risk of loss through model failure. The Group Model Risk Policy (GMRP) is managed by the independent Group Risk function.

The GMRP helps reduce the potential for model failure by setting Group-wide minimum standards for the model development and implementation process. The GMRP also sets the Group governance processes for all models, which allows model performance and risk to be monitored, and seeks to identify and escalate any potential problems at an early stage.

To ensure that the governance process is effective, and that management time is focused on the more material models, each model is provided with a materiality rating. The GMRP defines the materiality ranges for all model types, based on an assessment of the impact to the Group in the event of a model error. 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-level Material Models Technical Committee, and the most material models require further approval by the Executive Models Committee, a sub-committee of Group Executive Committee.

This process ensures that the most significant models are subject to the most rigorous review, and that senior management have a good understanding of the most material models in the Group. 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.

The GMRP also 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, as well as 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. 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. 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 confirms that the model has been implemented correctly and behaves as predicted.

The GMRP also sets the requirements for ongoing performance monitoring and the annual review process. Once implemented, all 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. 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.

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 Capital, where models are used to value positions within the trading book, the positions are subject to regular independent price testing which covers all trading positions. Prices are compared with direct external market data where possible. When this is not possible, more analytic 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.

Within Barclays Capital, where models are used to value positions within the trading book the positions are subject to regular independent price testing which covers all trading positions. Prices are compared with direct external market data where possible. When this is not possible, more analytic techniques are used, such as industry consensus pricing services. These services enable Barclays to verify structured products and model-input parameters against those of other banks engaged in the trading of the same financial products. The conclusions and any exceptions to this exercise are communicated to senior levels of business and infrastructure management.

#### **The ratings process**

The term 'internal ratings' usually refers to internally calculated estimates of PD. These ratings are combined with EAD and LGD in the range of applications described previously. The 'ratings process' refers to the use of PD, EAD and LGD across the Group. In Barclays, the rating process is defined by each business. For central government and banks, institutions and corporate customers many of the models used in the rating process are shared across businesses as the models are customer specific. For retail exposures, the ratings models are usually unique to the business and product type e.g. mortgages, credit cards, and consumer loans.

#### **Ratings process: Wholesale approaches**

A bespoke model has been built for PD and LGD for sovereign ratings. For sovereigns where there is no externally available rating, we use an internally developed PD scorecard. The scorecard has been developed using historic data on sovereigns, including external data, covering a wide range of qualitative

and quantitative information. Our LGD model is based on resolved recoveries in the public domain, with a significant element of conservatism added to compensate for the small sample size.

To construct ratings for institutions, corporates, specialised lending and purchased corporate receivables and equity exposures, we use external models, rating agencies and internally constructed models. To validate each of these approaches we apply the same high standards as we do when developing internal ratings. 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.

PD models built solely from internally produced data are also 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 adding together data sets from internal default observations with comparable externally obtained data sets from commercial providers such as rating agencies and industry gathering consortia.

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 Basel II and FSA criteria for conservatism.

We have developed our own internal policy which describes specific criteria for the use of parametric and non-parametric low default portfolio calibration techniques.

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. Where external data is sourced to validate or enhance internally-held data as part of the risk assessment process or to support model development and BAU operation, a similar approach is adopted towards ensuring data quality to that applied to the management of internal data. This entails adherence to the Group's procurement and supplier management process, including the agreement of specifications and service level agreements.

In wholesale portfolios, the main approaches to calculate LGD aim to establish the affects 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 apply adjustments to external data before using it as input to the model estimation or validation procedure. Changes required in the estimation and validation process are documented in the model build papers.

For all the above asset classes, we use the Basel II definition of default, utilising the 90 day past due criteria as the final trigger of default.

## **Derivative counterparty credit risk measurement**

The economic value associated with the trading 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 using a stochastic method.

### **Ratings process: Retail approaches**

Our retail banking operations have long and extensive experience of using credit models in assessing and managing risk in their businesses and, as a result, models play an integral role in customer approval and management processes.

Models used include PD models, mostly in the form of application and behavioural scorecards, as well as LGD and EAD models.

Application scorecards are derived from the 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, 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 PDs to new customers for the purposes of capital calculation.

Behavioural scorecards are derived from the historically observed performance of existing clients which is supplemented by data used for application scoring (including bureau data). 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 PDs to existing customers for the purposes of capital calculation.

Barclays embeds Basel II models as extensively as possible in the portfolio management process. This is an ongoing initiative and we expect greater convergence over time. However, in some cases there are sound business reasons for having different models for capital allocations and internal processes.

Barclays employs two broad methodological approaches to modelling EAD factors for retail portfolios. The less complex models 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 behavioural based, determining customer level CCFs from characteristics of the individual facility.

Retail LGD models are built using bespoke methods chosen to best model the observed recovery process. In a number of secured portfolios, structural models are often used which parameterise the LGD drivers giving models which can easily be updated to reflect current market trends. Models based on historical cash collected curves are often utilised in portfolios where recoveries are not based on the recovery of a single source of collateral. Finally, in some instances regression techniques are used to generate predicted LGDs based on account characteristics. In all instances, bespoke country level factors are derived to discount recovery flows to the point of default. For capital calculations, customised economic downturn adjustments are made to adjust losses to stressed conditions.

Most retail models within Barclays are built in-house, although occasionally external consultants will be contracted to build models on behalf of the businesses. Whilst most models are statistically or empirically derived, some expert lender models (similar to those described above 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 whilst international regulators may have different rules. In some cases, for models not used in regulatory capital calculations, in order to maximise model suitability, different default definitions are used. However, in all cases EAD and LGD models are appropriately aligned.

The following table shows the relationship between the financial statements description and external ratings on listed or unlisted debt securities

**Table 8: External ratings and financial statements description**

External Ratings	Financial Statements Description
AAA, AA+, AA, AA-, A+, A, A-, BBB+, BBB, BBB-	Strong
BB+, BB, BB-, B+, B	Satisfactory
B-, CCC+, CCC and lower	Higher risk

The following table summarises the principal portfolios within Barclays that use the Standardised, Foundation IRB and Advanced IRB approaches as at December 2009:

**Table 9: The scope of the Standardised and IRB approaches**

Business	Standardised Approach	Foundation IRB Approach	Advanced IRB Approach
Barclays Capital	Emerging markets, fund of funds, insurance	None	Most portfolios
Barclays Wealth	All portfolios	None	None
UK Retail Banking	Certain minor portfolios within personal accounts, mortgages and consumer loans	None	Most portfolios
Barclays Commercial Bank	Non UK portfolios and asset and trade financing and sales portfolios	None	Larger and Medium business portfolios
Barclaycard	Corporate credit cards and non UK portfolios	None	UK retail credit cards
Global Retail & Commercial Banking - Western Europe	All portfolios, except Mortgages Portugal, most Mortgages Italy	None	Mortgages Portugal, most Mortgages Italy
Global Retail & Commercial Banking - Emerging Markets	All portfolios	None	None
Absa	Certain minor portfolios	Wholesale portfolios	Retail portfolios
Head office Functions and other operations	None	None	All portfolios

The following table shows the Group's exposure for Advanced IRB approach and Foundation IRB approach portfolios in its wholesale business in both the Trading and Banking books.

**Table 10: IRB wholesale obligor grade disclosure**

10a: Central Governments and Banks

Obligor Grade	Central Governments & Central Banks				
	Advanced IRB		Foundation IRB		
As at 31.12.09	Exposure-Weighted EAD Post CRM	Exposure-Weighted Average LGD	Exposure-Weighted Average Risk Weight	Average Undrawn Commitments/CRM	Average Risk Weight
	£m	%	%	£m	%
	120,040	15.81	1.23	918	-

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Default Grade 1-3				1,336,256	
Default Grade 4-5	1,534	12.26	9.13	1561,824	25.17
Default Grade 6-8	469	39.01	38.74	15 235-	-
Default Grade 9-11	28	61.21	113.06	- 1020	69.71
Default Grade 12-14	54	65.37	162.62	16 58-	-
Default Grade 15-19	-	-	-	- 132	139.83
Default Grade 20-21	-	-	-	- --	-
In default	-	-	-	- --	-
<b>Total</b>	<b>122,125</b>	<b>15.89</b>	<b>1.57</b>	<b>1,528,487</b>	<b>1.88</b>

**Central Governments & Central Banks**

Obligor Grade	Advanced IRB			Foundation IRB		
	Exposure-Weighted EAD Post CRM	Exposure-Weighted Average LGD	Exposure-Weighted Average Risk Weight	Average Undrawn Exposure Post CRM	Average Risk Weight	Average Risk Weight
As at 31.12.08	£m	%	%	£m	£m	%
Default Grade 1-3	80,831	9.96	0.75	1,484	34,418-	-
Default Grade 4-5	2,653	8.88	5.45	263	2,405-	-
Default Grade 6-8	10	26.13	34.20	-	33-	-
Default Grade 9-11	56	58.60	119.21	-	76-	-
Default Grade 12-14	90	42.30	124.92	-	97-	-
Default Grade 15-19	13	74.39	279.34	-	43	145.12
Default Grade 20-21	-	-	-	-	--	-
In default	-	-	-	-	--	-
<b>Total</b>	<b>83,653</b>	<b>10.01</b>	<b>1.16</b>	<b>1,747</b>	<b>37,033</b>	<b>145.12</b>

AIRB exposures to central governments and central banks have increased by £38,472m reflecting Barclays higher liquidity buffers. This occurred in Default Grades 1 to 3, reflecting the high credit ratings of central governments.

10b: Institutions

Obligor Grade	Institutions				Foundation IRB	
	EAD Post CRM	Exposure-Weighted Average LGD	Exposure-Weighted Average Risk Weight	Undrawn Exposure Post CRM	Average Risk Weight	Average Risk Weight



<b>As at 31.12.09</b>	£m	%	%	£m	£m	£m	%
Default Grade 1-3	57,377	35.37	10.25	2,979	98,825	1,449	8.2
Default Grade 4-5	3,080	35.17	16.59	123	8,126	1,880	8.9
Default Grade 6-8	1,338	49.63	45.84	146	2,233	113	17.1
Default Grade 9-11	385	45.06	54.42	21	4,036	3	60.9
Default Grade 12-14	492	38.89	82.93	27	2,904	45	104.7
Default Grade 15-19	92	43.22	141.82	1	1,622	1	185.3
Default Grade 20-21	7	49.63	270.15	-	992	-	
In default	97	65.81	-	-	922	-	
<b>Total</b>	<b>62,868</b>	<b>35.81</b>	<b>12.36</b>	<b>3,297</b>	<b>119,660</b>	<b>3,491</b>	<b>10.2</b>

## Institutions

<b>Obligor Grade As at 31.12.08</b>	<b>EAD Post CRM</b>	<b>Advanced IRB</b>			<b>Undrawn Commitments</b>	<b>Average Exposure Value</b>	<b>Foundation IRB</b>	
		<b>Exposure-Weighted Average LGD</b>	<b>Exposure-Weighted Average Risk Weight</b>	<b>Post CRM</b>			<b>Exposure-Weighted Average Risk Weight</b>	
	£m	%	%	£m	£m	£m	%	
Default Grade 1-3	120,065	40.98	13.17	8,693	94,935	2,328	3.1	
Default Grade 4-5	13,595	43.67	29.33	1,295	12,651	717	7.1	
Default Grade 6-8	3,701	43.26	39.99	481	5,612	217	12.1	
Default Grade 9-11	6,449	57.74	72.54	98	7,929	1	77.1	
Default Grade 12-14	1,803	40.74	83.31	139	2,548	18	104.1	
Default Grade 15-19	2,255	22.67	87.71	121	1,625	1	154.1	

Default Grade								
20-21	1,009	26.53	152.39	29	522	-		
In default	1,570	50.79	0.01	-	385	3		
<b>Total</b>	<b>150,447</b>	<b>41.73</b>	<b>20.59</b>	<b>10,856</b>	<b>126,207</b>	<b>3,285</b>		<b>5.</b>

Average risk weights have decreased as a result of lower Loss Given Default (LGD).  
2008 figures under Foundation IRB were restated to reflect the effect of collateral in Absa.

## 10c: Corporates

Obligor Grade	Corporates				Undrawn Commitments	Average Exposure Value	Foundation IRB	
	EAD Post CRM	Exposure-Weighted Average LGD	Advanced IRB Exposure-Weighted Average Risk Weight	Average F			EAD Post CRM	Exposure-Weighted Average F
As at 31.12.09	£m	%	%	£m	£m	£m		
Default Grade 1-3	53,436	36.81	13.43	21,685	41,100	1,141		17
Default Grade 4-5	34,908	33.13	20.91	21,478	34,356	3,771		27
Default Grade 6-8	21,445	37.15	37.84	12,142	19,419	2,051		45
Default Grade 9-11	20,121	43.01	59.25	8,569	15,370	1,928		63
Default Grade 12-14	26,295	39.36	88.81	8,688	24,986	3,989		90
Default Grade 15-19	18,079	39.00	131.97	3,357	17,053	1,724		129
Default Grade 20-21	7,529	37.34	193.00	757	5,067	281		174
In default	4,868	43.20	59.82	378	3,226	685		
<b>Total</b>	<b>186,681</b>	<b>37.59</b>	<b>53.12</b>	<b>77,054</b>	<b>160,577</b>	<b>15,570</b>		<b>62</b>

Obligor Grade	Corporates				Undrawn Commitments	Average Exposure Value	Foundation IRB	
	EAD Post CRM	Exposure-Weighted Average LGD	Advanced IRB Exposure-Weighted Average Risk Weight	Average F			EAD Post CRM	Exposure-Weighted Average F
As at 31.12.08	£m	%	%	£m	£m	£m		
Default Grade	52,558	35.84	13.60	24,341	30,964	1,051		15

1-3 Default Grade								
4-5 Default Grade	46,007	32.33	21.38	24,830	40,335	2,480		28
6-8 Default Grade	23,564	39.66	42.46	10,766	27,151	1,479		44
9-11 Default Grade	17,274	40.01	57.66	6,985	20,775	1,665		61
12-14 Default Grade	24,545	42.20	90.71	8,472	24,153	4,095		94
15-19 Default Grade	16,048	41.24	131.69	4,135	16,561	1,482		126
20-21 Default Grade	3,322	43.35	206.36	669	2,519	62		190
In default	1,832	35.70	46.96	161	1,142	223		
<b>Total</b>	<b>185,150</b>	<b>37.29</b>	<b>47.56</b>	<b>80,359</b>	<b>163,600</b>	<b>12,537</b>		<b>67</b>

Increase in balances and higher LGD in grades 9 to 21 were driven by re-classification of bank counterparties to corporates.

2008 figures under Foundation IRB were restated to reflect the effect of collateral in Absa.

#### 10d: Central Governments & Central Banks, Institutions and Corporates

Obligor Grade As at 31.12.09	Total IRB Central Governments & Central Banks, Institutions and Corporates						
	EAD Post Exposure-Weighted CRM	Advanced IRB Exposure-Weighted Average LGD	Average Risk Weight	Undrawn Commitments	Average Exposure Value	Foundation IRB EAD Post CRM	Exposure-Weighted Average F Wei
	£m	%	%	£m	£m	£m	
1-3 Default Grade	230,853	25.46	7.32	25,999	226,181	3,508	9
4-5 Default Grade	39,522	32.48	20.12	21,757	44,306	5,655	21
6-8 Default Grade	23,252	37.91	38.32	12,303	21,887	2,164	43
9-11 Default Grade	20,534	43.07	59.23	8,590	19,507	1,951	63
	26,841	39.40	88.85	8,731	27,948	4,034	90

12-14 Default Grade							
15-19 Default Grade	18,171	39.02	132.02	3,358	18,688	1,727	129
20-21 In default	7,536	37.35	193.07	757	6,059	281	174
	4,965	43.64	58.65	378	4,148	685	
<b>Total</b>	<b>371,674</b>	<b>30.16</b>	<b>29.29</b>	<b>81,873</b>	<b>368,724</b>	<b>20,005</b>	<b>50</b>

**Total IRB Central Governments & Central Banks, Institutions and Corporates**

Obligor Grade As at 31.12.08	Advanced IRB			Undrawn Commitments	Average Exposure Value	Foundation IRB	
	EAD Post CRM	Exposure-Weighted Average LGD	Average Risk Weight			EAD Post CRM	Exposure-Weighted Average F Wei
	£m	%	%	£m	£m	£m	
1-3 Default Grade	253,454	29.93	10.35	34,518	160,317	3,379	7
4-5 Default Grade	62,255	33.81	22.44	26,388	55,391	3,197	23
6-8 Default Grade	27,275	40.14	42.12	11,247	32,796	1,696	40
9-11 Default Grade	23,779	44.86	61.84	7,083	28,780	1,666	6
12-14 Default Grade	26,438	42.10	90.32	8,611	26,798	4,113	94
15-19 Default Grade	18,316	38.98	126.38	4,256	18,190	1,486	120
20-21 In default	4,331	39.43	193.78	698	3,041	62	190
	3,402	42.66	25.33	161	1,527	226	
<b>Total</b>	<b>419,250</b>	<b>33.44</b>	<b>28.62</b>	<b>92,962</b>	<b>326,840</b>	<b>15,825</b>	<b>54</b>

Aggregate EAD under the Advanced IRB approach decreased £47,576m. This was due to decreased exposure to institutions; in addition to exposures that were re-classed as corporates, positions with institutions (other banks) were actively managed down during the year.

2008 figures under Foundation IRB were restated to reflect the effect of collateral in Absa.

**Advanced IRB Retail Expected Loss Grade Disclosures**

The tables below show analyses of retail exposures by Expected Loss (EL) Grade bucket in the retail portfolios modelled under the Advanced IRB approach. Secured and unsecured exposures are shown in separate tables to take account of the fact that their risk profiles are different. This is reflected in the different risk buckets used.

Table 11 shows the Group's retail exposures under the Advanced IRB approach by Expected Loss (EL) Grade for exposures secured by real estate collateral.

**Table 11: Analysis of exposures secured on real estate collateral by expected loss grade**

EL Grade	EAD Post CRM	
	Retail exposures secured on real estate collateral	
	As at 31.12.09	As at 31.12.08
	£m	£m
EL Grade => 0 - < 0.15%	102,021	84,070
EL Grade => 0.15 - < 0.3%	13,224	10,356
EL Grade => 0.3 - < 0.8%	7,337	6,867
EL Grade => 0.8 - < 2.15%	3,132	2,596
EL Grade => 2.15 - < 4.45%	681	1,103
EL Grade => 4.45 - < 8.65%	1,135	477
EL Grade => 8.65 - < 18.65%	2,177	1,391
EL Grade => 18.65 - < 100%	207	94
<b>Total</b>	<b>129,914</b>	<b>106,954</b>

The exposure has increased by £22,960m mainly driven by an increase of £17,951m in the lowest-risk bucket. This was driven mainly by the inclusion of certain low credit risk portfolios under the advanced approach.

The following table shows the EAD for unsecured retail exposures.

**Table 12: Analysis of unsecured exposures by expected loss grade**

EL Grade	EAD Post CRM			
	Retail	Qualifying revolving retail	Other retail	Total Unsecured Retail
	SME			
<b>As at 31.12.09</b>	£m	£m	£m	£m
EL Grade => 0 - < 0.8%	8,290	16,681	3,927	28,898
EL Grade => 0.8 - < 2.15%	2,138	4,890	4,321	11,349
EL Grade => 2.15 - < 3.05%	561	1,207	782	2,550
EL Grade => 3.05 - < 4.45%	494	1,194	1,241	2,929
EL Grade => 4.45 - < 6.35%	473	740	467	1,680
EL Grade => 6.35 - < 8.65%	304	579	386	1,269
EL Grade => 8.65 - < 18.65%	512	1,387	867	2,766
EL Grade => 18.65 - < 100%	482	2,113	1,842	4,437
<b>Total</b>	<b>13,254</b>	<b>28,791</b>	<b>13,833</b>	<b>55,878</b>

EL Grade	EAD Post CRM			
	Retail	Qualifying revolving retail	Other retail	Total Unsecured Retail
	SME			
<b>As at 31.12.08</b>	£m	£m	£m	£m
EL Grade => 0 - < 0.8%	8,032	16,698	5,405	30,135
EL Grade => 0.8 - < 2.15%	2,248	3,987	3,896	10,131

EL Grade => 2.15 - < 3.05%	711	1,002	1,098	2,811
EL Grade => 3.05 - < 4.45%	564	1,015	818	2,397
EL Grade => 4.45 - < 6.35%	569	673	469	1,711
EL Grade => 6.35 - < 8.65%	394	940	337	1,671
EL Grade => 8.65 - < 18.65%	487	806	584	1,877
EL Grade => 18.65 - < 100%	606	1,168	1,384	3,158
<b>Total</b>	<b>13,611</b>	<b>26,289</b>	<b>13,991</b>	<b>53,891</b>

**The increase in Qualifying Revolving Retail was driven by the roll out of certain credit card portfolios to the IRB approach. Although difficult market and economic conditions have driven a deterioration of the EL across Barclays retail portfolios, credit performance has generally shown good resilience due to active management of limits and underwriting standards**

#### Impairment and Actual Value Charges

Table 13 shows the impairment and actual value adjustments taken by the Group in the portfolios to which the IRB approaches apply. 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 Barclays 2009 Annual Report. For this and other reasons, the figures below differ from the Impairment roll-forward analysis in Table 33 ("Analysis of movement on impairment and amounts taken directly to profit and loss"). Additionally, the figures below are only for portfolios that use the IRB approaches; in contrast, the analysis in Table 33 shows impairment and actual value charges for both IRB and Standardised approach portfolios.

**Table 13: Impairment charges and actual value adjustments**

IRB Exposure Class	Actual Value Adjustments and Individual Impairment Charges	
	Year ended	
	As at 31.12.09	As at 31.12.08
	£m	£m
Central governments or central banks	(11)	-
Institutions	112	925
Corporates	3,063	1,063
<b>Retail</b>		
- Retail SME	111	78
- Retail exposures secured by real estate collateral	206	126
- Qualifying revolving retail	76	23
- Other retail	177	86
Equity	-	-
Securitisation positions	-	-

Non-credit obligation assets

**Total** **3,734** **2,301**

The £813m reduction in charges on institutions is driven by the removal of trades with Lehman Brothers, which were impaired in 2008. Impairment charges on corporates have increased primarily due to ratings downgrades that occurred during 2009 within certain asset-backed portfolios. There was a slight improvement in impairment ratios in the second half of 2009.

#### Loss Analysis - Regulatory Expected Loss versus Actual Losses

The following table shows Barclays Regulatory Expected Loss measure compared with an actual loss measure in 2009 for those portfolios where credit risk is calculated using the Internal Ratings Based approach.

##### **Regulatory Expected Loss**

Regulatory Expected Loss is a Basel II measure based upon Pillar 1 metrics which is an input to the Capital Adequacy process. Regulatory Expected Loss can be seen as an expectation of average future loss as derived from our IRB models, and is not a prediction of future impairment.

For non-defaulted assets, Regulatory Expected Loss is calculated using probability of default and downturn loss given default estimates. For the calculation of Regulatory Expected Loss for defaulted assets, the probability of default is 100% and loss given default is based upon an estimate of likely recovery levels for each asset.

##### **Actual Loss**

Cumulative Actual Loss is made up of two parts: the existing impairment stock at 31<sup>st</sup> December 2008 plus the net impairment charge recorded through the income statement in 2009.

Cumulative Actual Loss includes a degree of impairment allowance on assets not identified as being in default at the balance sheet date and can also include charges against assets that were originated during the year and which were therefore outside of the scope of the Regulatory Expected Loss calculated at the beginning of the year. Actual Loss does not include the effects on impairment stock of amounts written off in the year.

**Table 14: Analysis of expected loss versus actual losses**

	<b>Total Expected Loss to 31.12.09</b>	<b>Total Actual Loss to 31.12.09</b>
<b>IRB Exposure Class</b>	£m	£m
Central governments or central banks	2	9
Institutions	941	1,146
Corporates	1,375	4,628
<b>Retail</b>		
- SME	369	386
- Secured by real estate collateral	423	570
- Qualifying revolving retail	1,273	1,777
- Other retail	1,123	1,548
Equity	-	-

Securitisation positions	13	-
Non-credit obligation assets	N/A	N/A
<b>Total IRB</b>	<b>5,519</b>	<b>10,064</b>

	<b>Total Expected Loss to 31.12.08</b>	<b>Total Actual Loss to 31.12.08</b>
<b>IRB Exposure Class</b>	£m	£m
Central governments or central banks	2	2
Institutions	168	987
Corporates	881	1,609
<b>Retail</b>		
- SME	399	346
- Secured by real estate collateral	304	298
- Qualifying revolving retail	1,117	1,503
- Other retail	1,033	1,351
Equity	4	-
Securitisation positions	-	-
Non-credit obligation assets	N/A	N/A
<b>Total IRB</b>	<b>3,908</b>	<b>6,096</b>

The £3,968m increase in the actual loss was driven by the deteriorating economic conditions in 2008 and 2009, by portfolio maturation and by currency movements.

Regulatory expected loss has increased by £1,611m, reflecting deterioration in credit conditions.

Both actual and expected losses were also partly driven by roll out of certain portfolios to the IRB approach.

**While the impairment charge and the expected loss measure respond to similar drivers, they are not comparable. The expected loss does not reflect growth of portfolios or changes in the mix of exposures. In forecasting and tracking impairment, the Group looks at actual trends in the cash flow behaviour of customer accounts. Also, in times of stress we expect actual losses to be higher than the expected loss by definition; actual losses will capture losses beyond the average measures captured by expected loss.**

#### Credit Model Performance - Estimated versus Actual

The following table shows the forecast and actual probability of default, loss given default and exposure at default ratio for the assets under the IRB approach. In each case, the forecasts are based on Barclays operational model calibrations at the start of the period. This may differ from the models' applications in regulatory capital calculations where the probability of default is generally estimated on a "through the cycle" basis and the loss given default on a downturn basis. Additionally, regulatory capital calculations set minimum values for certain parameters which are typically more conservative than Barclays modelled and observed values. In particular, retail loans secured by real estate collateral have a regulatory minimum LGD of 10%.

The PDs below 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 in proportion to the expected monetary loss of the portfolio to arrive at the class PD. 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).

#### Table 15: Analysis of expected credit model performance versus actual results



IRB Exposure Class	PD of Total Portfolio		LGD of Defaulted Assets <sup>1</sup>		Exposure at Default of Defaulted Assets <sup>1</sup>
	Estimated %	Actual %	Estimated %	Actual %	Estimate to Actual Ratio <sup>2</sup>
<b>Wholesale</b>					
Central Governments or central banks	0.17%	0.00%	9.95%	0.00%	N/A
Institutions	0.96%	0.20%	49.01%	46.17%	1.01
Corporates	2.23%	1.67%	39.72%	32.72%	1.07
<b>Retail</b>					
SME	6.87%	6.19%	61.78%	50.74%	0.98
Secured by real estate collateral UK <sup>3</sup>	0.57%	0.52%	13.00%	10.00%	1.03
Secured by real estate collateral Rest of World <sup>3</sup>	4.27%	3.92%	19.34%	21.69%	0.99
Qualifying revolving retail	3.88%	2.74%	85.10%	87.52%	0.93
Other retail	8.10%	7.96%	73.08%	74.49%	1.09

Barclays retail credit models continue to perform adequately across all portfolios. Actual outcomes have generally been close to model estimates.

Notes on Table 15:

<sup>1</sup> Where default rates are typically low Barclays carries out multi-year analysis to improve the sample data and as such the estimates and outcomes above do not represent the results for a single year. The LGD results for different portfolios have been weighted in proportion to the expected EAD of the defaulted assets. Where individual portfolio EAD results are based on multi-year analysis they have been annualised for consolidation by dividing them by the period of years the sample portfolio covers. Barclays does not use PD, EAD, LGD and expected loss models to calculate the credit risk of its equity, securitisation, and non-credit obligation asset portfolios. Accordingly there is no model analysis to disclose for these exposure classes.

<sup>2</sup> 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 models' 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%.

<sup>3</sup> Barclays has shown the model performance information for UK and ROW retail exposures secured on real estate collateral separately because the total portfolio does not give homogeneous results.

## Counterparty Credit Risk

### Counterparty Credit Exposures

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.

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 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.

Collateral is obtained against derivative assets, depending on the creditworthiness of the counterparty and/or nature of the transaction. Any non-cash 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 Credit Support Annex (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.

'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.

Table 16 shows Barclays counterparty credit exposure including the impact of netting contracts and the offset of collateral held (see "Credit Risk Mitigation" section 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.

In line with industry practice, Barclays normally deducts collateral received from the loss given default or risk weight rather than from the exposure in calculating the expected loss.

### Table 16: Counterparty credit exposure

	<b>Gross Positive Fair Value of Contracts</b>	<b>Potential Future Credit Exposure</b>	<b>Netting Benefits</b>	<b>Netted Current Credit Exposure</b>	<b>Collateral Held</b>	<b>Net Derivatives Credit Exposure</b>
<b>As at</b>	£m	£m	£m	£m	£m	£m
<b>31.12.09</b>						
Mark to Market Method	4,311	3,017	(2,993)	4,335	15	4,320
Internal Model Method	N/A	N/A	N/A	N/A	N/A	67,423
<b>Total</b>						<b>71,743</b>

	<b>Gross Positive Fair Value of Contracts</b>	<b>Potential Future Credit Exposure</b>	<b>Netting Benefits</b>	<b>Netted Current Credit Exposure</b>	<b>Collateral Held</b>	<b>Net Derivatives Credit Exposure</b>
<b>As at</b>	£m	£m	£m	£m	£m	£m
<b>31.12.08</b>						
Mark to Market Method	31,640	25,280	(37,595)	19,325	-	19,325
Internal Model Method	N/A	N/A	N/A	N/A	N/A	108,130
<b>Total</b>						<b>127,455</b>

Net derivatives credit exposure decreased by £55,712m from 2008 to 2009. The majority of this change was driven by market movements and elimination of offsetting contracts with counterparties.

In addition to the £71,743m counterparty credit exposure under Mark to Market and Internal Model Methods (2008: £127,455m), Barclays has an additional counterparty credit exposure of £3,382m (2008: £2,122m) calculated under other approved approaches.

The 2008 figures under the Mark to Market Method were restated following alignment with 2009 methodology in Absa.

#### Credit derivative notionals

The following table shows the notional of the credit derivative transactions outstanding as at year-end. Exposure where Barclays is the protection purchaser and where it is the protection seller, are shown separately.

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 17: Notionals of credit derivative contracts**

<b>Outstanding Amount of Exposure held:</b>	<b>Notional Exposure to Credit Derivative Transaction</b>			
	<b>Own Credit Portfolio</b>		<b>Intermediation Activities</b>	
	<b>As Protection Purchaser</b>	<b>As Protection Seller</b>	<b>As Protection Purchaser</b>	<b>As Protection Seller</b>
	£m	£m	£m	£m

**Credit Derivative Product****Type as at 31.12.09**

Credit Default Swaps	19,372	6,727	995,009	974,610
Total Return Swaps	9	9	18,408	2,652
<b>Total</b>	<b>19,381</b>	<b>6,736</b>	<b>1,013,417</b>	<b>977,262</b>

**Notional Exposure to Credit Derivative Transaction**

<b>Outstanding Amount of Exposure held:</b>	<b>Own Credit Portfolio</b>		<b>Intermediation Activities</b>	
	<b>As Protection Purchaser</b>	<b>As Protection Seller</b>	<b>As Protection Purchaser</b>	<b>As Protection Seller</b>
<b>Credit Derivative Product Type as at 31.12.08</b>	£m	£m	£m	£m
Credit Default Swaps	16,516	13,120	1,490,211	1,410,249
Total Return Swaps	-	-	42,902	2,820
<b>Total</b>	<b>16,516</b>	<b>13,120</b>	<b>1,533,113</b>	<b>1,413,069</b>

The reduction in credit default swap notionals reflects an increase in the frequency of activity to manage trades with participating counterparties.

The following table shows the Group's exposure at default (EAD) to counterparty credit risk after credit risk mitigation (CRM) analysed by the type of financial contract. The nature of the calculation of credit exposure under the Internal Model Method precludes the identification of individual product exposures. Only a total for each counterparty is calculated.

**Table 18: Counterparty credit exposures analysed by financial contract type**

<b>Financial Contract Type</b>	<b>As at 31.12.09</b>	
	<b>EAD Post CRM under Mark to Market Approach</b>	<b>EAD Post CRM under Internal Model Method</b>
	£m	£m
Interest Rate Contracts	994	N/A
Foreign Currency Contracts	764	N/A
Gold Contracts	-	N/A
Equities Contracts	485	N/A
Precious Metal other than Gold Contracts	150	N/A
Commodities other than Precious Metal Contracts	1,082	N/A
Securities financing transactions	1,064	N/A
Credit Derivatives	35	N/A
Other	810	N/A
<b>Total</b>	<b>5,384</b>	<b>104,481</b>
<b>Financial Contract Type</b>	<b>As at 31.12.08</b>	
	<b>EAD Post CRM under Mark to Market Approach</b>	<b>EAD Post CRM under Internal Model Method</b>
	£m	£m
Interest Rate Contracts	1,362	N/A

Credit derivative notionals

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Foreign Currency Contracts	1,616	N/A
Gold Contracts	35	N/A
Equities Contracts	1,018	N/A
Precious Metal other than Gold Contracts	178	N/A
Commodities other than Precious Metal Contracts	14,078	N/A
Securities financing transactions	1,261	N/A
Credit Derivatives	177	N/A
Other	861	N/A
<b>Total</b>	<b>20,586</b>	<b>157,542</b>

This table shows the same exposures as table 16, in addition to securities financing transactions. Overall exposures under the MTM and IMM approaches have decreased following market movements and active management of offsetting contracts with counterparties.

Exposures against financial contracts on commodities other than precious metals contracts have decreased by £12,996m as certain power/gas trades are now treated under the Internal Model Method. In addition to the £109,865m counterparty credit exposure under Mark to Market and Internal Model Methods (2008: £178,128m), Barclays has additional counterparty credit exposure under securities financing transactions of £5,705m (2008: £4,171m), as well as exposures that would fall under the "other" category of £3,382m (2008: 2,122). These are calculated using other approved approaches. The 2008 figures under the Mark to Market Method were restated following alignment with 2009 methodology in Absa.

The following table sets out the notional value of the Group credit derivative contracts held for hedging purposes.

**Table 19: Notional value of credit derivative contracts held for hedging purposes**

Risk Methodology	As at 31.12.09	As at 31.12.08
	£m	£m
Notional value of credit derivative hedges for Standardised Method	-	-
Notional value of credit derivative hedges for Mark to Market Method	-	-
Notional value of credit derivative hedges under the Internal Model Method	4,090	5,047
<b>Total</b>	<b>4,090</b>	<b>5,047</b>

The notional value of credit derivative hedges has decreased £957m following the closure of certain books.

## Credit Risk Exposures

### Standardised Approach Credit Exposure

The following table shows Barclays credit exposure for its portfolios under the Standardised approach before the use of credit risk mitigation (CRM).

**Table 20: Credit risk exposure under the Standardised approach**

EAD Pre-CRM	As at 31.12.09
	Average EAD Pre-CRM over the year

<b>Standardised Approach Credit Risk Exposure Class</b>	£m	£m
Central governments or central banks	10,329	6,558
Regional government or local authorities	260	197
Administrative bodies and non-commercial undertakings	384	338
Institutions	2,909	3,375
Corporates	44,777	50,650
Retail	26,130	26,938
Secured on real estate property	26,881	32,041
Past due items	4,116	3,584
Private equity	2,138	2,173
Short term claims on institutions and corporates	-	6,553
Collective investment undertakings	921	1,464
Other items	3,643	2,695
<b>Total Standardised Credit Risk Exposure</b>	<b>122,488</b>	<b>136,566</b>

	<b>EAD Pre-CRM</b>	<b>As at 31.12.08 Average EAD Pre-CRM over the year</b>
<b>Standardised Approach Credit Risk Exposure Class</b>	£m	£m
Central governments or central banks	5,228	4,292
Regional government or local authorities	87	73
Administrative bodies and non-commercial undertakings	418	327
Institutions	2,857	2,617
Corporates	52,550	48,525
Retail	30,272	23,975
Secured on real estate property	40,619	33,260
Past due items	2,602	1,491
Private equity	3,215	2,569
Short term claims on institutions and corporates	11,423	13,503
Collective investment undertakings	780	293
Other items	2,453	2,054
<b>Total Standardised Approach Credit Risk Exposure</b>	<b>152,504</b>	<b>132,979</b>

Exposure at Default, before credit risk mitigation, decreased £30,016m in the year to 31<sup>st</sup> December 2009. The pre-CRM EAD of assets secured on real estate property decreased by £13,738m due to the sale of mortgage loans during 2009 and the transition of certain portfolios to Advanced IRB. Together with an £7,773m decrease in pre-CRM EAD for corporates where some material counterparties have been transferred to IRB treatment, this accounts for most of the change. EAD on other retail exposures decreased £4,142m as a result of balance sheet reduction and exchange rate movements. Exposures under short term claims on institutions and corporates were re-classified under institutions and corporates as more granular data became available.

**Advanced and Foundation IRB Approach Credit Exposure**

The following table shows the Group's credit exposures measured under the Advanced Internal Ratings Based approach and the Foundation Internal Ratings Based approach before the application of credit risk mitigation.

**Table 21: Credit risk exposures under the Advanced and Foundation IRB approaches**

<b>As at 31.12.09</b>	<b>EAD Pre-CRM</b>		<b>Average EAD Pre-CRM over the year</b>	
	<b>Advanced IRB</b>	<b>Foundation IRB</b>	<b>Advanced IRB</b>	<b>Foundation IRB</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
<b>IRB Exposure Class</b>				
Central governments or central banks	85,789	919	29,375	619
Institutions	35,545	2,057	57,657	1,678
Corporates	143,208	14,559	116,614	13,054
Retail				
- SME	13,251	N/A	13,567	N/A
- Secured by real estate collateral	129,914	N/A	119,153	N/A
- Qualifying revolving retail	28,791	N/A	29,222	N/A
- Other retail	13,833	N/A	13,976	N/A
Equity	637	N/A	680	N/A
Securitisation positions	31,023	N/A	57,785	N/A
Non-credit obligation assets	12,143	N/A	14,029	N/A
<b>Total IRB Credit Risk Exposure</b>	<b>494,134</b>	<b>17,535</b>	<b>452,058</b>	<b>15,351</b>

<b>As at 31.12.08</b>	<b>EAD Pre-CRM</b>		<b>Average EAD Pre-CRM over the year</b>	
	<b>Advanced IRB</b>	<b>Foundation IRB</b>	<b>Advanced IRB</b>	<b>Foundation IRB</b>
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
<b>IRB Exposure Class</b>				
Central governments or central banks	35,753	3	18,147	6
Institutions	67,616	3,304	61,636	3,202
Corporates	147,902	11,808	138,488	9,913
Retail				
- SME	13,611	N/A	11,639	N/A
- Secured by real estate collateral	106,954	N/A	107,087	N/A
- Qualifying revolving retail	26,289	N/A	26,648	N/A
- Other retail	13,991	N/A	13,173	N/A
Equity	734	N/A	498	N/A
Securitisation positions	85,132	N/A	52,386	N/A
Non-credit obligation assets	17,742	N/A	14,317	N/A
<b>Total IRB Credit Risk Exposure</b>	<b>515,724</b>	<b>15,115</b>	<b>444,019</b>	<b>13,121</b>

EAD treated under the Advanced IRB approach decreased by £21,590m. This was driven by declines in EAD calculated against institutions (£32,071m) and securitisations (£54,109m). Certain institutions counterparties were reclassified as corporates, and some position with other banks were closed. The decline under the securitisations category follows updated regulatory guidance on the reporting of such positions. This was partly offset by increases in exposures to central governments and central banks.

EAD under the retail Advanced approach increased by £24,944m. Retail exposures secured by real estate collateral rose £22,960m, reflecting a combination of IRB roll-out, book growth (mainly in the UK, accounting for £5.2bn), and exchange rate movements. EAD for qualifying revolving retail exposures rose by £2,502m, mainly due to IRB roll-out.

2008 figures under Foundation IRB were restated to reflect the effect of collateral in Absa.

## Geographic Analysis

The following tables represent Barclays credit exposure by geographic region. Exposures are allocated to the region in which the customer is located and are disclosed before the application of credit risk mitigation.

**Table 22: Geographic analysis of credit risk exposures under the Standardised approach**

<b>As at 31.12.09</b>	<b>United Kingdom</b>	<b>Other European Union</b>	<b>United States</b>	<b>Africa</b>	<b>Rest of the World</b>	<b>Total</b>
<b>Standardised Approach Credit Risk Exposure Class</b>	£m	£m	£m	£m	£m	£m
Central governments or central banks	134	3,706	493	5,500	496	10,329
Regional government or local authorities	12	140	65	43	-	260
Administrative bodies and non-commercial undertakings	53	331	-	-	-	384
Institutions	479	1,061	131	521	717	2,909
Corporates	11,681	17,872	2,401	3,442	9,381	44,777
Retail	7,294	8,933	6,717	1,854	1,332	26,130
Secured on real estate property	8,310	16,629	224	276	1,442	26,881
Past due items	1,164	1,833	714	47	358	4,116
Private equity positions	883	307	847	40	61	2,138
Short term claims on institutions and corporates	-	-	-	-	-	-
Collective investment undertakings	-	921	-	-	-	921
Other items	2,816	381	-	313	133	3,643
<b>Total Standardised Approach Credit Risk Exposure</b>	<b>32,826</b>	<b>52,114</b>	<b>11,592</b>	<b>12,036</b>	<b>13,920</b>	<b>122,488</b>

<b>As at 31.12.08</b>	<b>United Kingdom</b>	<b>Other European Union</b>	<b>United States</b>	<b>Africa</b>	<b>Rest of the World</b>	<b>Total</b>
<b>Standardised Approach Credit Risk Exposure Class</b>	£m	£m	£m	£m	£m	£m
Central governments or central banks	81	2,690	-	1,910	547	5,228
Regional government or local authorities	2	74	11	-	-	87
Administrative bodies and non-commercial undertakings	208	209	1	-	-	418
Institutions	1,421	550	43	367	476	2,857



Corporates	14,055	20,548	3,882	4,059	10,006	52,550
Retail	8,084	10,364	7,430	2,354	2,040	30,272
Secured on real estate property	8,896	27,077	3,050	280	1,316	40,619
Past due items	747	1,361	356	119	19	2,602
Private equity positions	1,094	479	1,526	35	81	3,215
Short term claims on institutions and corporates	1,053	5,189	1,053	3,236	892	11,423
Collective investment undertakings	-	219	561	-	-	780
Other items	831	492	86	513	531	2,453
<b>Total Standardised Approach Credit Risk Exposure</b>	<b>36,472</b>	<b>69,252</b>	<b>17,999</b>	<b>12,873</b>	<b>15,908</b>	<b>152,504</b>

**Standardised Approach EAD decreased by £30,016m, driven by a decline of £17,138 in Other European Union. Declines in retail portfolios' exposures across geographies since 2008 mainly reflect exchange rate movements (for books outside the UK) and transitions to Advanced IRB. The United States total declined by £6,407m as retail mortgages and BGI exposures were reduced via disposals.**

**Table 23: Geographic analysis of credit risk exposures under the Foundation IRB approach**

<b>As at 31.12.09</b>	<b>United Kingdom</b>	<b>Other European Union</b>	<b>United States</b>	<b>Africa</b>	<b>Rest of the World</b>	<b>Total</b>
<b>Foundation IRB Approach Credit Risk Exposure Class</b>	£m	£m	£m	£m	£m	£m
Central governments or central banks	-	-	-	919	-	919
Institutions	-	-	-	2,057	-	2,057
Corporates	72	-	-	14,487	-	14,559
<b>Total Foundation Approach Credit Risk Exposure</b>	<b>72</b>	<b>-</b>	<b>-</b>	<b>17,463</b>	<b>-</b>	<b>17,535</b>

<b>As at 31.12.08</b>	<b>United Kingdom</b>	<b>Other European Union</b>	<b>United States</b>	<b>Africa</b>	<b>Rest of the World</b>	<b>Total</b>
<b>Foundation IRB Approach Credit Risk Exposure Class</b>	£m	£m	£m	£m	£m	£m
Central governments or central banks	-	-	-	3	-	3
Institutions	-	-	-	3,304	-	3,304
Corporates	68	-	-	11,740	-	11,808
<b>Total Foundation Approach Credit Risk Exposure</b>	<b>68</b>	<b>-</b>	<b>-</b>	<b>15,047</b>	<b>-</b>	<b>15,115</b>

Absa is the only part of the Group that has exposures treated under the Foundation IRB approach. The increase in total exposure was driven by foreign exchange movements and general book growth. 2008 figures were restated to reflect the effect of collateral in Absa. In addition, some exposures were re-classified as United Kingdom.

**Table 24: Geographic analysis of credit risk exposures under the Advanced IRB approach**

<b>As at 31.12.09</b>	<b>United Kingdom</b>	<b>Other European Union</b>	<b>United States</b>	<b>Africa</b>	<b>Rest of the World</b>	<b>Total</b>
<b>Advanced IRB Approach Credit Risk Exposure Class</b>	£m	£m	£m	£m	£m	£m
Central governments or central banks	38,270	4,303	32,574	1,348	9,294	85,789
Institutions	16,949	8,091	6,815	111	3,579	35,545
Corporates	81,317	22,187	27,927	217	11,560	143,208
Retail	131,986	16,515	8	37,263	17	185,789
Equity	-	-	-	637	-	637
Securitisation positions	4,996	4,163	17,646	1,222	2,996	31,023
Non-credit obligation assets	6,236	1,651	1,206	2,568	482	12,143
<b>Total Advanced IRB Credit Risk Exposure</b>	<b>279,754</b>	<b>56,910</b>	<b>86,176</b>	<b>43,366</b>	<b>27,928</b>	<b>494,134</b>

<b>As at 31.12.08</b>	<b>United Kingdom</b>	<b>Other European Union</b>	<b>United States</b>	<b>Africa</b>	<b>Rest of the World</b>	<b>Total</b>
<b>Advanced IRB Approach Credit Risk Exposure Class</b>	£m	£m	£m	£m	£m	£m
Central governments or central banks	11,914	5,013	10,265	1,595	6,966	35,753
Institutions	18,330	21,356	14,546	62	13,322	67,616
Corporates	83,005	25,994	29,652	449	8,802	147,902
Retail	127,897	9	5	32,924	10	160,845
Equity	-	-	-	734	-	734
Securitisation positions	24,299	11,756	38,841	1,209	9,027	85,132
Non-credit obligation assets	8,958	1,804	3,028	3,438	514	17,742
<b>Total Advanced IRB Credit Risk Exposure</b>	<b>274,403</b>	<b>65,932</b>	<b>96,337</b>	<b>40,411</b>	<b>38,641</b>	<b>515,724</b>

Total IRB credit exposure declined by £21,590m in total during 2009, as exposures with other institutions were managed down during the year. At the same time, exposures to governments, in the US and UK in particular, were increased following increased capital and liquidity targets. The roll out of certain portfolios to IRB treatment partially offset this decrease.

#### Industry Analysis

The following table represents the Group's credit exposures split by industry and counterparty type. Exposure includes drawn as well as undrawn amounts and is Barclays calculation of the expected maximum amount which may be drawn at the time of default. It cannot be directly compared with the balance sheet industry analysis contained within the Barclays Annual Report. However, Barclays has used the same industry classification in this document and the Annual Report.

**Table 25: Industry analysis of credit exposure under the Standardised approach**

**As at 31.12.09**    **Financial**    **Agriculture,Manufacturing**    **Construction**    **Property**    **EnergyWholesale**    **Transport**

	<b>institutions/ services</b>	<b>forestry and fishing</b>			<b>and water</b>	<b>and retail, distribution and leisure</b>		
<b>Credit Exposure Pre-CRM</b>	£m	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	7,002	-	-	-	-	-	-	-
Regional government or local authorities	2	-	-	1	-	-	-	-
Administrative bodies and non-commercial undertakings	-	-	26	1	-	80	29	-
Institutions	2,684	-	-	-	-	-	-	-
Corporates	6,300	285	5,475	2,264	5,989	2,079	3,701	4,400
Retail	94	73	423	214	253	325	348	1,400
Secured on real estate property	427	105	443	230	1,098	30	601	1,400
Past due items	187	11	127	89	525	13	81	300
Private equity positions	1,213	-	205	16	5	39	97	-
Short term claims on institutions and corporates	-	-	-	-	-	-	-	-
Collective investment undertakings	921	-	-	-	-	-	-	-
Other items	109	-	-	-	151	-	-	-
<b>Total Standardised Approach</b>	<b>18,939</b>	<b>474</b>	<b>6,699</b>	<b>2,815</b>	<b>8,021</b>	<b>2,566</b>	<b>4,857</b>	<b>6,400</b>
<b>Credit Exposure</b>								

<b>As at 31.12.08</b>	<b>Financial institutions/ services</b>	<b>Agriculture, forestry and fishing</b>	<b>Manufacturing</b>	<b>Construction</b>	<b>Property</b>	<b>Wholesale Energy and water</b>	<b>and retail, distribution and leisure</b>	<b>Transport</b>
<b>Credit Exposure Pre-CRM</b>	£m	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	3,318	-	-	-	-	-	-	-
Regional government or	-	-	-	-	-	-	-	-

local authorities Administrative bodies and non-commercial undertakings	-	-	25	25	-	52	37	
Institutions	2,857	-	-	-	-	-	-	
Corporates	10,244	434	5,658	2,101	5,635	1,553	7,595	1,9
Retail	93	120	776	262	146	223	466	2
Secured on real estate property	387	66	244	160	944	15	261	
Past due items	57	4	47	39	301	49	48	
Private equity positions	1,586	-	256	49	60	43	381	
Short term claims on institutions and corporates	5,034	44	1,208	894	804	216	726	4
Collective investment undertakings	780	-	-	-	-	-	-	
Other items	125	8	8	33	15	13	2	
<b>Total Standardised Approach Credit Exposure</b>	<b>24,481</b>	<b>676</b>	<b>8,222</b>	<b>3,563</b>	<b>7,905</b>	<b>2,164</b>	<b>9,516</b>	<b>2,8</b>

The £30,016m decrease in exposures between 2008 and 2009 was driven by home loans following the migration of certain portfolios to the IRB approach. Credit risk exposures to financial institutions and services decreased following the sale of BGI; in addition, some counterparties were transferred to Advanced IRB treatment.

Retail exposure classified as Other Personal was also reduced by AIRB roll out in some cards portfolios. The industrial distribution of retail exposures under the Standardised approach largely arises from retail SME asset finance lending in the UK market.

**Table 26: Industry analysis of credit exposure under the Foundation IRB approach**

As at 31.12.09 Credit Exposure Pre-CRM	Financial institutions/ services	Agriculture, forestry and fishing	Manufacturing	Construction	Property	Wholesale Energy and retail, and distribution		Transport	
						water	and leisure		
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Central governments	917	-	-	-	-	-	-	-	-

or central banks									
Institutions	2,057	-	-	-	-	-	-	-	-
Corporates	3,414	764	1,492	396	1,774	454	-	-	86
<b>Total Foundation IRB Approach Credit Exposure</b>	<b>6,388</b>	<b>764</b>	<b>1,492</b>	<b>396</b>	<b>1,774</b>	<b>454</b>	<b>-</b>	<b>-</b>	<b>86</b>

As at 31.12.08 Credit Exposure Pre-CRM	Financial institutions/ services	Agriculture, forestry and fishing	Manufacturing	Construction	Property	Water	Wholesale Energy and retail, and distribution and leisure	Transport	
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	-	-	-	-	-	-	-	-	-
Institutions	3,304	-	-	-	-	-	-	-	-
Corporates	3,372	561	1,130	401	1,768	229	-	-	87
<b>Total Foundation IRB Approach Credit Exposure</b>	<b>6,676</b>	<b>561</b>	<b>1,130</b>	<b>401</b>	<b>1,768</b>	<b>229</b>	<b>-</b>	<b>-</b>	<b>87</b>

Total exposures increased £2,420m. The movements in business and other services and postal communication were due to the increase in funded net exposures as a result of a re-allocation of customer facilities.

2008 figures were restated to reflect the effect of collateral in Absa.

**Table 27: Industry analysis of credit exposure under the Advanced IRB approach**

As at 31.12.09 Credit Exposure Pre-CRM	Financial institutions/ services	Agriculture, forestry and fishing	Manufacturing	Construction	Property	Water	Wholesale Energy and retail, and distribution and leisure	Transport	
	£m	£m	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	72,858	-	-	-	-	-	-	-	-
Institutions	35,545	-	-	-	-	-	-	-	-
Corporates	18,900	1,290	21,159	4,546	28,864	14,646	14,662	-	5,041

Retail	494	2,073	831	814	2,064	15	2,729	291
Equity	74	-	324	-	199	-	31	-
Securitisation positions	30,183	-	-	-	728	-	-	-
Non-credit obligation assets	-	-	-	-	-	-	-	-
<b>Total Advanced IRB Approach Credit Exposure</b>	<b>158,054</b>	<b>3,363</b>	<b>22,314</b>	<b>5,360</b>	<b>31,855</b>	<b>14,661</b>	<b>17,422</b>	<b>5,332</b>

<b>As at 31.12.08</b>	<b>Financial institutions/ services</b>	<b>Agriculture, forestry and fishing</b>	<b>Manufacturing</b>	<b>Construction</b>	<b>Property</b>	<b>Wholesale energy and water</b>	<b>retail, distribution and leisure</b>	<b>Transport</b>
<b>Credit Exposure Pre-CRM</b>	£m	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	21,003	-	-	-	-	-	-	-
Institutions	67,263	-	-	-	-	-	-	-
Corporates	6,472	1,268	24,767	5,061	30,434	20,401	17,452	5,137
Retail	417	2,038	1,041	949	1,831	18	2,937	369
Equity	167	-	360	-	175	-	32	-
Securitisation positions	84,676	-	210	-	221	-	-	2
Non-credit obligation assets	-	-	-	-	-	-	-	-
<b>Total Advanced IRB Approach Credit Exposure</b>	<b>179,998</b>	<b>3,306</b>	<b>26,378</b>	<b>6,010</b>	<b>32,661</b>	<b>20,419</b>	<b>20,421</b>	<b>5,508</b>

Exposures to financial institutions and services decreased as credit risk mitigation trades with other institutions have reduced. Exposures to central governments and central banks have increased reflecting higher liquidity buffers. Manufacturing and energy and water decreased due to small decreases in a large number of counterparties. Home loans increased following the inclusion of Western Europe portfolios under the Advanced IRB approach.

**Residual maturity analysis**

The maturity analysis below shows all of the Group's credit exposure by contractual maturity date. This is the basis upon which capital adequacy calculations are performed. This differs from the treatment required by IFRS, under which firms disclose drawn balances rather than exposures and apportion maturity according to the repayment schedule.

**Table 28: Residual maturity analysis of credit exposures under the Standardised approach**

<b>As at 31.12.09 Credit Exposure Pre-CRM</b>	<b>EAD Pre-CRM by Standardised Approach Credit Risk Exposure Class</b>						<b>Total</b>
	<b>On demand and qualifying revolving</b>	<b>Under one year</b>	<b>Over one year but not more than three years</b>	<b>Over three years but not more than five years</b>	<b>Over five years but not more than ten years</b>	<b>Over ten years or undated</b>	
	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	3,053	3,784	1,284	1,840	368	-	10,329
Regional government or local authorities	1	139	51	-	3	66	260
Administrative bodies and non-commercial undertakings	-	214	8	108	6	48	384
Institutions	342	1,620	169	648	37	93	2,909
Corporates	1,426	22,152	8,074	5,269	5,414	2,442	44,777
Retail	12,185	3,175	3,376	3,099	3,157	1,138	26,130
Secured on real estate property	27	1,675	1,042	1,889	4,135	18,113	26,881
Past due items	1,586	621	345	337	294	933	4,116
Private equity	-	25	9	24	128	1,952	2,138
Short term claims on institutions and corporates	-	-	-	-	-	-	-
Collective investment undertakings	-	832	7	-	82	-	921
Other items	2,942	272	94	-	-	335	3,643
<b>Total Standardised Approach Credit Risk Exposure</b>	<b>21,562</b>	<b>34,509</b>	<b>14,459</b>	<b>13,214</b>	<b>13,624</b>	<b>25,120</b>	<b>122,488</b>

**EAD Pre-CRM by Standardised Approach Credit Risk Exposure Class**

<b>As at 31.12.08</b>	<b>Credit Exposure</b>	<b>Pre-CRM</b>	<b>On demand and qualifying revolving</b>	<b>Under one year</b>	<b>Over</b>	<b>Over</b>	<b>Over five</b>	<b>Over ten years or undated</b>	<b>Total</b>
					<b>one year but not more than three years</b>	<b>three years but not more than five years</b>	<b>years but not more than ten years</b>		
			£m	£m	£m	£m	£m	£m	£m
	Central governments or central banks		28	4,035	562	390	213	-	5,228
	Regional government or local authorities		-	63	9	-	12	3	87
	Administrative bodies and non-commercial undertakings		-	187	51	72	57	51	418
	Institutions		1	1,138	1,241	307	144	26	2,857
	Corporates		520	24,438	6,407	5,979	9,834	5,372	52,550
	Retail		14,029	4,650	3,629	4,215	2,610	1,139	30,272
	Secured on real estate property		-	1,490	931	1,920	5,100	31,178	40,619
	Past due items		778	516	185	153	259	711	2,602
	Private equity		-	3	30	122	59	3,001	3,215
	Short term claims on institutions and corporates		3,147	8,276	-	-	-	-	11,423
	Collective investment undertakings		-	585	97	2	96	-	780
	Other items		153	1,572	286	14	302	126	2,453
	<b>Total Standardised Approach Credit Risk Exposure</b>		<b>18,656</b>	<b>46,953</b>	<b>13,428</b>	<b>13,174</b>	<b>18,686</b>	<b>41,607</b>	<b>152,504</b>

The decline of £12,444m in exposures with maturities less than one year was driven by decreases in overdrafts and short-term lending as businesses' demand for credit reduced. The migration of mortgage portfolios in Western Europe to the IRB approach drove the £16,487m decrease in maturities over 10 years.

**Table 29: Residual maturity analysis of credit exposures under the Foundation IRB approach****EAD Pre-CRM by Foundation Approach Credit Risk Exposure Class**

<b>As at 31.12.09</b>	<b>Credit Exposure</b>	<b>Pre-CRM</b>	<b>On demand and qualifying revolving</b>	<b>Under one year</b>	<b>Over</b>	<b>Over</b>	<b>Over five</b>	<b>Over ten years or undated</b>	<b>Total</b>
					<b>one year but not more than three years</b>	<b>three years but not more than five years</b>	<b>years but not more than ten years</b>		
			£m	£m	£m	£m	£m	£m	£m
			919	-	-	-	-	-	919



Central governments or central banks							
Institutions	1,089	99	869	-	-	-	2,057
Corporates	6,745	2,367	2,173	748	1,931	595	14,559
<b>Total Foundation IRB Approach Credit Risk Exposure</b>	<b>8,753</b>	<b>2,466</b>	<b>3,042</b>	<b>748</b>	<b>1,931</b>	<b>595</b>	<b>17,535</b>

**EAD Pre-CRM by Foundation Approach Credit Risk Exposure Class**

As at 31.12.08 Credit Exposure Pre-CRM	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
Central governments or central banks	3	-	-	-	-	-	3
Institutions	711	-	1,359	1,212	22	-	3,304
Corporates	6,326	1,698	1,800	199	1,289	496	11,808
<b>Total Foundation IRB Approach Credit Risk Exposure</b>	<b>7,040</b>	<b>1,698</b>	<b>3,159</b>	<b>1,411</b>	<b>1,311</b>	<b>496</b>	<b>15,115</b>

The increase in the corporates category is attributable to general book growth in Absa and foreign exchange movements. This accounts for the majority of the £2,420m increase in total exposure. 2008 figures were restated to reflect the effect of collateral in Absa.

**Table 30: Residual maturity analysis credit exposures under the Advanced IRB approach**

Credit exposure Pre-CRM as at 31.12.09	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

<b>Advanced IRB Exposure Class</b>	<b>years five years</b>						
	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	71,771	4,394	3,121	2,429	2,391	1,683	85,789
Institutions	1,732	18,574	13,712	613	447	467	35,545
Corporates	10,223	20,096	47,493	27,100	13,113	25,183	143,208
Retail	37,424	1,852	7,147	9,209	18,774	111,383	185,789
Equity	637	-	-	-	-	-	637
Securitisation positions	-	10,229	3,177	895	12,632	4,090	31,023
Non-credit obligation assets	177	67	-	-	-	11,899	12,143
<b>Total Advanced IRB Credit Risk Exposure</b>	<b>121,964</b>	<b>55,212</b>	<b>74,650</b>	<b>40,246</b>	<b>47,357</b>	<b>154,705</b>	<b>494,134</b>

**EAD Pre-CRM by Advanced Approach Credit Risk Exposure Class**

<b>Credit exposure Pre-CRM as at 31.12.08 Advanced IRB Exposure Class</b>	<b>On demand and qualifying revolving</b>	<b>Under one year</b>	<b>Over one</b>	<b>Over</b>	<b>Over five</b>	<b>Over ten years or undated</b>	<b>Total</b>
			<b>year but not more than three years</b>	<b>three not more than five years</b>	<b>Over not more than ten years</b>		
	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	16,773	6,133	4,715	1,691	3,287	3,154	35,753
Institutions	5,235	35,354	9,308	11,320	4,311	2,088	67,616
Corporates	13,067	26,100	31,079	33,128	18,334	26,194	147,902
Retail	34,518	1,933	6,630	9,062	17,625	91,077	160,845
Equity	734	-	-	-	-	-	734
Securitisation positions	-	31,264	5,318	2,443	46,107	-	85,132
Non-credit obligation assets	-	-	-	-	-	17,742	17,742
<b>Total Advanced IRB Credit Risk Exposure</b>	<b>70,327</b>	<b>100,784</b>	<b>57,050</b>	<b>57,644</b>	<b>89,664</b>	<b>140,255</b>	<b>515,724</b>

Changes in the profile of wholesale credit risk maturities were driven by reductions in positions such as single name exposures, securitisations and credit risk mitigation positions.

In the retail portfolios, the most significant movements were driven by a reclassification of credit cards portfolios into the on demand category.

## Impaired exposures

The Group assesses at each balance sheet date whether there is objective evidence that loans and receivables or available for sale financial investments are impaired. "Objective evidence of impairment" means the occurrence of loss event(s) that took place after the initial recognition of the asset and prior to the balance sheet date. Furthermore, to constitute objective evidence these events must have had an impact on projected cash flows from the asset or portfolio that can be reliably estimated. The criteria that the Group uses to determine that there is objective evidence of an impairment loss include:

- 
- significant financial difficulty of the issuer or obligor;
- 
- a breach of contract, such as a default or delinquency in interest or principal payments;
- 
- the lender, for economic or legal reasons relating to the borrower's financial difficulty, granting to the borrower a concession that the lender would not otherwise consider;
- 
- it becomes probable that the borrower will enter bankruptcy or other financial reorganisation;
- 
- the disappearance of an active market for that financial asset because of financial difficulties; or
- 
- observable data indicating that there is a measurable decrease in the estimated future cash flows from a portfolio of financial assets since the initial recognition of those assets, although the decrease cannot yet be identified with the individual financial assets in the portfolio, including (i) adverse changes in the payment status of borrowers in the portfolio; (ii) national or local economic conditions that correlate with defaults on the assets in the portfolio.

For loans and receivables, the Group assesses whether objective evidence of impairment exists individually for loans and receivables that are individually significant, and individually or collectively for loans and receivables that are not individually significant. If the Group determines that no objective evidence of impairment exists for an individually assessed loan and receivable, whether significant or not, it includes the asset in a group of loans and receivables with similar credit risk characteristics and collectively assesses them for impairment. Loans and receivables that are individually assessed for impairment and for which an impairment loss is or continues to be recognised are not included in a collective assessment of impairment.

The amount of impairment loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows discounted at the asset's original effective interest rate. The amount of the loss is recognised using an allowance account and recognised in the income statement. Where appropriate, the calculation of the present value of the estimated future cash flows of a collateralised loan and receivable asset reflect the cash flows that may result from foreclosure costs for obtaining and selling the collateral, whether or not foreclosure is probable.

For the purposes of a collective evaluation of impairment, loans and receivables are grouped on the basis of similar risk characteristics, taking into account asset type, industry, geographical location, collateral type, past due status and other relevant factors. These characteristics are relevant to the estimation of future cash flows for groups of such assets by being indicative of the counterparty's ability to pay all amounts due according to the contractual terms of the assets being evaluated.

Future cash flows in a group of loans and receivables that are collectively evaluated for impairment are estimated on the basis of the contractual cash flows of the assets in the group and historical loss experience for assets with credit risk characteristics similar to those in the group. Historical loss experience is adjusted based on current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not currently exist.

The methodology and assumptions used for estimating future cash flows are reviewed regularly to minimise any differences between loss estimates and actual loss experience.

Following impairment, interest income is recognised using the effective rate of interest which was used to discount the future cash flows for the purpose of measuring the impairment loss.

When a loan is uncollectible, it is written off against the related allowance for loan impairment. Such loans are written off after all the necessary procedures have been completed and the amount of the loss has been determined. Subsequent recoveries of amounts previously written off are credited to the income statement.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed by adjusting the allowance account. The amount of the reversal is recognised in the income statement.

Equity securities or properties acquired in exchange for loans in order to achieve an orderly realisation are accounted for as a disposal of the loan and an acquisition of equity securities or investment properties. Where control is obtained over an entity as a result of the transaction, the entity is consolidated. Any further impairment of the assets or business acquired is treated as an impairment of the relevant asset or business and not as an impairment of the original instrument.

In the case of available for sale equity securities, a significant or prolonged decline in the fair value of the security below its cost is also considered in determining whether impairment exists. Where such evidence exists, the cumulative net loss that has been previously recognised directly in equity is removed from equity and recognised in the income statement. In the case of debt instruments classified as available for sale, impairment is assessed based on the same criteria as all other financial assets. Reversals of impairment of debt instruments are recognised in the income statement. Reversals of impairment of equity shares are not recognised in the income statement, increases in the fair value of equity shares after impairment are recognised directly in equity.

The table below shows an analysis of impaired exposures, past due exposures and allowance for impairment. Impaired exposures comprise loans where individual identified impairment allowance has been raised and also include loans which are fully collateralised or where indebtedness has already been written down to the expected realisable value. The impaired loan category may include loans, which, while impaired, are still performing. Loans are past due when a counterparty has failed to make a payment when contractually due. Impairment allowances are a provision held on the balance sheet as a result of the raising of a charge against profit for the incurred loss inherent in the lending book. An impairment allowance may either be identified or unidentified and individual or collective.

**Table 31: Analysis of impaired and past due exposures and allowance for impairment by exposure type**

	<b>Impaired Exposures</b>	<b>Past Due Exposures</b>	<b>Allowance for Impairment</b>
<b>As at 31.12.09</b>	£m	£m	£m
Financial assets designated at fair value	-	180	-
Loans and advanced to banks	57	2,280	61
Residential mortgage loans	1,693	8,846	639
Credit card receivables	2,459	1,544	2,309
Other personal lending	2,372	2,175	2,908
Wholesale and Corporate loans and advances	10,088	7,598	4,558
Finance lease receivables	402	664	321
Impaired exposures			52

<b>Total</b>	<b>17,071</b>	<b>23,287</b>	<b>10,796</b>
	<b>Impaired Exposures</b>	<b>Past Due Exposures</b>	<b>Allowance for Impairment</b>
<b>As at 31.12.08</b>	£m	£m	£m
Financial assets designated at fair value	-	875	-
Loans and advanced to banks	48	1,045	51
Residential mortgage loans	1,668	7,481	321
Credit card receivables	1,231	1,426	1,445
Other personal lending	1,980	1,274	1,869
Wholesale and Corporate loans and advances	7,586	8,307	2,699
Finance lease receivables	234	285	189
<b>Total</b>	<b>12,747</b>	<b>20,693</b>	<b>6,574</b>

Table 31 is shown on the same basis as note 47 of the Annual Report.

Impaired exposures and allowance for impairment increased during the year across the majority of businesses as credit conditions deteriorated during the year, with increases particularly within credit card receivables and wholesale and corporate loans and advances

Past due exposures have decreased within financial assets designated at fair value following sale of positions. This has been more than offset by an increase in past due particularly within retail industries driven by economic conditions.

The following table gives a geographic analysis of impaired exposures, past due exposures and allowances for impairment.

**Table 32: Geographic analysis of impaired and past due exposures and allowance for impairment**

	<b>Impaired Exposures</b>	<b>Past Due Exposures</b>	<b>Allowance for Impairment</b>
<b>As at 31.12.09</b>	£m	£m	£m
UK	5,101	10,614	4,083
Other European Union	4,045	5,198	2,014
United States	4,792	3,098	2,518
Africa	2,192	3,777	1,349
Rest of the World	941	600	832
<b>Total</b>	<b>17,071</b>	<b>23,287</b>	<b>10,796</b>

**Impaired Past Due Allowance for**

	<b>Exposures</b>	<b>Exposures</b>	<b>Impairment</b>
<b>As at 31.12.08</b>	£m	£m	£m
UK	4,160	10,888	2,947
Other European Union	1,742	3,634	963
United States	4,479	3,627	1,561
Africa	1,996	252	857
Rest of the World	370	2,292	246
<b>Total</b>	<b>12,747</b>	<b>20,693</b>	<b>6,574</b>

Impairments have increased across all countries as general macro economic conditions remain challenging, especially the impact of rising unemployment, falling asset prices and higher delinquency rates are pushing up impairments.

Within the UK, the increase in impairment has been driven by rising unemployment, increasing bankruptcy rates and implementation of stricter impairment models. Impairments within the EU are mainly within Spain, where continuing difficulties in the construction industry, rising unemployment and falling house prices result in large impairment charges.

In the Rest of the World, the deteriorating credit environment led to higher losses in both retail and commercial segments. The increasing jobless rate in India and UAE lead to higher losses in unsecured and cards portfolios. In addition to unsecured lending, mortgage portfolios in UAE are heavily stressed, resulting in sharp falls in real estate prices and hence driving up impairments.

An increase in past due exposures within Africa is driven primarily by economic conditions, particularly within retail sectors. Past due exposures have decreased within the Rest of the World, driven by a reduction in settlement balances.

Table 33 shows the movement of impairment during 2009 as well as amounts directly written off or recovered to profit and loss.

**Table 33: Analysis of movement on impairment and amounts taken directly to profit and loss**

	<b>Allowance for Impairment</b>	
	<b>As at 31.12.09</b>	<b>As at 31.12.08</b>
	£m	£m
<b>Impairment Movement</b>		
Starting period	6,574	3,772
Acquisitions & Disposals	434	307
Exchange and other adjustments	(127)	791
Unwind of discount	(185)	(135)
Amounts written off	(3,380)	(2,919)
Recoveries	150	174
Amounts charged against profit	7,330	4,584
<b>Ending period</b>	<b>10,796</b>	<b>6,574</b>
	<b>P&amp;L Impact</b>	
	<b>As at 31.12.09</b>	<b>As at 31.12.08</b>
	£m	£m
<b>Direct P&amp;L Impacts</b>		
Direct write-offs	2,522	1,934
Direct recoveries	-	-

## Credit rating agencies

Under the Standardised approach, the Group makes limited use of credit ratings assigned by credit rating agencies in its calculation of credit risk weighted assets. 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 & Poors

- .
- Moody's

- .
- Fitch

These ratings are used in the calculation of the following exposure classes:

- .
- Central governments and central banks

- .
- Institutions

- .
- Corporates

- .
- Short term claims on institutions and corporates

## Unrated and Rated Counterparties

Where a rating is not available, Barclays follows the provisions of the regulations that cover this state. 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 34: Credit rating agencies and credit quality steps under the Standardised approach**

<b>Standard and Poors</b>	<b>Moody's</b>	<b>Fitch</b>	<b>Credit Quality Step</b>
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

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. Where a rating is not available, in most cases the treatment is approximately equivalent to that which is applied to credit quality step 3. The following table is a simplified version of the risk weight allocation process.

**Table 35: Credit quality steps and risk weights under the Standardised approach**

Credit quality Step	Central governments and central banks	Corporates	Institutions greater than three 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

**Credit Quality Assessment Scale**

The following table shows the exposures calculated under the Standardised approach broken down by credit quality step as specified by the Standardised approach rules (further detail on this may be obtained from the FSA's BIPRU regulations, Section 3).

**Table 36: Credit quality step analysis of pre-CRM exposure and capital deductions under the Standardised approach**

Credit Exposure / Capital Pre-CRM As at 31.12.09	Credit Exposure							Unrated	Total	Capital Deducted from Capital Resources
	Credit Quality Step 1	Credit Quality Step 2	Credit Quality Step 3	Credit Quality Step 4	Credit Quality Step 5	Credit Quality Step 6	Credit Quality Step 6			
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m
Central governments or central banks	3,692	846	3,312	1,066	535	-	878	10,329	-	-
Regional government or local authorities	1	7	42	-	-	-	210	260	-	-
Administrative bodies and non-commercial undertakings	-	-	-	-	-	-	384	384	-	-
Institutions	328	482	61	41	-	-	1,997	2,909	-	-
Corporates	83	675	486	90	64	76	43,303	44,777	-	-
Retail	N/A	N/A	N/A	N/A	N/A	N/A	26,130	26,130	-	-
Secured on real estate property	N/A	N/A	N/A	N/A	N/A	N/A	26,881	26,881	-	-



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Past due items	N/A	N/A	N/A	N/A	N/A	N/A	4,116	4,116	-
Private Equity	N/A	N/A	N/A	N/A	N/A	N/A	2,138	2,138	-
Short term claims on institutions and corporates	-	-	-	-	-	-	-	-	-
Collective investment undertakings	762	155	-	-	-	-	4	921	-
Other items	N/A	N/A	N/A	N/A	N/A	N/A	3,643	3,643	-
Securitisation positions	-	-	-	-	-	-	-	-	1,237
<b>Total Standardised Approach Credit Exposure/ Capital</b>	<b>4,866</b>	<b>2,165</b>	<b>3,901</b>	<b>1,197</b>	<b>599</b>	<b>76</b>	<b>109,684</b>	<b>122,488</b>	<b>1,237</b>

Credit Exposure / Capital Pre-CRM As at 31.12.08	Credit Exposure							Unrated	Total	Capital Deducted from Capital Resources
	Credit Quality Step 1	Credit Quality Step 2	Credit Quality Step 3	Credit Quality Step 4	Credit Quality Step 5	Credit Quality Step 6	£m			
Central governments or central banks	2,223	436	203	778	208	-	1,380	5,228	-	
Regional government or local authorities	-	-	-	-	-	-	87	87	-	
Administrative bodies and non-commercial undertakings	-	-	-	-	-	-	418	418	-	
Institutions	1,764	507	72	64	-	-	450	2,857	-	
Corporates	171	1,801	634	753	297	91	48,803	52,550	-	
Retail	N/A	N/A	N/A	N/A	N/A	N/A	30,272	30,272	-	
Secured on real estate property	N/A	N/A	N/A	N/A	N/A	N/A	40,619	40,619	-	
Past due items	N/A	N/A	N/A	N/A	N/A	N/A	2,602	2,602	-	
Private Equity	N/A	N/A	N/A	N/A	N/A	N/A	3,215	3,215	-	
Short term claims on institutions and corporates	183	-	-	4	-	-	11,236	11,423	-	
Collective investment undertakings	-	-	-	-	-	-	780	780	-	
Other items	N/A	N/A	N/A	N/A	N/A	N/A	2,453	2,453	-	
Securitisation positions	-	-	-	-	-	-	-	-	113	
<b>Total Standardised</b>	<b>4,341</b>	<b>2,744</b>	<b>909</b>	<b>1,599</b>	<b>505</b>	<b>91</b>	<b>142,315</b>	<b>152,504</b>	<b>113</b>	

**Approach Credit  
Exposure/  
Capital**

Although exposures have decreased in aggregate during the year (see table 25), partly due to AIRB roll out, exposures to central government and central banks increased due to higher liquidity reserves.

**Table 37: Credit quality step analysis of post-CRM exposure and capital deductions under the Standardised approach**

Credit Exposure / Capital post CRM As at 31.12.09	Credit Exposure						Unrated £m	Total £m	Capital Deducted from Capital Resources £m
	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			
Central governments or central banks	3,692	846	3,312	1,066	535	-	878	10,329	-
Regional government or local authorities	1	7	42	-	-	-	210	260	-
Administrative bodies and non-commercial undertakings	-	-	-	-	-	-	384	384	-
Institutions	328	482	61	41	-	-	1,921	2,833	-
Corporates	83	675	486	90	64	76	41,121	42,595	-
Retail	N/A	N/A	N/A	N/A	N/A	N/A	25,860	25,860	-
Secured on real estate property	N/A	N/A	N/A	N/A	N/A	N/A	26,735	26,735	-
Past due items	N/A	N/A	N/A	N/A	N/A	N/A	4,103	4,103	-
Private Equity	N/A	N/A	N/A	N/A	N/A	N/A	2,138	2,138	-
Short term claims on institutions and corporates	-	-	-	-	-	-	-	-	-
Collective investment undertakings	762	155	-	-	-	-	4	921	-
Other items	N/A	N/A	N/A	N/A	N/A	N/A	3,643	3,643	-
Securitisation positions	-	-	-	-	-	-	-	-	1,237
<b>Total Standardised Approach Credit Exposure/ Capital</b>	<b>4,866</b>	<b>2,165</b>	<b>3,901</b>	<b>1,197</b>	<b>599</b>	<b>76</b>	<b>106,997</b>	<b>119,801</b>	<b>1,237</b>

Credit Exposure / Capital post CRM As at 31.12.08	Credit Exposure						Unrated £m	Total £m	Capital Deducted from Capital Resources £m
	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			
Central governments or central banks	2,223	436	203	778	208	-	1,380	5,228	-
Regional government or local authorities	-	-	-	-	-	-	87	87	-
Administrative bodies and non-commercial undertakings	-	-	-	-	-	-	418	418	-
Institutions	1,764	507	72	64	-	-	441	2,848	-
Corporates	171	1,801	634	753	297	91	47,358	51,105	-
Retail	N/A	N/A	N/A	N/A	N/A	N/A	30,065	30,065	-
Secured on real estate property	N/A	N/A	N/A	N/A	N/A	N/A	40,286	40,286	-
Past due items	N/A	N/A	N/A	N/A	N/A	N/A	2,602	2,602	-
Private Equity	N/A	N/A	N/A	N/A	N/A	N/A	3,215	3,215	-
Short term claims on institutions and corporates	183	-	-	4	-	-	10,855	11,042	-
Collective investment undertakings	-	-	-	-	-	-	573	573	-
Other items	N/A	N/A	N/A	N/A	N/A	N/A	2,094	2,094	-
Securitisation positions	-	-	-	-	-	-	-	-	113
<b>Total Standardised Approach Credit Exposure / Capital</b>	<b>4,341</b>	<b>2,744</b>	<b>909</b>	<b>1,599</b>	<b>505</b>	<b>91</b>	<b>139,374</b>	<b>149,563</b>	<b>113</b>

Aggregate exposures have declined in line with pre-CRM exposures (shown in the preceding table).

### Credit Risk Mitigation

The Group uses a wide variety of techniques to reduce credit risk on its lending. The most basic of these is performing an assessment of the ability of a borrower to service the proposed level of borrowing without distress. In addition, the Group commonly obtains security for the funds advanced, such as in the case of a retail or commercial mortgage, a reverse repurchase agreement, or a commercial loan with a floating charge over book debts and inventories. The Group ensures that the collateral held is sufficiently liquid,

legally effective, enforceable and regularly valued.

Various forms of collateral are held and commonly include: cash in major currencies; fixed income products including government bonds; letters of credit; property, including residential and commercial; and other fixed assets.

The Group actively manages its credit exposures and when weaknesses in exposures are detected - either in individual exposures or in groups of exposures - action is taken to mitigate the risks. These include steps to manage down the exposure (in discussion with the customers, clients or counterparties, if appropriate), the use of credit derivatives and, sometimes, the sale of the loan assets.

The Group also uses various forms of specialised legal agreements to reduce risk, including netting agreements which permit it to offset positive and negative balances with customers in certain circumstances to minimise the exposure at default, as well as financial guarantees, and the use of covenants in commercial lending agreements.

Barclays manages the diversification of its portfolio to avoid unwanted credit risk concentrations. A concentration of credit risk exists when a number of counterparties are engaged in similar activities and have similar economic characteristics that would cause their ability to meet contractual obligations to be similarly affected by changes in economic or other conditions.

Credit risk mitigation to address concentrations takes several dimensions. Within wholesale credit risk, maximum exposure guidelines are in place relating to the exposures to any individual counterparty. These permit higher exposures to borrowers with higher ratings. They also distinguish between types of counterparty, for example, between sovereign governments, banks and corporations. Excesses to maximum exposure guidelines are considered individually at the time of credit sanctioning, are reviewed regularly, and are reported to the Risk Oversight Committee and the Board Risk Committee.

'Wrong way risk', in a trading exposure with a counterparty, arises when the exposure to that counterparty increases as its credit quality declines. In the event of a default by the counterparty this would lead to a significant loss. When assessing the credit exposure potentially exhibiting wrong-way risk, the correlation between the counterparty and the value of the position is considered as part of the sanctioning process. Adjustments to the calculated credit equivalent exposure (CEE) are considered on a case by case basis. The Risk Oversight Committee has delegated and apportioned responsibility for risk management to the Retail and Wholesale Credit Risk Management Committees. The Retail Credit Risk Management Committee (RCRMC) oversees exposures, which comprise unsecured personal lending (including small businesses), mortgages and credit cards. The RCRMC monitors the risk profile and performance of the retail portfolios by receipt of key risk measures and indicators at an individual portfolio level, ensuring mitigating actions taken to address performance are appropriate and timely. Metrics reviewed will consider portfolio composition at both an overall stock and new flow level.

The Wholesale Credit Risk Management Committee (WCRMC) oversees wholesale exposures, comprising lending to businesses, banks, other financial institutions and sovereigns. The WCRMC monitors exposure by country, industry sector, individual large exposures and exposures to sub-investment grade countries. A further mitigant against undesirable concentration of risk is the mandate and scale framework outlined on page 5. Mandate and scale limits, which can also be set at Group level to reflect overall Risk Appetite, can relate either to the stock of current exposures in the relevant portfolio or to the flow of new exposures into that portfolio. Typical limits include the caps on UK commercial investment property lending, the proportion of lending with maturity in excess of seven years and the proportion of new mortgage business that is buy-to-let. The mandate and scale framework also provides protection against undue concentrations within the collateral held.

Country concentrations are addressed through the country risk policy and utilisation of country limits which specify Risk Appetite by country and avoid excessive concentrations of credits in individual countries.

Country risk grades are assigned to all countries where the Group has, or is likely to have, exposure and are reviewed regularly to ensure they remain appropriate. Country grades, which are derived from long-term sovereign foreign currency ratings, range from 1 (lowest probability of default) to 21 (highest probability of default). A ceiling is applied where a country is graded 12 or worse so that the counterparty cannot normally receive a higher risk grading than the country, unless some form of protection is available

in the event of a cross-border event, such as a significant portion of a counterparty's assets or income being held or generated in hard currency.

To manage exposure to country risk, the Group uses two country limits: the Prudential Guideline and the Country Guideline. The Prudential Guideline is identified through the strict mapping of a country grade to derive a model-driven acceptable level of country appetite. The Country Guideline for all graded countries is set by the Credit Committee based on the Prudential Guideline and the internal assessment of country risk. The Country Guideline may therefore be above or below the Prudential Guideline.

Country risk is calculated through the application of Country Loss Given Default (CLGD). All cross-border or domestic foreign currency transactions incur CLGD from the Country Guideline agreed at Credit Committee. The level of CLGD incurred by a counterparty transaction will largely depend on three main factors: the country severity, the product severity and counterparty grade. CLGD is incurred in the country of direct risk, defined as where the majority of operating assets are held. This may differ from the country of incorporation. However, where transactions are secured with collateral, the country risk can be transferred from the country of the borrower to the country of the collateral provider. This is only permitted where the collateral covers the borrowing and is not expected to decrease over time.

Country managers are in place for all countries where the Group has exposure and they, under the direction of Credit Committee, have responsibility for allocating country risk to individual transactions. The total allocation of country limits is monitored on a daily basis by Group Credit Risk, as headed by the Credit Risk Director. Discretions exist to increase the Country Guideline above the level agreed by Credit Committee where the Country Guideline is below the Prudential Guideline. All requests to increase the Country Guideline in line with individual discretions must be submitted to and applied centrally through Group Credit Risk.

#### **Collateral and Guarantees**

Table 38 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.

**Table 38: Collateral and guarantees for Standardised approach**

<b>Standardised Approach Credit Risk Exposure Class</b>	<b>Total Exposure after netting and volatility adjustments covered by Eligible Financial Collateral</b>	
	<b>As at 31.12.09</b>	<b>As at 31.12.08</b>
	<b>£m</b>	<b>£m</b>
Central governments or central banks	-	-
Regional government or local authorities	-	-
Administrative bodies and non-commercial undertakings	-	-
Institutions	76	9
Corporates	2,182	1,445
Retail	270	207
Secured on real estate property	146	333
Past due items	13	-
Private equity positions	-	-
Short term claims on institutions and corporates	-	381
Collective investment undertakings	-	207
Other items	-	359

**Total** **2,687** **2,941**

The slight decrease in Collateral and Guarantees is driven by a decline in the market value of financial instruments used as collateral.

Table 39 shows the Group's exposure for assets in its Advanced and Foundation portfolios covered by collateral, guarantees and credit derivatives.

**Table 39: Collateral and guarantees for Advanced and Foundation IRB approach**

IRB Exposure Class	Advanced IRB		Foundation IRB	
	Total Exposure - after netting covered by Guarantees and Credit Derivatives	Total Exposure - after netting and volatility adjustments covered by Eligible Financial Collateral	Total Exposure - after netting and volatility adjustments covered by Other Eligible Collateral	Total Exposure - after netting covered by Guarantees and Credit Derivatives
As at 31.12.09	£m	£m	£m	£m
Central governments or central banks	-	-	-	-
Institutions	-	1,476	-	-
Corporates	-	62	-	-
Retail	-	N/A	N/A	N/A
<b>Equity</b>				
- Exchange traded exposures	-	N/A	N/A	N/A
- Private equity exposures	-	N/A	N/A	N/A
- Other Exposures	-	N/A	N/A	N/A
Securitisation positions	-	-	-	-
Non-credit obligation assets	N/A	N/A	N/A	N/A
<b>Total</b>	-	1,538	-	-

IRB Exposure Class	Advanced IRB		Foundation IRB	
	Total Exposure - after netting covered by Guarantees and Credit Derivatives	Total Exposure - after netting and volatility adjustments covered by Eligible Financial Collateral	Total Exposure - after netting and volatility adjustments covered by Other Eligible Collateral	Total Exposure - after netting covered by Guarantees and Credit Derivatives

<b>As at 31.12.08</b>	£m	£m	£m	£m
Central governments or central banks	-	-	-	-
Institutions	-	2,278	-	-
Corporates	-	99	-	-
Retail	-	N/A	N/A	N/A
<b>Equity</b>				
- Exchange traded exposures	-	N/A	N/A	N/A
- Private equity exposures	-	N/A	N/A	N/A
- Other exposures	-	N/A	N/A	N/A
Securitisation positions	-	-	-	-
Non-credit obligation assets	N/A	N/A	N/A	N/A
<b>Total</b>	-	2,377	-	-

The table includes collateral applied against exposures and does not include collateral which has been applied against loss given default or risk weights. Collateral balances within the Annual Report generally refer to securities financing transactions which are not part of the credit exposures above.

### Securitisations

This section discloses information about Barclays securitisation activities distinguishing between the various roles Barclays plays in this business. It includes traditional securitisations as well as synthetic transactions effected through the use of derivatives.

#### Objectives in relation to securitisation activities

In the course of its business, Barclays has traditionally undertaken securitisations of its own originated assets as well as the securitisation of third party assets via 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.

#### The role Barclays plays in the securitisation process

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

- Originator of securitised assets

- Executor of securitisation trades including bond marketing and syndication

- Provider of securitisation trade servicing, including data management, investor payments and reporting.

- Purchaser of third-party securitisations (i.e. where Barclays would not be defined as an originator or a sponsor for regulatory purposes) to support client franchise.

As at the end 2009, Barclays has securitised some of its own originated retail and commercial mortgages, credit cards and corporate loans across both funded traditional and synthetic transactions.

Barclays acts as an administrator and manager of multi-seller conduits through which interests in third-party-originated assets are securitised and funded via the issuance of asset backed commercial paper. 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.

In addition to the above, Barclays has provided swaps to securitisation vehicles, both those sponsored by Barclays and those sponsored by third parties, in order to provide hedges against interest rate and/or currency movements. This forms part of Barclays Capital's market making activity in interest rate and foreign exchange products.

Third party securitisations in which Barclays acts as investor include positions in ABS CDO Super Senior, other US Sub Prime & Alt A and bonds.

#### **Barclays involvement in securitisation in 2009**

Due to the continuing market disruption throughout 2008 and 2009, the volume of securitisation activity in all forms that Barclays has undertaken has been more limited than previously.

On 16th September 2009, Barclays Capital sold assets of £7,454m, including £5,087m in credit market assets, to Protium Finance LP (Protium), a newly established fund.

As part of the transaction, Barclays extended a £7,669m 10 year loan to Protium. No capital relief has been taken on the assets that were subject to the transaction and the Protium transaction is being treated as a securitisation for capital purposes.

#### **Approaches to calculating RWAs**

RWAs reported for securitised assets at 31<sup>st</sup> December 2009 are calculated in line with FSA regulations. Barclays has approval to use the Internal Ratings Based Approach for the calculation of RWAs. Within this, the Group uses the Internal Assessment Approach and the Supervisory Formula Approach to calculate its regulatory capital requirements arising from its securitisation exposures. We also make extensive use of ratings based approach and there are items calculated on a standard rules basis as well.

#### **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. Potential 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.

Assets that have been transferred to an unconsolidated entity will nonetheless remain on the Group balance sheet, with a liability recognised for the proceeds received, unless the following cases apply:

a) substantially all the risks and rewards associated with the assets have been transferred, in which case, they are derecognised in full; or



b) 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.

Where (a) or (b) above 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.

Other than where (a) or (b) apply, securitisation transactions are treated as financing in the financial statements. When (a) or (b) do apply, the transaction will result in sale treatment or partial sale treatment to the extent the Group has no 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 2009 Annual Report. To the extent that these interests are measured at fair value, they will be included within the fair value disclosures in Note 50 to the financial statements in the Annual Report. As outlined in these disclosures, key valuation assumptions for retained interests of this nature will include spreads to discount rates, default and recovery rates and prepayment rates which 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. However, derecognition will be possible only if asset cash flows are transferred into the SPE under arrangements satisfying the pass-through criteria of paragraph 19 of IAS 39 Financial Instruments: Recognition and Measurement.

#### **ECAIs used for securitisations**

Barclays employs External Credit Assessment Institutions to provide ratings for its asset backed securities. Their use is dependent on the transaction or asset class involved. For existing transactions, we employ Standard & Poor's, Moody's and Fitch for securitisations of corporate, residential mortgage and other retail exposures and Standard & Poor's and Moody's for securitisations of small and medium-sized entity and revolving retail exposures.

#### **Quantitative tables**

The securitisations disclosed below are those whose capital requirement has been calculated by reference to the BIPRU 9 securitisation framework under FSA regulations. The amounts are typically higher than those shown in the Annual Report as disclosure guidance requires all underlying exposures to be shown where a securitisation has been created during the year regardless of any accounting de-recognition treatment. The exposures are calculated on the basis of financial statement values, gross of the application of provisions.

In line with industry guidance, we have removed from tables 40, 41 and 45 below securitisations which were not originated in the year and in which we no longer hold any positions. In the tables below, where applicable we have restated December 2008 for this updated guidance. Note that if, at a later date, securitisation exposures are re-purchased for such trades, underlying exposures are then reported in full.

**Table 40: Outstanding amount of exposures securitised**

Exposure Type	Outstanding Amount of Exposures Securitised			
	Traditional Transactions		Synthetic Transactions	
	Originator	Sponsor	Originator	Sponsor
<b>As at 31.12.09</b>	£m	£m	£m	£m
Residential Mortgages	16,718	-	-	-
Commercial Mortgages	4,939	-	-	-
Credit Card Receivables	8,533	-	-	-
Leasing	94	-	-	-

Loans to Corporates or SMEs	2,172	-	5,003	-
Consumer Loans	-	8,793	-	-
Trade Receivables	-	-	-	-
Securitisation / Re-securitisation	1,214	-	-	-
Other Assets	480	-	-	-
<b>Total</b>	<b>34,150</b>	<b>8,793</b>	<b>5,003</b>	<b>-</b>
<b>Total (Prior Year)</b>	<b>39,977</b>	<b>14,752</b>	<b>27,849</b>	<b>-</b>

The total outstanding amount of exposures securitised decreased for both traditional and synthetic transactions over 2009. The reduction in synthetic transactions was due to a decrease in securitisations of loans to corporates or SMEs, while the reduction in traditional transactions was driven principally by residential mortgages and consumer loans related trades.

**Table 41: Analysis of impaired, past due and losses recognised on exposures securitised**  
**Outstanding Amount of Exposures Securitised**

Exposure Type	Past Due		Recognised Losses	
	Originator	Sponsor	Originator	Sponsor
As at 31.12.09	£m	£m	£m	£m
Residential Mortgages	1,506	-	1,148	-
Commercial Mortgages	-	-	32	-
Credit Card Receivables	581	-	-	-
Leasing	6	-	-	-
Loans to Corporates or SMEs	42	-	-	-
Consumer Loans	-	263	-	-
Trade Receivables	-	-	-	-
Securitisations/ Re-securitisations	436	-	338	-
Other Assets	-	-	-	-
<b>Total</b>	<b>2,571</b>	<b>263</b>	<b>1,518</b>	<b>-</b>

**Table 42: Aggregate amount of securitised positions retained or purchased**

Exposure Type	Aggregate Amount of Securitised Positions Retained or Purchased		
	Retained	Purchased	Total
As at 31.12.09	£m	£m	£m
Residential Mortgages	2,332	26,372	28,704
Commercial Mortgages	63	980	1,043
Credit Card Receivables	13	42	55
Leasing	-	41	41
Loans to Corporates or SMEs	3,092	6,469	9,561
Consumer Loans	8,941	2,393	11,334
Trade Receivables	-	-	-
Securitisations/ Re-securitisations	202	219	421
Other Assets	12	2,186	2,198
<b>Total</b>	<b>14,655</b>	<b>38,702</b>	<b>53,357</b>

**Aggregate Amount of Securitised Positions**

Exposure Type	Retained or Purchased		Total
	Retained	Purchased	
<b>As at 31.12.08</b>	£m	£m	£m
Residential Mortgages	1,548	45,525	47,073
Commercial Mortgages	99	558	657
Credit Card Receivables	13	147	160
Leasing	3	16	19
Loans to Corporates or SMEs	18,024	1,120	19,144
Consumer Loans	13,512	617	14,129
Trade Receivables	-	-	-
Securitisations/ Re-securitisations	2,959	849	3,808
Other Assets	3	1,680	1,683
<b>Total</b>	<b>36,161</b>	<b>50,512</b>	<b>86,673</b>

The total amount of securitised positions decreased £33,316m, mainly driven by residential mortgages, reflecting reductions in US agency CDO positions, and loans to corporates or SMEs, reflecting a change in regulatory treatment and unwinding of transactions. Securitisation and re-securitisations also reduced due to a change in the regulatory treatment of CDO positions.

**Table 43: Analysis of securitised positions retained or purchased by risk weight**

Risk Weight Band	Aggregate Amount of Securitised Positions Retained or Purchased		Guidance for Risk Weight Bands	STD S&P Equiv Rating
	Retained	Purchased		
<b>As at 31.12.09</b>	£m	£m	<b>IRB S&amp;P Equiv Rating</b>	
<= 10%	10,466	12,410	AAA to A+ (Senior Positions Only)	N/A
> 10% <= 20%	896	5,488	A to A- (Senior Positions Only) / AAA to A+ (Base Case)	N/A
> 20% <= 50%	501	489	A to A- (Base Case)	AAA to AA-
> 50% <= 100%	1,695	337	BBB+ to BBB (Base Case)	A+ to A-
>100% <= 650%	94	277	BBB- (Base Case) to BB (Base Case)	BBB+ to BB-
> 650% <= 1250%	41	58	BB- (Base Case)	N/A
> 1250% /	962	19,643	B+ & Below (Base Case)	B+ & Below
Deducted Non-1250% Deduction	-	-	Cap deduction with assets rated BB- or above	
<b>Total</b>	<b>14,655</b>	<b>38,702</b>		

Risk Weight Band	Aggregate Amount of Securitised Positions Retained or Purchased		Guidance for Risk Weight Bands	STD S&P Equiv Rating
	Retained	Purchased		
<b>As at 31.12.08</b>	£m	£m	<b>IRB S&amp;P Equiv Rating</b>	
<= 10%	31,857	37,143	AAA to A+ (Senior Positions Only)	N/A
> 10% <= 20%	2,605	6,878	A to A- (Senior Positions Only) / AAA to A+ (Base Case)	N/A
> 20% <= 50%	69	746	A to A- (Base Case)	AAA to AA-

> 50% <= 100%	20	1,039	BBB+ to BBB (Base Case)	A+ to A-
>100% <= 650%	1,245	1,480	BBB- (Base Case) to BB (Base Case)	BBB+ to BB-
> 650% <= 1250%	14	118	BB- (Base Case)	N/A
> 1250% / Deducted	351	3,108	B+ & Below (Base Case)	B+ & Below
Non-1250% Deduction	-	-	Cap deduction with assets rated BB- or above	
<b>Total</b>	<b>36,161</b>	<b>50,512</b>		

The decrease in the aggregate amount of securitised positions decreased was mainly driven by the reduction in <=10% risk-weighted exposures following reductions in mitigation trades, a general decrease in exposures, and downgrades of transactions. Retained positions in the >10<=20% risk weight band also decreased, driven by downgrades and change in regulatory treatment. Purchased positions in the >1250%/Deducted risk weight band increased due to the inclusion of positions that were previously treated under a different approach.

**Table 44: Aggregate amount of securitised revolving exposures**

Underlying Asset Type As at 31.12.09	Outstanding Amount of Securitised Revolving Exposures	
	Originator's Amount	Investor's Interest
	£m	£m
Retail	7,446	1,087
Non-retail	-	-
<b>Total</b>	<b>7,446</b>	<b>1,087</b>

**Table 45: Analysis of securitisation activity**

Exposure Type As at 31.12.09	Securitisation Activity in 2009 (exposures securitised)					
	Traditional		Synthetic			
	Originator	Sponsor	Recognised Gain / Loss on Traditional Securitisation		Originator	Sponsor
	£m	£m	£m	£m	£m	£m
Residential Mortgages	2,029	-	-	-	-	-
Commercial Mortgages	-	-	-	-	-	-
Credit Card Receivables	-	-	-	-	-	-
Leasing	-	-	-	-	-	-
Loans to Corporates or SMEs	329	-	-	-	-	-
Consumer Loans	-	-	-	-	-	-
Trade Receivables	-	-	-	-	-	-
Securitisations/ Re-securitisations	-	-	-	-	-	-
Other Assets	-	-	-	-	-	-
<b>Total</b>	<b>2,358</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total (Prior Year)</b>	<b>2,222</b>	<b>1,761</b>	<b>4</b>	<b>19,059</b>	<b>-</b>	<b>-</b>

## Market Risk Management

### Market risk management strategy

Market Risk is the risk that Barclays earnings or capital, or its ability to meet business objectives, will be adversely affected by changes in the level or volatility of market rates or prices such as interest rates, credit spreads, commodity prices, equity prices and foreign exchange rates. The majority of market risk exposure resides in Barclays Capital. Barclays is also exposed to market risk through non-traded interest rate risk and the pension fund.

Barclays market risk objectives are to:

- Understand and control market risk by robust measurement and the setting of limits.

- Facilitate business growth within a controlled and transparent risk management framework.

- Ensure traded market risk resides primarily in Barclays Capital.

- Minimise non-traded market risk.

### Organisation and structure

The Board approves market risk appetite for trading and non-trading activities. The Market Risk Director is responsible for the 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. A daily market risk report summarises Barclays market risk exposures against agreed limits. This daily report is sent to the Chief Risk Officer, the Market Risk Director, the Finance Director and the appropriate Business Risk Directors.

The head of each business, assisted by the business risk management team, is accountable for all market risks associated with its activities. Each business is responsible for the identification, measurement, management, control and reporting of market risk as outlined in the Barclays Market Risk Control Framework. Oversight and support is provided to the business by the market risk director, assisted by the market risk team within group risk. The market risk committee reviews, approves, and makes recommendations concerning the market risk profile across Barclays including risk appetite, limits and utilisation. The Committee meets monthly and is chaired by the Market Risk Director. Attendees include the Chief Risk Officer, respective business risk managers and senior managers from Group Market Risk. In Barclays Capital, the head of market risk is responsible for implementing the Market Risk Control Framework. Day to day responsibility for market risk lies with the senior management of Barclays Capital, supported by the market risk management team that operates independently of the trading areas.

Oversight is provided by group market risk.

Daily market risk reports are produced for Barclays Capital as a whole as well as for the main business areas. These are sent to Group Market Risk for review and inclusion in the daily market risk report. The risks covered include interest rate, credit spread, commodity, equity and foreign exchange.

A more detailed trading market risk presentation is produced fortnightly and discussed at the Barclays Capital traded positions risk review meeting. Traders and risk managers discuss the implications of the report and agree any appropriate actions.

In each of the six main Global Retail and Commercial Banking businesses (UK Retail Banking, Barclays Commercial Bank, Barclaycard, Western Europe, Emerging Markets and Absa), Group Treasury and Wealth, there is a dedicated market risk department. The head of each department is responsible for implementing the Market Risk Control Framework, with oversight provided by Group Market Risk. A combination of daily and monthly risk reports are sent to Group Market Risk for review and inclusion in the daily market risk report. A risk summary is also presented at Market Risk Committee and the respective Asset and Liability Committees.

## Traded market risk

Barclays policy is to concentrate trading activities in Barclays Capital. This includes transactions where Barclays Capital acts as principal with clients or with the market. For maximum efficiency client and market activities are managed together. In Barclays Capital, trading risk is measured for the trading book, as defined for regulatory purposes, and certain banking books.

### Risk Measurement and Control

The measurement techniques used to measure and control traded market risk include Daily Value at Risk (DVaR), Expected Shortfall, average of the three worst hypothetical losses from the DVaR simulation (3W), stress testing and scenario testing.

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. Barclays Capital uses the historical simulation method with a two-year unweighted historical period at the 95% confidence level.

The historical simulation methodology can be split into three parts:

- Calculate hypothetical daily profit or loss for each position over the most recent two years, using observed daily market moves.

- Sum all hypothetical profits or losses for day one across all positions, giving one total profit or loss. Repeat for all other days in the two year history.

- DVaR is the 95th percentile selected from the two year history of daily hypothetical total profit or loss. Market volatility decreased from the extreme levels observed in the second half of 2008, but remained at about pre-crisis 2007 levels. As a consequence of the unweighted DVaR historical simulation methodology, the extreme 2008 volatility will continue to impact DVaR until late 2010.

The DVaR model has been approved by the FSA to calculate regulatory capital for the trading book. The approval covers general market risk in interest rate, foreign exchange, commodities and equity products, and issuer specific risk for the majority of single name and portfolio traded credit products. Internally, as noted before, DVaR is calculated for the trading book and certain banking books.

When reviewing DVaR estimates, a number of considerations should be taken into account. These are:

- Historical simulation uses the recent past 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.

- Intra-day risk is not captured.

DVaR does not indicate the potential loss beyond the 95th percentile.

DVaR is an important market risk measurement and control tool and consequently the model is regularly assessed. The main approach employed is the technique known as back-testing which counts the number of days when a loss (as defined by the FSA) exceeds the corresponding DVaR estimate, measured at the 99% confidence level.

The FSA categorises a DVaR model as green, amber or red. A green model is consistent with a good working DVaR model and is achieved for models that have four or less back-testing exceptions in a 12-month period. For Barclays Capital's trading book, green model status was maintained for 2009 and 2008.

Expected Shortfall is the average of all hypothetical losses from the historical simulation beyond DVaR. To improve the control framework, formal monitoring of 3W (average of the three worst observations from the

DVaR historical simulation) was started in the first half of 2009.

Stress testing provides an indication of the potential size of losses that could arise in extreme conditions. Global Asset Class stress testing has been designed to cover major asset classes including interest rate, credit spread, commodity, equity and foreign exchange rates. They are based on past stress moves in respective asset class prices and rates. Global Scenario testing is based on hypothetical events which could lead to extreme yet plausible stress type moves, under which profitability is seriously challenged. Market Risk is controlled through the use of limits where appropriate on the above risk measures. Limits are set at the total Barclays Capital level, risk factor level e.g. interest rate risk, and business line level e.g. Emerging Markets. Book limits such as foreign exchange and interest rate sensitivity limits are also in place.

Risk exposures are monitored by Barclays Capital's risk managers with oversight provided by Group Market Risk. The total DVaR limit is approved by the Board. Risk Factor DVaR limits and Global Asset Class stress testing limits are approved by Market Risk Committee.

#### Equity investments

Barclays holds equity positions in non-trading books to generate capital gains for private equity subsidiaries. It can also hold positions as a result of debt to equity conversions, or to maintain strategic relationships. The following table shows the Group exposure to equities not held in the trading book. All equities are held at fair value.

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. Barclays also has non trading book equity investments which are risk weighted under the Standardised approach.

**Table 46: Risk weighted exposures of equity investments**

Risk Weight Category	Risk Weighted Exposure Amount for Equities Exposures using Simple Risk Weight Approach	
	As at 31.12.09	As at 31.12.08
	£m	£m
Exchange Traded Exposures	427	602
Non Exchange Traded Exposures	1,980	2,133
Other Exposures	-	-
<b>Total Risk Weighted Exposure Amount for Equities</b>	<b>2,407</b>	<b>2,735</b>

The £328m decrease in equities is primarily driven by further investments in existing holdings. This has resulted in these investments being proportionally consolidated as associates, rather than risk weighted, and thus excluded from the table above.

The c. £5.4bn stake that Barclays retains in BlackRock following the sale of BGI is deducted from capital requirements, hence not risk weighted.

**Table 47: Fair value of and gains and losses on equity investments**

Non Trading Book Equity Investments	As at 31.12.09	As at 31.12.08
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<b>Fair Value</b>	£m	£m
Exchange Traded	194	738
Private Equity	2,633	3,644
Other	491	1,570
<b>Total</b>	<b>3,318</b>	<b>5,952</b>

<b>Cumulative Realised Gains / Losses from Sale and Liquidations of equity investments</b>	65	194
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**Unrealised gains/(losses)**

Total Gains or Losses	309	122
Amount included in Tier 1, 2 or 3 Capital	309	122

**Latent Revaluation gains/(losses)**

Total Gains or Losses	-	-
Amount included in Tier 1, 2 or 3 Capital	-	-

Decrease in equities is primarily driven by a reduction in positions and the sale of Barclays Global Investors to BlackRock.

Note 50 of the Barclays 2009 Annual Report provides more information on the methodologies Barclays follows in the determination of fair value. Note that the market price is deemed to be the fair value for exchange traded equities.

**Interest Rate Risk Sensitivity**

The following table shows the Group's sensitivity to a 200 basis point shock to interest rates (in either direction) across all maturities for positions outside of its trading book. Where current interest rates are lower than 2%, the analysis has calculated the sensitivity to rates that are negative. Whilst such conditions are extremely rare, they are not unknown and this interpretation is in line with regulatory guidance. The sensitivity of the consolidated banking book is measured on a monthly basis.

**Table 48: Sensitivity of the banking book to interest rate changes**

Currency	Change in Economic Value of Equity £m	
	As at 31.12.09	
	+ 200 basis points	- 200 basis points
GBP	(1,357)	1,287
USD	(710)	720
Euro	(55)	194
Rand	(183)	203
Other	(98)	(4)
<b>Total Economic Value of Equity (EVE)</b>	<b>(2,403)</b>	<b>2,399</b>
<b>Percentage of EVE to Tier 1 and Tier 2 Capital</b>	<b>-3.73%</b>	<b>3.73%</b>

Currency	Change in Economic Value of Equity £m	
	As at 31.12.08	
	+ 200 basis points	- 200 basis points
GBP	(1,373)	1,509
USD	(324)	269
Euro	(323)	380



Rand	(136)	143
Other	(92)	24
<b>Total Economic Value of Equity (EVE)</b>	<b>(2,248)</b>	<b>2,325</b>
<b>Percentage of EVE to Tier 1 and Tier 2 Capital</b>	<b>-3.77%</b>	<b>3.90%</b>

Economic Value of Equity (EVE) quantifies the change in value of the balance sheet for a 200bp interest rate shock. Balance sheet growth will necessarily increase the level of EVE. Comparison of this metric to Barclays total Tier 1 and Tier 2 capital provides a number that is independent of the size of the balance sheet and therefore better represents the potential impact on shareholder value.

## Operational Risk Management

Operational risk is the risk of direct or indirect losses resulting from human factors, external events, and inadequate or failed internal processes and systems. Operational risks are inherent in the Group's operations and are typical of any large enterprise. Major sources of operational risk include: operational process reliability, IT security, outsourcing of operations, dependence on key suppliers, implementation of strategic change, integration of acquisitions, fraud, human error, customer service quality, regulatory compliance, recruitment, training and retention of staff, and social and environmental impacts. Barclays is committed to the advanced measurement and management of operational risks. In particular, it has implemented improved management and measurement approaches for operational risk to strengthen control, improve customer service and minimise operating losses. Barclays was granted a Waiver to operate an Advanced Measurement Approach (AMA) under Basel II, which commenced in January 2008. The Group's operational risk management framework aims to:

- Understand and report the operational risks being taken by the Group.

- Capture and report operational errors made.

- Understand and minimise the frequency and impact, on a cost benefit basis, of operational risk events.

- Manage residual exposures using insurance.

### Organisation and Structure

Barclays works to benchmark our internal operation risk practices with peer banks and to drive the development of advanced operational risk techniques across the industry. It is not cost effective to attempt to eliminate all operational risks and in any event it would not be possible to do so. Events of small significance are expected to occur and are accepted as part of the normal course of business; events of material significance are rare and the Group seeks to reduce the risk from these in accordance with its agreed Risk Appetite.

Barclays has a Group Operational Risk Framework, which is consistent with and part of the Group Internal Control and Assurance Framework. Minimum control requirements have been established for all key areas of identified risk by 'Principal Risk' owners (see page 82). The risk categories relevant to operational risks are Financial Crime, Financial Reporting, Taxation, Legal, Operations, People, Regulatory and Technology. In addition, the following risk categories are used for business risk: Brand Management, Corporate Responsibility, Strategic and Major Change. Responsibility for implementing and overseeing these policies is positioned with Group Principal Risk Owners. 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. Front line risk managers are widely distributed throughout the Group in business units. They service and support these areas, assisting line managers in managing these risks.

Business Risk Directors in each business are responsible for overseeing the implementation of and compliance with Group policies. Governance and Control Committees in each business monitor control

effectiveness.

The Group Governance and Control Committee receives reports from the committees in the businesses and considers Group-significant control issues and their remediation. In the Group Centre, each Principal Risk is owned by a senior individual who liaises with Principal Risk owners within the businesses. In addition, the Operational Risk Director oversees the range of operational risks across the Group in accordance with the Group Operational Risk Framework. Business units are required to report on both a regular and an event-driven basis. The reports include a profile of the material risks to their business objectives, control issues of Group-level significance, and operational risk events. Specific reports are prepared on a regular basis for the Group Risk Oversight Committee, the Board Risk Committee and the Board Audit Committee. The Internal Audit function provides further assurance for operational risk control across the organisation and reports to the Board and senior management.

#### **Measurement and capital modelling**

Barclays applies a consistent approach to the identification and assessment of key risks and controls across all business units. Managers in the businesses use self-assessment techniques to identify risks, evaluate control effectiveness and monitor performance. Business management determines whether particular risks are effectively managed within business Risk Appetite and otherwise takes remedial action. The risk assessment process is consistent with the principles in the integrated framework published by the Committee of Sponsoring Organisations of the Treadway Commission (COSO).

A standard process is used Group-wide for the recognition, capture, assessment, analysis and reporting of risk events. This process is used to help identify where process and control requirements are needed to reduce the recurrence of risk events. Risk events are captured in a central database and reported monthly to the Group Operational Risk Executive Committee.

Barclays also uses a database of external public risk events and is a member of the Operational Risk Data Exchange (ORX), an association of international banks that share anonymised loss data information to assist in risk identification, assessment and modelling.

By combining internal data, including internal loss experience, risk and control assessments, key indicators and audit findings, with external loss data and expert management judgement, Barclays is able to generate Key Risk Scenarios (KRSs), which identify the most significant operational risks across the Group. The KRSs are validated at business unit and at Group level to ensure that they appropriately reflect the level of operational risk. These are the main input to our capital model. Distributions of the potential frequency and severity of operational risk losses are calculated and aggregated to provide a distribution of potential losses over a year for Barclays as a whole. The aggregation process takes into account potential correlations between risk events. The regulatory capital requirement is determined to a soundness standard of 99.9% confidence. Operational risk capital is allocated, on a risk sensitive basis, to business units, providing an incentive to manage these risks within appetite levels.

Barclays has been granted a waiver by the FSA to apply this Advanced Measurement Approach (AMA) for Group-wide consolidated and solus regulatory capital reporting. Barclays has applied the AMA Group-wide. Barclays does not currently offset the expected loss or mitigating effect of insurances against its regulatory capital requirement.

Areas where roll-out of AMA is still continuing and where the Standardised approach is currently applied are Barclays Bank Mozambique and National Bank of Commerce (Tanzania). Areas where roll-out of AMA is ongoing and where the Basic Indicator approach is applied are Banco Comercial Angolano, Woolworths Financial Services in South Africa, Barclays Bank PLC Pakistan, Barclays Investment and Loans India Limited, Barclays Bank LLC Russia, Barclays Bank Indonesia and the Cash Equity, Municipal Bonds, M&A and Wealth business acquired from Lehman Brothers. In certain joint ventures and associates, Barclays may not be able to apply the Advanced Operational Risk Framework.

## Liquidity Risk Management

Liquidity risk is the risk that the Group is unable to meet its obligations when they fall due as a result of a sudden, and potentially protracted, increase in net cash outflows. Such outflows would deplete available cash resources for client lending, trading activities, investments and deposits. In extreme circumstances lack of liquidity could result in reductions in balance sheet and sales of assets, or potentially an inability to fulfil lending commitments. The risk that it will be unable to do so is inherent in all banking operations and can be affected by a range of institution-specific and market-wide events.

### Organisation and structure

Barclays Treasury operates a centralised governance and control process that covers all of the Group's liquidity risk management activities. Businesses assist Barclays Treasury in policy formation and limit setting by providing relevant and expert input for their local markets and customers.

Execution of the Group's liquidity risk management strategy is carried out at country level within agreed policies, controls and limits, with the Country Treasurer providing reports directly to Barclays Treasury to evidence conformance with the agreed risk profile. Liquidity risk is a standing agenda item at Country and Cluster Asset and Liability Committees and on a consolidated basis is reported to the Group's Treasury Committee.

The objective of the Group's liquidity risk management strategy is to ensure that the funding profile of individual businesses and the Group as a whole is appropriate to underlying market conditions and the profile of our business in each given country. Liquidity risk limits and controls are flexed to achieve that profile and are based on regular qualitative and quantitative assessments of conditions under both normal and stressed conditions. Businesses are only allowed to have funding exposure to wholesale markets where they can demonstrate that their market is sufficiently deep and liquid and then only relative to the size and complexity of their business.

Liquidity limits reflect both local regulatory requirements as well as the behavioural characteristics of their balance sheets. Breaches of limits are reported to Treasury Committee together with details of the requirements to return to compliance.

### Liquidity risk framework

Barclays has a comprehensive Liquidity Risk Management Framework (the Liquidity Framework) for managing the Group's liquidity risk. The objective of the Liquidity Framework is for the Group to have sufficient liquidity to continue to operate for at least the minimum period specified by the FSA in the event that the wholesale funding markets are neither open to Barclays nor to the market as a whole. Many of the stress tests currently applied under the Liquidity Framework will also be applied under the FSA's new regime, although the precise calibration may differ in Barclays final Individual Liquidity Guidance to be set by the FSA. The Framework considers a range of possible wholesale and retail factors leading to loss of financing including:

- . maturing of wholesale liabilities;
- . loss of secured financing and widened haircuts on remaining book;
- . retail and commercial outflows from savings and deposit accounts;
- . drawdown of loans and commitments;
- . potential impact of a two-notch ratings downgrade; and
- . withdrawal of initial margin amounts by counterparties.

These stressed scenarios are used to assess the appropriate level for the Group's liquidity pool, which comprises unencumbered assets and cash. Barclays regularly uses these assets to access secured funding markets, thereby testing the liquidity assumptions underlying pool composition. The Group does not presume the availability of central bank facilities to monetise the liquidity pool in any of the stress scenarios under the Liquidity Framework.

#### **Liquidity Pool**

The Group liquidity pool as at 31st December 2009 was £127bn gross (31st December 2008: £43bn) and comprised cash and unencumbered assets.

The cost of maintaining the liquidity pool is a function of the source of funding for the buffer and the reinvestment spread. The cost of funding the liquidity pool is estimated to have been approximately £650m for 2009.

#### **Term Financing**

Raising term funding is important in meeting the risk appetite of the Barclays Liquidity Framework. Barclays has continued to increase the term of issued liabilities during 2009 by issuing:

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£15bn equivalent of public senior term funding;

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£1.8bn equivalent of public covered bonds; and

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£21bn equivalent of structured notes.

The Group has £4bn of publicly issued debt and £11bn of structured notes maturing in 2010.

#### **Intraday liquidity**

The need to monitor, manage and control intraday liquidity in real time is recognised by the Group as a critical process: any failure to meet specific intraday commitments would have significant consequences, such as a visible market disruption.

The Group policy is that each operation must ensure that it has access to sufficient intraday liquidity to meet any obligations it may have to clearing and settlement systems. Major currency payment flows and payment system collateral are monitored and managed in real time to ensure that at all times there is sufficient collateral to make payments. In practice, the Group maintains a significant buffer of surplus intraday liquidity to ensure that payments are made on a timely basis. The Group actively engages in payment system development to help ensure that new payment systems are robust.

#### **Day to day funding**

Day to day funding is managed through limits on wholesale borrowings, secured borrowings and funding mismatches. These ensure that on any day and over any period there is a limited amount of refinancing requirement. These requirements include replenishment of funds as they mature or are borrowed by customers.

In addition to cash flow management, Treasury also monitors term mismatches between assets and liabilities, as well as the level and type of undrawn lending commitments, the usage of overdraft facilities and the impact of contingent liabilities such as standby letters of credit and guarantees.

#### **Diversification of liquidity sources**

Sources of liquidity are regularly reviewed to maintain a wide diversification by currency, geography, provider, product and term. In addition, to avoid reliance on a particular group of customers or market sectors, the distribution of sources and the maturity profile of deposits are also carefully managed. Important factors in assuring liquidity are competitive rates and the maintenance of depositors' confidence. Such confidence is based on a number of factors including the Group's reputation and relationship with those clients, the strength of earnings and the Group's financial position.

## Funding Structure

Global Retail and Commercial Banking, Barclays Wealth and Head Office Functions are structured to be self-funded through customer deposits and Barclays equity and other long-term capital. The Barclays Capital and Absa businesses are funded through the wholesale secured and unsecured funding markets. The ratio of customer loans to customer deposits and long-term funding has improved to 81% at 31st December 2009, from 93% at 31st December 2008.

### Global Retail and Commercial Banking, Barclays Wealth and Head Office Functions

An important source of structural liquidity is provided by our core retail deposits in the UK, Europe and Africa; mainly current accounts and savings accounts. Although contractually current accounts are repayable on demand and savings accounts at short notice, the Group's broad base of customers - numerically and by depositor type - helps to protect against unexpected fluctuations. Such accounts form a stable funding base for the Group's operations and liquidity needs.

Group policy is to ensure that the assets of the retail, wealth and corporate bank, together with Head Office functions, on a global basis, do not exceed customer deposits and subordinated funding so that these businesses place no reliance on wholesale markets. The exception to this policy is Absa, which has a large portion of wholesale funding due to the structure of the South African financial sector.

In order to assess liquidity risk, the balance sheet is modelled to reflect behavioural experience in both assets and liabilities and is managed to maintain a cash surplus. The maturity profile, excluding Absa, resulting from this behavioural modelling is set out above. This shows that there is a funding surplus of £94.5bn, and that there are expected outflows of £10.2bn within one year from asset repayments being less than liability attrition. For subsequent years the expected repayments on assets are larger than the roll off of liabilities resulting in cash inflows. Maturities of net liabilities are, therefore, behaviourally expected to occur after five years.

### Barclays Capital

Barclays Capital manages its liquidity to be primarily funded through wholesale sources, managing access to liquidity to ensure that potential cash outflows in a stressed environment are covered.

73% of the inventory is funded on a secured basis (31st December 2008: 50%). Additionally, much of the short-term funding is invested in highly liquid assets and central bank cash and therefore contributes towards the Group liquidity pool.

Barclays Capital undertakes secured funding in the repo markets based on liquidity characteristics. Limits are in place for each security asset class reflecting liquidity in the cash and financing markets for these assets. The percentage of secured funding using each asset class as collateral is set out below.

Unsecured wholesale funding for the Group (excluding Absa) is managed by Barclays Capital within specific term limits. Excluding short term deposits that are included within the Group's liquidity pool, the term of unsecured liabilities has been extended, with average life improving from at least 14 months at 31st December 2008 to at least 26 months at 31st December 2009.

The extension of the term of the wholesale financing has meant that, as at 31st December 2009, 81% of net wholesale funding had remaining maturity of greater than one year and, as at the same date, there was no net wholesale unsecured re-financing required within six months.

### Regulatory Changes in 2009

The FSA issued its policy document on 'strengthening liquidity standards' on 5th October detailing the requirements for liquidity governance to be in place by 1st December 2009, and the quantitative requirements for liquidity buffers, which will be in place from 1st June 2010, although with an extended transition period of several years to meet the expected standards. This is the most comprehensive liquidity regime imposed by any regulator globally, requiring increased quantitative reporting from June 2010 and additional evidential reporting to demonstrate adherence to new qualitative requirements. In addition, the Basel Committee on Banking Supervision released a consultative document 'International framework for

liquidity risk measurement, standards and monitoring' in December 2009. This included two new key liquidity metrics. A liquidity coverage ratio aimed at ensuring banks have sufficient unencumbered high quality assets to meet cash outflows in an acute short-term stress and a Net Stable Funding Ratio to promote longer-term structural funding of the Bank's balance sheet and capital market activities.

### **Barclays sensitivity to a ratings downgrade**

As part of our liquidity framework, we model on an ongoing basis the impact of cash outflows in the event of a two-notch downgrade. Barclays ensures that it always holds sufficient surplus liquidity to more than cover the impact of this stress outcome.

## **Appendix: Basis of preparation of this report**

### **Differences between regulatory consolidation and IFRS consolidation**

**Table 49: Differences between the scope of statutory and regulatory consolidation**

<b>Entity</b>	<b>Statutory accounting treatment</b>	<b>Basel II Regulatory treatment</b>
Subsidiaries engaged in non-financial activities such as insurance	Fully consolidated	An investment in an unconsolidated subsidiary deducted from capital
Associates, joint ventures and participations in businesses which are financial in nature	Accounted for on an equity basis	Consolidated in proportion to the participation
Associates, joint ventures and participations in businesses which are not financial in nature	Accounted for on an equity basis	Deducted from capital
Private equity investments treated as associates	Accounted for on an equity basis	The underlying investments are individually risk weighted

### **Presentation of figures**

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

### **Significant subsidiaries**

Pillar 3 disclosures are at consolidated group level. However, Barclays has a number of subsidiary companies which are also FSA approved firms. The regulations require any such subsidiaries which are significant to disclose limited Pillar 3 information. Barclays 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

#### **Exceptions to the disclosure requirements**

The following disclosures were not made in this report as they are considered to be proprietary or inapplicable:

The association of the external rating of each nominated ECAI or export credit agency with the credit quality assessment steps prescribed in BIPRU 3 (BIPRU 11.5.10), as the Group complies with the credit quality assessment scale.

A description of the internal ratings process for equities (BIPRU 11.6.1) as it is proprietary.

A description of the types of exposure included in the IRB exposure class, the definitions, methods and data for estimation and validation of PD and, if applicable, LGD and credit conversion factors, including assumptions employed in the derivation of these variables, and the descriptions of material deviations from the definition of default, including the broad segments affected by such deviations (BIPRU 11.6.1R (3)). This information is proprietary.

#### **Glossary of terms**

'ABS CDO Super Senior' - The super senior tranches of debt linked to collateralised debt obligations of asset backed securities (defined below). Payment of super senior tranches takes priority over other obligations.

'Arrears' - Customers are said to be in arrears when they are behind in fulfilling their obligations with the result that an outstanding loan is unpaid or overdue. Such a customer is also said to be in a state of delinquency. When a customer is in arrears, his entire outstanding balance is said to be delinquent, meaning that delinquent balances are the total outstanding loans on which payments are overdue.

'Asset Backed Security (ABS)' - Securities that represent an interest in an underlying pool of referenced assets. The referenced pool can comprise any assets which attract a set of associated cash flows but are commonly pools of residential or commercial mortgages and, in the case of Collateralised Debt Obligations (CDOs), the referenced pool may be ABS or other classes of assets.

'Absa' - Refers to the results for Absa Group Limited as consolidated into the results of Barclays PLC; translated into Sterling with adjustments for amortisation of intangible assets, certain head office adjustments, transfer pricing and non-controlling interests.

'Absa Group Limited' - Refers to the consolidated results of the South African group of which the parent company is listed on the Johannesburg Stock Exchange (JSE Limited) in which Barclays owns a controlling stake.

'Alphabet Ratings' - Refers to non-numeric credit ratings used by external ratings agencies.

'Alt-A' - Loans regarded as lower risk than sub-prime, but with higher risk characteristics than lending under normal criteria.

'Available For Sale (AFS)' - Available for sale investments are non-derivative financial investments that are designated as available for sale and are not categorised as held at fair value through profit and loss, loans and receivables or held to maturity.

'Basis Point' - One hundredth of a per cent (0.01 per cent), so 100 basis points is 1 per cent.

'Called Up Share Capital' - Ordinary shares, issued and fully paid.

'Capital Adequacy' - The Group manages its capital resources to ensure that those Group entities that are subject to local capital adequacy regulation in individual countries meet their minimum capital requirements.

'Capital Instruments' - Security (bonds, notes, shares) issued to obtain equity capital or loan capital

'Capital Requirement' - Amount to be held by the bank to cover the risk of losses to a certain confidence level.

'Capital Resources' - Financial instruments on balance sheet that are eligible to satisfy capital requirements.

'Collateralised Debt Obligations (CDOs)' - Securities issued by a third party which reference Asset Backed Securities (ABSs) (defined above) and/or certain other related assets purchased by the issuer. CDOs may feature exposure to sub-prime mortgage assets through the underlying assets. CDO<sup>2</sup> securities represent investments in CDOs that have been securitised by a third party.

'Collectively Assessed Impairment Allowances' - Impairment is measured collectively where a portfolio comprises homogenous assets and where appropriate statistical techniques are available.

'Commercial Paper' - An unsecured promissory note issued to finance short-term credit needs. It specifies the face amount paid to investors on the maturity date.

'Conduits' - A financial vehicle that holds asset-backed debt such as mortgages, vehicle loans, and credit card receivables, all financed with short-term loans (generally commercial paper) that use the asset-backed debt as collateral. The profitability of a conduit depends on the ability to roll over maturing short-term debt at a cost that is lower than the returns earned from asset-backed securities held in the portfolio.

'Core Tier 1 Capital' - Called-up share capital and eligible reserves plus equity non-controlling interests, less intangible assets and deductions relating to the excess of expected loss over regulatory impairment allowance and securitisation positions as specified by the FSA.

'Core Tier 1 Capital Ratio' - Core Tier 1 capital as a percentage of risk weighted assets.

'Coverage Ratio' Impairment allowances as a percentage of CRL balances.

'Credit Conversion Factor (CCF)' - The portion of an off-balance sheet commitment drawn in the event of a future default. The conversion factor is expressed as a percentage. The conversion factor is used to calculate the exposure at default (EAD).

'Credit Default Swap (CDS)' - A credit derivative is an arrangement whereby the credit risk of an asset (the reference asset) is transferred from the buyer to the seller of protection. A credit default swap is a contract where the protection seller receives premium or interest-related payments in return for contracting to make payments to the protection buyer in the event of a defined credit event. Credit events normally include bankruptcy, payment default on a reference asset or assets, or downgrades by a rating agency.

'Credit Enhancements' - see 'Liquidity and Credit enhancements'

'Credit Equivalent Exposure (CEE)' - The magnitude of trading 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 CEE for such exposures using a stochastic method.

'Credit Risk Loans (CRLs)' - A loan becomes a credit risk loan when evidence of deterioration has been observed, for example a missed payment or other breach of covenant. A loan may be reported in one of three categories: impaired loans; accruing past due 90 days or more; or impaired and restructured loans. These may include loans which, while impaired, are still performing but have associated individual impairment allowances raised against them.

'Credit Spread' - The yield spread between securities with the same coupon rate and maturity structure but with different associated credit risks, with the yield spread rising as the credit rating worsens. It is the premium over the benchmark or risk-free rate required by the market to accept a lower credit quality.

'Customer Deposits' - Money deposited by all individuals and companies that are not credit institutions. Such funds are recorded as liabilities in the Group's balance sheet under Customer Accounts.

'Daily Value at Risk (DVaR)' - An estimate of the potential loss which might arise from market movements under normal market conditions, if the current positions were to be held unchanged for one business day, measured to a confidence level. (Also see VaR).

'Delinquency' - See 'Arrears'.

'Economic Capital' - An internal measure of the minimum equity and preference capital required for the Group to maintain its credit rating based upon its risk profile.

'Economic Profit' - Profit after tax and non-controlling interests excluding amortisation of acquired intangible assets less a capital charge representing adjusted average shareholders' equity excluding non-controlling interests multiplied by the Group cost of capital.



'Expected Loss' - The Group measure of anticipated loss for exposures captured under an internal ratings based credit risk approach for capital adequacy calculations. It is measured as the Barclays modelled view of anticipated loss based on Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD)

'Exposure at Default (EAD)' - The estimation of the extent to which Barclays may be exposed to a customer or counterparty in the event of, and at the time of, that counterparty's default. At default, the customer may not have drawn the loan fully or may already have repaid some of the principal, so that exposure is typically less than the approved loan limit.

'External Credit Assessment Institutions (ECAI)' - Agencies whose credit assessment banks can use for the purpose of calculating regulatory capital requirements under certain conditions.

'Funded/Unfunded' - Exposures where the notional amount of the transaction is either funded or unfunded. Represents exposures where a commitment to provide future funding has been made and the funds have been released/not released.

'Home Loans' - A loan to purchase a residential property which is then used as collateral to guarantee repayment of the loan. The borrower gives the lender a lien against the property, and the lender can foreclose on the property if the borrower does not repay the loan per the agreed terms. Also known as a residential mortgage.

'Impairment Allowances' - A provision held on the balance sheet as a result of the raising of a charge against profit for the incurred loss inherent in the lending book. An impairment allowance may either be identified or unidentified and individual or collective.

'Individually/Collectively Assessed' - Impairment is measured individually for assets that are individually significant, and collectively where a portfolio comprises homogenous assets and where appropriate statistical techniques are available.

'Internal Ratings' - refers to internally calculated estimates of PD, EAD and LGD.

'Investment Grade' - A debt security, treasury bill or similar instrument with a credit rating measured by external agencies of AAA to BBB (or equivalent).

'ISDA Master Agreement' - Is used to document transactions between parties in different jurisdictions and/or transactions involving different currencies.

'Liquidity and Credit Enhancements' - Credit enhancement facilities are used to enhance the creditworthiness of financial obligations and cover losses due to asset default. Two general types of credit enhancement are third-party loan guarantees and self-enhancement through over collateralization. Liquidity enhancement makes funds available if required, for other reasons than asset default, e.g. to ensure timely repayment of maturing commercial paper.

'Liquidity Pool/Buffer' - The group liquidity pool comprises cash at central banks and highly liquid collateral specifically held by the group as contingency to enable the bank to meet cash outflows in the event of stressed market conditions.

'Loan Capital' - Part of capital, excluding equity capital employed that earns a fixed rate of interest instead of dividends, and must be repaid within a specified period, irrespective of financial position.

'Loan Loss Rate (LLR)' - Defined as total credit impairment charge (excluding available for sale assets and reverse repurchase agreements) divided by gross loans and advances to customers and banks (at amortised cost).

'Loss Given Default (LGD)' - The fraction of Exposure at Default (EAD) (defined above) that will not be recovered following default. LGD comprises the actual loss (the part that is not expected to be recovered), together with the economic costs associated with the recovery process.

'Monoline' - An entity which specialises in providing credit protection to the holders of debt instruments in the event of default by a debt security counterparty. This protection is typically held in the form of derivatives such as credit default swaps (CDS) referencing the underlying exposures held.

'Non-Credit obligation assets' - Non-credit assets which attract regulatory capital in the same manner as credit assets (for instance, private equity holdings)

'Own Credit' - The effect of the Group's own credit standing on the fair value of financial liabilities.

'Point-In-Time (PIT)' - refers to credit risk measures which do not factor longer-term average risk characteristics of a credit asset.

'Position Risk' - Probability of loss associated with a particular trading (long or short) position due to price changes.

'Potential Credit Risk Loans (PCRLs)' - Comprise the outstanding balances to Potential Problem Loans (defined below) and the three categories of Credit Risk Loans (defined above).

'Potential Problem Loans (PPLs)' - Loans where serious doubt exists as to the ability of the borrowers to continue to comply with repayment terms in the near future. 'Prime' - Loans of a higher credit quality and would be expected to satisfy the criteria for inclusion into Government programmes.

'Private Equity Exposures' - Amounts on balance sheet for private equity holdings, after any value adjustments required by regulations.

'Probability of Default (PD)' - The likelihood that a loan will not be repaid and will fall into default. PD may be calculated for each client who has a loan (normally applicable to wholesale customers/clients) or for a portfolio of clients with similar attributes (normally applicable to retail customers). To calculate 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 rating decision on individual large credits, such as internal and external models, rating agency ratings, and for wholesale assets market information such as credit spreads. For smaller credits, a single source may suffice such as the result from an internal rating model.

'Qualifying Revolving Retail' - Retail exposures treated under BIPRU 4.6.44 R (2). Amongst their characteristics they are revolving, unsecured, and, to the extent they are not drawn, immediately and unconditionally cancellable by the lender.

'Qualifying Subordinated Liabilities' - Liabilities held by a bank that can be counted toward capital requirements.

'Regulatory Capital' - The amount of capital that a bank holds to satisfy regulatory requirements.

'Retail Loans' - Loans to individuals rather than institutions. This includes both secured and unsecured loans such as mortgages and credit card balances.

'Revaluation Reserves' - Reserve created when an asset has been revalued and an increase in value is brought to account.

'Risk-Weighted Assets' - A measure of a bank's assets adjusted for their associated risks. Risk weightings are established in accordance with the Basel Capital Accord as implemented by the FSA.

'Securitisation' - A process by which debt instruments are aggregated into a pool, which is used to back new securities. A company sells assets to an SPV (special purpose vehicle) which then issues securities backed by the assets based on their value. This allows the credit quality of the assets to be separated from the credit rating of the original company and transfers risk to external investors.

'Special Purpose Entities (SPE)' - Entities that are created to accomplish a narrow and well defined objective. There are often specific restrictions or limits around their ongoing activities. Transactions with SPEs take a number of forms, including:

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The provision of financing to fund asset purchases, or commitments to provide finance for future purchases.

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Derivative transactions to provide investors in the SPE with a specified exposure.

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The provision of liquidity or backstop facilities which may be drawn upon if the SPE experiences future funding difficulties.

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Direct investment in the notes issued by SPEs.

'Structural Liquidity' - The liquidity available from current positions - principally unpledged marketable assets and holdings of term liabilities with long remaining lives.

'Subordination' - The state of prioritising repayments of principal and interest on debt to a creditor lower than repayments to other creditors by the same debtor. That is, claims of a security are settled by a debtor to a creditor only after the claims of securities held by other creditors of the same debtor have been settled.

'Subordinated Liabilities' - Liabilities which, in the event of insolvency or liquidation of the issuer, are subordinated to the claims of depositors and other creditors of the issuer.

'Sub-Prime' - Defined as loans to borrowers typically having weakened credit histories that include payment delinquencies and potentially more severe problems such as court judgements and bankruptcies. They may also display reduced repayment capacity as measured by credit scores, high debt-to-income ratios, or other criteria indicating heightened risk of default.

'Through-The-Cycle (TTC)' - refers to credit risk measures which seek to capture the average risk characteristics of a credit asset over a credit cycle.

'Tier 1 Capital' - A measure of a bank's financial strength defined by the FSA. It captures Core Tier 1 capital plus other Tier 1 securities in issue, but is subject to a deduction in respect of material holdings in financial companies.

'Tier 1 Capital Ratio' - The ratio expresses Tier 1 capital as a percentage of risk weighted assets.

'Tier 1 Capital Resources' - capital resources that count toward satisfying Tier 1 Capital requirements.

'Tier 1 Notes' - Hybrid capital instruments that can be counted toward Tier 1 capital.

'Tier 2 Capital' - Defined by the FSA. Broadly, it includes qualifying subordinated debt and other Tier 2 securities in issue, eligible collective impairment allowances, unrealised available for sale equity gains and revaluation reserves. It is subject to deductions relating to the excess of expected loss over regulatory impairment allowance, securitisation positions and material holdings in financial companies.

'Tier 2 Capital Resources' - capital resources that count toward satisfying Tier 2 Capital requirements.

'Value Adjustments' - Adjustment to accounting values made for regulatory purposes.

'Value at Risk (VaR)' - An estimate of the potential loss which might arise from market movements under normal market conditions, if the current positions were to be held unchanged for one business day, measured to a confidence level. (Also see DVaR).

## **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 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', 'expect', 'estimate', 'intend', 'plan', 'goal', 'believe' 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, 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 and global economic and business conditions, the effects of continued volatility in credit markets, market related risks such as changes in interest rates and 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, changes in legislation, the further development of standards and interpretations under International Financial Reporting Standards (IFRS) applicable to past, current and future periods, evolving practices with regard to the interpretation and application of standards under IFRS, the outcome of pending and future litigation, 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 (FSA), the London Stock Exchange or applicable law, Barclays expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained in this announcement 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 filed or may file with the SEC.