

The **co-operative** bank  
good with money

Pillar 3 disclosures 2007

# co-operation innovation transformation

# 07

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## Overview and context

The Capital Requirements Directive (Basel II) introduced on 1 January 2007 set out the new disclosure requirements for firms operating under the framework. The disclosure requirements (Pillar 3) aim to complement the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2) and aim to encourage market discipline by allowing market participants to assess key pieces of information on risk exposures and the risk assessment processes of the firm.

### *Frequency*

This report will be published on an annual basis based on the financial year end date in line with the financial statements announcement. All amounts are reported in £millions unless otherwise indicated.

### *Media and location*

The report will be published on the CFS (Co-operative Financial Services) website, [www.cfs.co.uk](http://www.cfs.co.uk).

### *Verification*

Disclosures will only be externally verified to the extent they are equivalent to those made under accounting requirements.

## Risk management

The Bank is part of a wider group of companies (Co-operative Financial Services (CFS) Group), the ultimate group parent being Co-operative Group Limited (formerly known as Co-operative Group (CWS) Limited) which provides banking and insurance offerings via the CFS group. CFS has developed and implemented a common governance and organisation structure, with the same committee structure supporting each Board within the CFS group.

A robust qualitative and quantitative risk and governance framework has been developed, embedded and implemented enterprise-wide. This:

- includes processes for the quantification, management and mitigation of all risks across the Bank;
- has built on the work undertaken in developing the Bank's Basel II IRB Permission Application Pack (PAP); and
- enabled much stronger links between risk, capital and business management, increasing confidence in the capital calculations and accurately reflecting the risk profile and risk appetite of the business.

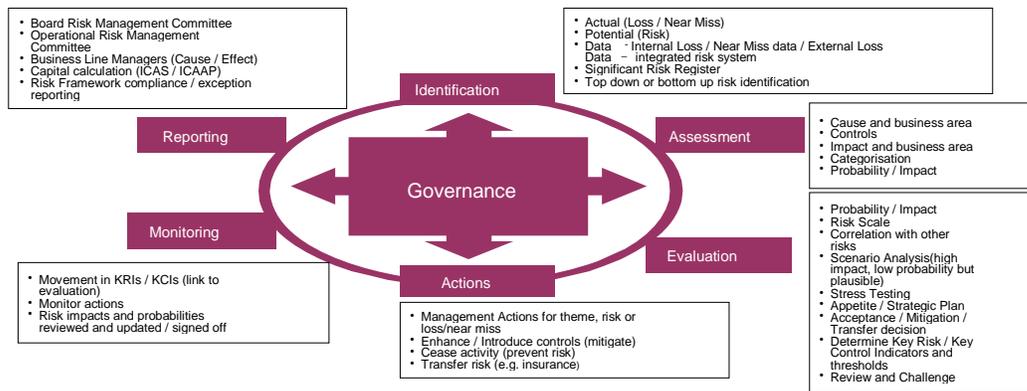
The CFS Risk Management Policy sets out the above in detail including:

- risk management vision, strategy, and principles;
- risk governance structure, model and target operating model (TOM);
- risk roles, accountabilities and responsibilities;
- risk categorisations and definitions;
- risk appetite (definition and application);
- risk identification, evaluation, monitoring assessment and control;
- significant risk reporting; and
- risk quantification methods and processes.

A significant amount of risk initiatives have been completed to date including:

- embedding and approving roles and responsibilities;
- continuous enhancements to the Integrated Risk System (IRS) to capture and monitor all risks across the Bank and CFS;
- improved processes to identify and quantify emerging and actual risk losses; and
- key risk indicators (KRIs) and key control indicators (KCI) to assess the adequacy of risk adjusted capital to meet risk appetite and strategic planning targets

Monitoring of all risks, the adequacy of controls and the capital required for these risks is undertaken via daily exception reporting. On a quarterly basis risk and risk appetite management information, liquidity and stress testing, and quarterly significant risk reporting are undertaken. All risks including key risk and control indicators for these risks are held on the IRS.

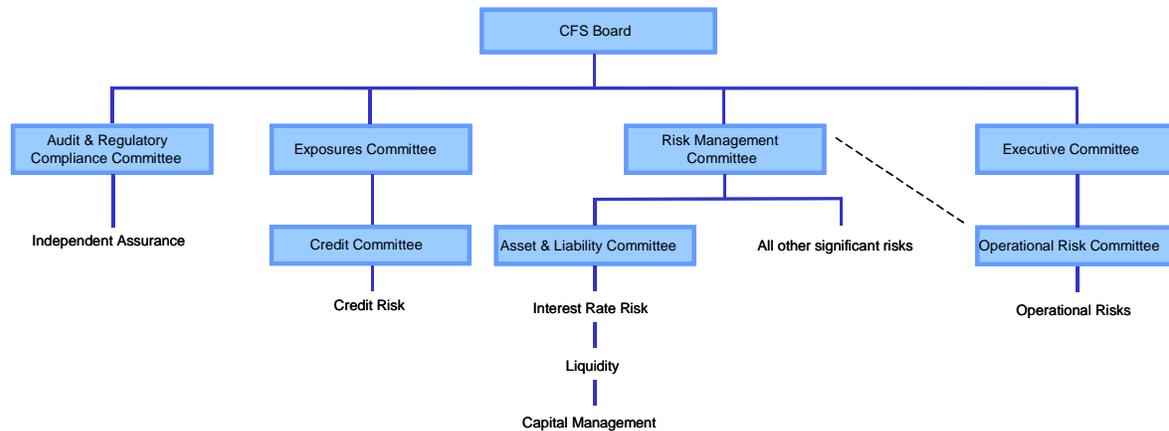


**Risk management framework**

The CFS group of companies including Co-operative Financial Services Limited, Co-operative Insurance Society Limited, CIS General Insurance Limited and Co-operative Bank p.l.c. have a common Board composition.

The Board sub-committees also work on a CFS-wide basis, with the same committee structure supporting each Board within the CFS group.

The CFS Board has ultimate responsibility for the management of all risks across CFS.



The Board is responsible for approving the Bank's strategy, its principal markets and the level of acceptable risks articulated through its statement of risk appetite. It is also responsible for overall corporate governance which includes ensuring that there is an adequate system of risk management and that the level of capital held is consistent with the risk profile of the business.

The Board has established Board Committees and Senior Management Committees to administer, oversee and challenge the risk management process, identifying the key risks facing the business and assessing the effectiveness of planned management actions. Specific Board authority has been delegated to Board Committees and the Chief Executive who may, in turn, delegate elements of his discretions to appropriate Executive Directors and their senior line managers.

### **CFS Board Committees**

The CFS Board delegates authority to the CFS Risk Management Committee (RMC) (Senior Board Committee) for monitoring compliance with the Board-approved risk appetite statements. This includes:

- setting limits for individual types of risk; and
- approving (at least annually) and monitoring compliance with risk policies and delegated levels of authority.

**CFS Risk Management Committee (RMC):** this committee is responsible for review and challenge of the adequacy of risk management activities and portfolio exposures across CFS including:

- operation of mandates and limits;
- risk management policy approval;
- risk management information reporting and integrity of relevant data;
- risks adequately identified and measured;
- risk and portfolio exposure management strategy; and
- adequacy of the risk mitigation process.

**CFS Audit & Regulatory Compliance Committee (ARCC):** this committee provides independent oversight in relation to financial reporting; internal control and risk management; regulatory compliance; external audit and internal audit.

**CFS Exposures Committee:** this committee ensures that non-executive directors are actively involved in major credit decisions (including sanctioning large counterparty transactions) and monitoring large exposures.

**CFS Executive Committee:** this committee manages the business in line with the board risk appetite statement. It also maintains oversight of risk management processes and management information.

### **CFS risk management sub-committees**

**CFS Risk Management Working Group:** this committee is a designated committee of the Board which is chaired by a member of the Executive, and has authority for reviewing, challenging, and approving ICAS, IRB and ICAAP models, independent validation of models, and Pillar 3 disclosures. The Committee also oversees the development and implementation of stress testing and risk appetite across CFS.

**CFS Shareholder Asset & Liability Committee (ALCO):** this committee is a designated committee of the Board which is chaired by the Chief Executive. It is primarily responsible for overseeing the management of interest rate, market, liquidity and funding risks and to advise on the composition and sourcing of adequate capital.

**CFS Credit Committee:** this committee is chaired by the Director of Banking Risk and Capital Management. The Chair has delegated authority for approving credit facilities within approved strategies and delegated authorities.

**CFS Operational Risk Committee:** this committee is chaired by the Head of Operational Risk. It monitors significant operational risks and controls as well as the management actions taken to mitigate them to an acceptable level and/or transfer them. This includes business continuity arrangements and insurance cover to protect the CFS business. Each division within CFS is represented on the committee.

There is also a framework of sector specific management committees reporting up to the CFS management and Board Committees, responsible for risk and capital management, enhancing and implementing changes in business strategy, optimising performance, adherence to and setting of policy, and development of management information and training.

#### *Bank Significant Risks*

The Bank's significant risks arise in four broad categories:

- credit risk
- market risk
- liquidity risk
- operational risk

#### *Credit risk*

Credit risk arises from the possibility of customers and counterparties failing to meet their obligations to the Bank.

Credit risk is an integral part of many of our business activities and is inherent in traditional banking products – loans, commitments to lend and contingent liabilities, such as letters of credit – and in "traded products" – derivative contracts such as forwards, swaps and options, repurchase agreements, and securities borrowing and lending transactions.

The Credit Risk Management Policies are approved by the RMC annually and are the responsibility of the Director of Banking Risk and Capital Management. The policies determine the criteria for the management of personal, corporate and wholesale market exposures and credit management standards, including country, sector and counterparty limits, along with delegated authorities.

All authority to take credit risk derives from the CFS Board. This is delegated through authorities to individuals or committees via the CEO.

The level of credit risk authority delegated to holders depends upon their seniority and experience, varying according to the quality of the counterparty and any associated security or collateral held.

The Credit Risk Control Unit (CRCU) function provides an independent view of credit risk in order to support the business management functions decision making. CRCU does not directly benefit from decisions to extend credit. The CRCU provides risk oversight by virtue of its independence from the Business Management functions. The CRCU function is in house and is not outsourced.

CRCU performs the following tasks and responsibilities related to its role:

- Design and implementation of risk assessment and rating systems;
- Testing, validating, documenting and monitoring, of risk assessment and rating systems;
- Production and analysis of summary reports of risk assessment and rating systems;
- Maintenance of policy and procedures and upkeep of various returns and reporting requirements;
- Monitoring system decision overrides and exceptions;
- Ongoing review and update to models used in the risk assessment process;
- Benchmarking against third-party data and vendor model sources;
- Reviewing the risk criteria to ensure they remain predictive of risk;
- Independent validation;
- Production of management information.

The Bank's Personal Lending Policy is to establish credit criteria which determine the optimum balance between volume growth (generating higher income) and higher bad debts, so as to maximise overall profitability. The Risk Management Committee receives regular reports on the performance of the portfolio.

The majority of retail credit risk related decisions are based on well founded and robust decision mechanisms designed to segregate customers into risk categories. There are a suite of bespoke externally developed application and behavioural scorecards derived from sound historic data. It is the responsibility of the CRCU to design, select, implement, maintain and monitor these systems. All such systems conform with those principles laid down in the BIPRU regulations and the Capital Requirements Directive (CRD).

Application scorecards are used to determine lending decisions to those customers with no existing relationship with the Bank (primarily accept/reject, price and loan/limit amount). They include both demographic, financial and credit reference agency data and form part of an automated application decision process.

Behavioural scorecards are used to make existing account lending decisions including credit limit increases/decreases, pricing, further advances, authorisation decisions, collections activity and card reissue. They are applied at customer and account level, include both account and customer level data and credit reference agency data, refreshed monthly, and are applied through the use of automated decision systems, Probe SM and Triad.

Strategies in relation to the use of all automated decision systems are set to ensure that the outcomes conform with the Bank's appetite for risk and meet minimum targets for Return on Capital. Ongoing evaluation of the effectiveness of individual strategies is undertaken, including the use of Champion and Challenger testing.

The Bank's Corporate Sector Policy is to maintain a broad sectoral spread of exposures which reflect the Bank's areas of expertise. Credit exposures to corporate and business banking customers are assessed individually. The quality of the overall portfolio is monitored, using a credit grading system calibrated to expected loss. All aspects of credit management are controlled centrally. The Exposures Committee receives regular reports on new facilities and changes in facilities, sector exposures, bad debt provisions and the realisation of problem loans.

Larger corporate facilities are sanctioned by the Board's Exposures Committee who also review, each month, facilities granted within the Chief Executive's discretion.

Teams of risk managers and the Credit Risk Control Unit (CRCU) framework support the Treasury business group.

Wholesale markets credit risk framework takes a holistic approach to risk management with, at its centre, a credit risk policy which governs the types of exposure the business can take and sets concentration parameters.

To complement this, individual authority is delegated in terms of Internal Rating Grade (IRG) and associated Probability of Default (PD) to approve limits to individual counterparties within the parameters established by the credit risk policy.

Limits on exposures to counterparties are principally (95% of all approvals) established from Internal Rating Grades 1-10 (10 being default) and associated PDs to Total Potential Limits (TPL) using a Limit matrix.

#### *scope and nature of risk reporting and measurement systems*

The following general approach has been applied to the design and development of the risk reporting framework. All management information (MI) is sourced from common, verified data sources thus presenting an accurate and consistent view of risk profile and performance across the organisation. The MI is produced at varying degrees of granularity depending on the target level.

1. Board MI is generally at portfolio level (e.g. retail, corporate, wholesale) and focuses on exceptions through the use of RAG indicators.
2. RMC MI is generally at rating system and product level, however, to manage the volume of MI requiring review at any point in time, individual MI packs will provide selected product 'spotlight' sections focusing in depth on one particular product.
3. CRCU MI drills down to considerably greater depth, examples being by risk pool, campaign or key characteristic.

For all stakeholders, where appropriate and/or on demand, drill down to a more detailed level is provided to support the diagnosis of any anomalies or issues arising from the more summarised data. Selected elements of the MI at all levels may be tabled for discussion and review at the Business Management Sector Forums. Business Management Sector Forums act as an interface between the risk functions and the business, providing a platform for internal review and challenge of significant risks.

### **Board MI**

The Board MI pack is a high-level summary of the information presented in the RMC pack. The MI is reported for 'Total Book', 'Retail Portfolio', 'Corporate Portfolio' and 'Wholesale Portfolio'. The key themes are:

- Capital / Risk weighted exposure amount (RWEA) summary – providing a profile of minimum capital requirement, RWEA's, expected loss and exposure across the Basel asset classes.
- Risk Appetite – presenting current position with respect to each element of the Risk Appetite statement.
- Risk Profile – represented through a combination of trends in IRB parameters (probability of default [PD], loss given default [LGD] and exposure at default [EAD]), sector cap utilisation and distribution of exposures across risk pools.
- Bad Debt – summarising period and year to date performance against budget.

For every item of information presented, a RAG indicator provides an indication of its status with respect to pre-defined tolerance levels.

### **RMC MI**

The RMC MI pack follows the same broad structure as the Board MI pack with the following additions:

- an overview of key changes to credit risk criteria to provide context for identified changes in risk profile.
- a backdrop of key economic trends pertaining to the Bank's credit risk experience.
- a combination of trend and 'point-in-time' information to illustrate both the current position and how each portfolio is changing.

### **CRCU MI**

The CRCU MI is produced at timely intervals, with different MI produced for each business area. This MI drills down to considerably greater depth than the Executive packs; reports include:

- key trends in both Basel II models and underlying scorecards and systems, demonstrating how each portfolio is changing and whether these changes remain within pre-set tolerances.
- pool migration for the appropriate measures, with movements demonstrated through transition matrices.
- model forecasting accuracy, including actual default rates monitored against forecast PD and pre-calculated confidence intervals.
- key characteristics monitored with trends analysed and 'point-in-time' values compared to development/validation samples.
- analysis of the relationship between expected loss, provisioning and forecast bad debt levels, to a low level of granularity.

RAG indicators provided where appropriate, and any exceptions highlighted and escalated as necessary.

## Sector Specific MI

MI for the wholesale sector is prepared for the Corporate & Markets & Shareholder Capital & Interest Rate Risk Assurance Meeting (CSAM) and Financial Risk Group (FRG) on a monthly basis, as part of the Business Management Sector Forums. Reports include:

- early warning signals
- risk concentrations and investment portfolio analysis
- expected loss values versus limit
- trend analysis
- stress scenarios

The identification of any exceptions and agreed mitigating action are included should they occur. Reporting is at sub-portfolio level.

### *Market risk*

Market risk arises from the effect of changes in market prices of financial instruments, on income derived from the structure of the balance sheet, execution of customer and inter-bank business and proprietary trading. The majority of the risk arises from changes in interest rates as the Bank does not trade in equities or commodities and has limited foreign currency activities.

Interest Rate Risk Policy Statements, approved by the CFS Risk Management Committee on behalf of the Board, specify the scope of the Bank's wholesale market activity, market risk limits and delegated authorities. The policy is executed by the Bank's ALCO. ALCO meets monthly and its prime task is to assess the interest rate risk inherent in the maturity and repricing characteristics of the Bank's assets and liabilities. It sets limits within which Treasury and the CFS' Shareholder Capital & Interest Rate Risk department manages the effect of interest rate changes on the Bank's overall net interest income. Treasury are responsible for interest rate risk management for Treasury and CFS' Shareholder Capital & Interest Rate Risk department manage interest rate risk within the rest of the Bank. The principal analytical techniques involve assessing the impact of different interest rate scenarios and changes in balances over various time periods.

### *Treasury interest rate risk*

Treasury executes funding and hedging transactions with the wholesale markets on behalf of the Bank and its customers. It also generates incremental income from proprietary trading within strict risk limits. There are two prime measures of risk supplemented by additional controls such as maturity and stop loss limits. Risk units express the various re-pricing and maturity mismatches as a common unit of measurement. Value at Risk (VaR) measures the daily maximum potential gain or loss due to recent market volatility to a statistical confidence level of 95% and a one day holding period. The VaR methodology has inherent limitations in that market volatility in the past may not be a reliable predictor of the future, and may not reflect the time required to hedge or dispose of the position, hence VaR is not used by the Bank as the sole measure of risk.

The Board receive quarterly reports on the management of balance sheet risk and, each month, ALCO reviews the balance sheet risk position and the utilisation of wholesale market risk limits.

### *Trading value at risk:*

At 12 January 2008, total Treasury VaR of **£0.5million** (2006 – £1.4million) represents the maximum potential daily gain or loss in market rates within a confidence level of 95% based on recent market performance. The average, highest and lowest VaR, as calculated on a daily basis, for the accounting year ended 12 January 2008 were **£0.7million** (2006 – £0.6million), **£1.4million** (2006 – £1.4million) and **£0.4 million** (2006 – £0.3million).

The Bank does not have FSA VaR model permission and VaR is not used in regulatory reporting. The maturity method is used for reporting general interest rate risk for prudential reporting purposes.

#### *PV01*

PV01 is used as an additional risk measure to supplement VaR and is calculated on a daily basis and measured against limits for the Treasury Portfolio. This risk measure is based upon a full revaluation and indicates the change in value of a fixed income product, or portfolio, given a 1 basis point movement in interest rates. A number of different scenarios including +/- 10bp and 100bp are also calculated, PV100 is provided below.

#### *PV100*

Instruments are decomposed into applicable term cash flows and the present value of each position is derived using zero coupon discount factors. A further full revaluation is performed following a 100 basis point parallel shift across the entire yield curve. The sensitivity result is calculated as the movement between the base and 100 basis point shift valuations.

The table below illustrates the change in valuation on a fixed income portfolio experienced given a 1% increase and decrease in interest rates for Treasury, representing Treasury Banking Book and Trading Book combined.

|                       | <b>1% increase in interest rates</b> |        | <b>1% decrease in interest rates</b> |      |
|-----------------------|--------------------------------------|--------|--------------------------------------|------|
|                       | 2007                                 | 2006   | 2007                                 | 2006 |
| At reporting date     | (4.4)                                | (16.1) | 4.4                                  | 17.2 |
| Average in the period | (11.8)                               | (12.9) | 14.1                                 | 17.7 |
| Maximum               | (16.9)                               | (17.9) | 21.4                                 | 25.8 |
| Minimum               | (4.4)                                | (7.5)  | 4.4                                  | 11.7 |

At the reporting date the PV100 relating to the Banking Book within Treasury was (£4.4million) for a 1% increase in interest rates and £4.4million for 1% decrease in interest rates. Analysed by currency the year end position for Treasury Banking book represents, for 1% increase in interest rates (£5.2million) GBP sterling, £0.4million Euros, £0.4million US\$ and for 1% decrease in interest rates £5.2million GBP sterling, (£0.4million) Euros, (£0.4million) US\$.

#### *Currency risk*

The Bank's Treasury foreign exchange activities are primarily:

- Providing a service in meeting the foreign exchange requirements of customers;
- Maintaining liquidity in euros and dollars by raising funds and investing these to generate a return; and
- Performing limited intra-day trading and overnight positioning in major currencies to generate incremental income.

At 12 January 2008 the Group's open position was £2.9million (2006 – £1.2million) representing a potential loss of £0.1million given a 3% depreciation in sterling (2006 – loss of £0.04million given a 3% appreciation in sterling). The Group's open position is monitored against limits in addition to limits in place on individual currencies.

#### *Non Treasury interest rate risk*

The Bank (excluding Treasury) uses an earnings approach to managing interest rate risk, focusing in detail on the sensitivity of assumed changes in interest rates on net interest income for one year. Higher level analysis is performed for subsequent years. The Bank does not consider economic value an appropriate measure for interest rate risk in the non-trading book (excluding Treasury).

ALCO, the Board sub-committee responsible for monitoring compliance with interest rate risk limits, meets on a monthly basis. Non-trading interest rate risk is split between Treasury and the rest of the Bank. The following describes the non-trading portfolios excluding Treasury. These positions are managed by Shareholder Capital and Interest Rate Risk (SCIRR). All interest rate risk is centralised into SCIRR using appropriate transfer pricing rates.

Interest rate risk is primarily managed through assessing the sensitivity of the Bank's non-trading book to standard and non-standard interest rate scenarios. The Board has established a limit of a variance of less than 2% of net interest income over the next twelve months to be at risk to a 100bp rise and fall in all yield curve rates, assuming the external rate on all retail products changes to maintain constant margins.

The management of interest rate risk is supplemented by the use of gap reports, which are based on defined time periods. ALCO set guidance limits around the gap, principally that the sum of positions maturing in greater than twelve months and non-sensitive balances (includes non-maturity deposits) is no more than £350m.

Risk limits are formally calculated at each month end. Interest rate risk and effectiveness of hedging is monitored daily using gap positions, incorporating new business requirements. Draw down risk, in particular for fixed rate mortgages, is managed through weekly balance sheet meetings. SCIRR undertake hedges for interest rate risk using derivative instruments and investment securities which are executed via Treasury to wholesale markets, and loans and deposits which are executed internally with Treasury.

*Interest rate risk in the non trading book*

For Basel II, the exposure to interest rate risk in the retail non-trading book is measured using the Bank's extreme rate scenario (used for the stress of Pillar I) across all yield curve rates. The calculation for interest rate risk assumes external rates on variable rate retail products and new fixed rate business changes by varying amounts based on the Bank's future view of pricing and margins. Balances are based on expected balance sheet growth over the next 3 years. As existing fixed rate business matures, marginal business is added based on balance sheet growth, pricing and behavioural maturity assumptions.

Prepayment risk for fixed rate personal lending is modelled based on past behaviour observed by the Bank. Those non-maturity deposits which are non-interest bearing are separated into a stable 'core' element, based on a long run average, and the residual balance, which can fluctuate. In the gap report, the residual balance and interest bearing non-maturity deposits are deemed to re-price or mature within 1 month. The 'core' non-maturity deposits are within the non-sensitive balance on the gap report, along with non-dated capital and other non-sensitive balances. ALCO sets guidance around the treatment of non-sensitive balances, to reinvest evenly in fixed rate assets in periods up to 5 years.

The Bank's balances excluding Treasury are wholly GBP sterling and the table below shows the estimated change in net interest income over the next 12 month period to a 1% shock in interest rates across the yield curve. The percentage change in forecast net interest income (NII) as a proportion of cumulative net interest income for the next 12 months is shown.

|                         | 100bp parallel increase | 100bp parallel decrease |
|-------------------------|-------------------------|-------------------------|
| <b>2007</b>             |                         |                         |
| At 12 January 2008      | (0.6%)                  | 0.5%                    |
| Average during the year | (0.9%)                  | 0.9%                    |
| Maximum during the year | (1.3%)                  | 1.4%                    |
| Minimum during the year | (0.6%)                  | 0.5%                    |
| <b>2006</b>             |                         |                         |
| At 13 January 2007      | (0.9%)                  | 0.9%                    |
| Average during the year | (0.5%)                  | 0.3%                    |
| Maximum during the year | (0.8%)                  | 0.8%                    |
| Minimum during the year | (0.1%)                  | (0.5%)                  |

*Liquidity Risk*

Liquidity risk arises from the timing of cash flows generated from the Group's assets, liabilities and off-balance sheet instruments. The Group's liquidity management policies are reviewed and approved annually by the Risk Management Committee and compliance reviewed monthly by ALCO.

Liquidity risk arising from the structure of the balance sheet (structural liquidity) is managed to policies developed by ALCO. The primary policy is to fund 85% of retail assets by retail deposits to ensure there is no over reliance on wholesale funding. The group's structural liquidity risk management is therefore retail based and is dependent on behavioural analysis of both customer demand deposit and loan drawdown profiles by product category based on experience over the last eight years. The behaviour of retail products is reviewed by ALCO on a quarterly basis. The policy is to hold sufficient marketable assets for the worst gross monthly outflow (excluding offsetting inflows) experienced on a gross product basis.

In addition the Group has maturity mismatch limits to control the exposure to longer term mismatches.

Day-to-day cash flows (tactical liquidity) is managed by Treasury within guidelines laid down by ALCO and in accordance with the standards established for all banks by banking regulators. Short-term liquidity standards, including holding a portfolio of liquid assets, ensure the Group can always meet its immediate obligations without recourse to the wholesale markets (for at least the next five working days). The group undertakes tactical liquidity stress tests, assuming restricted access to wholesale market funding, with the aim of having sufficient liquidity for six months non-access.

The Group is dependent on marketable assets, the asset quality of these is controlled via credit limits. Concentration limits are set by issuer name and holding per bond to ensure diversity of assets.

#### *Operational Risk*

Defined within CFS as the risk of loss resulting from inadequate or failed internal processes, people and systems or external events. This encompasses the effectiveness of risk management techniques and controls to minimise these losses.

#### **Objectives**

The objective for operational risk management is to establish a consistent framework across CFS that delivers best-practice operational risk management to provide a clear understanding of the operational risks across our business areas; proactive management of risks to improve efficiency, prevent incidents occurring, and hence minimise unexpected losses; avoiding overlaps in activity and ensuring effective controls; and understanding and managing the relationship between risk and reward.

#### **Operational risk framework**

Following agreement of the Target Operating Framework for risk management within CFS in 2006, 2007 has seen continued advancement and embedding of operational risk techniques across the organisation. The framework is compliant with the Basel Standardised Approach for operational risk.

CFS has a dedicated central operational risk team who are responsible for the operational risk framework, provide support to colleagues and the organisation and who operate as a second line of defence function.

Operational risks are identified, managed and mitigated through ongoing risk management practices including risk assessments; formal internal control procedures; training; segregation of duties; delegated authorities; and contingency planning.

Operational risks are formally reviewed on a regular basis. Significant Operational Risks are regularly reported to Executive Directors, a formal management Operational Risk Committee, and the Risk Management Committee (a formal Board sub-committee). These meet regularly to monitor the suitability of the risk management framework and management of significant risks within CFS.

Developments during 2007 include:

- Launch of an Integrated Risk System to facilitate timely identification, assessment, management, monitoring and reporting of all risk types.
- Development of an operational risk quantification approach to provide a means of translating operational risk exposures into capital requirements.

The framework is subject to regular Internal Audit review in line with CFS' rolling risk-based audit plan.

### **Business Continuity Framework**

The Business Continuity Framework is included within the operational risk framework and consists of a number of components. These are summarised as follows:

- crisis management and incident response capability – through formally established and trained teams.
- business continuity capability – identification of critical areas and business priorities, and the structured development, implementation and testing of continuity planning.

### **Corporate insurance programme**

CFS has a structured insurance programme designed to transfer the impact of specific operational risks and provide a level of protection in line with the appetite of the organisation and industry best practice. For example:

- insurance of CFS' buildings and assets.
- protection of revenue in the event of business interruption.
- protection against impacts of financial crime.

### **Responsibilities**

Whilst the Board is ultimately responsible for operational risks across the Bank and the wider CFS organisation, this is delegated to the Chief Executive and Executive Directors within CFS who are responsible for controlling the operational risks in their direct areas of accountability and for compliance with CFS policies.

Each Executive has a nominated divisional risk owner who is a member of the Operational Risk Committee and is responsible for ensuring the consistent application of the operational risk framework in their division. Divisional risk owners are supported from within their business division.

The central operational risk team facilitate the identification, management and reporting of operational risks across CFS in line with regulatory and business requirements; manage the CFS corporate insurance programme and support development and testing of business continuity arrangements.

### **Operational risk themes**

CFS categorises operational risk into a number of distinct themes for internal management, monitoring and reporting. Key operational risks for CFS are:

#### **Financial crime**

This relates to the effectiveness of controls to minimise financial losses arising from the fraudulent activities of employees, customers and third parties.

The organisation recognises the increasing concerns of customers, regulatory authorities and the media in respect of the loss or theft of confidential customer information. It has responded pro-actively to these concerns by reviewing, in detail, its arrangements for the security of confidential customer files. Whilst these were found to be robust, enhancements to provide additional customer protection continue to be assessed and implemented where appropriate.

#### **Compliance (with regulatory and legal requirements)**

As a regulated business, CFS places great emphasis on maintaining compliance with our regulatory and legal obligations by:

- regulatory - supporting CFS's business objectives through the provision of advice, and the recommendation of solutions where appropriate, in respect of the regulatory implications of business developments, and assisting the business in assessing and addressing new and enhanced regulatory expectations. This is supported by appropriate and effective monitoring, aimed at influencing the business to mitigate or eliminate regulatory risk and demonstrate that we are meeting our regulatory obligations.
- legal - seeking to pro-actively manage legal issues in relation to commercial, contractual, employment and litigation activities.

### **Employee practices/workplace safety**

It is acknowledged that our people are a key asset. The financial services sector as an industry is reliant on its people and the skills, knowledge and experience they provide. The risk of failure to maintain employee relations, or provide a safe environment in line with legislative requirements and with the ethical, diversity and discrimination rules is managed with support from our Human Resources department.

### **Property & facilities**

The risk of unforeseen operational disruption caused through the denial of access to major occupancies or other interruptions to business operations is managed through our business continuity framework and corporate insurance programme.

### **Customer service**

As a financial services business, providing fair and high-quality customer service is a must. Controls that could prevent such risks occurring are regularly assessed and monitored. These include customer service levels, getting things right first time, availability of customer facing systems, together with trained and skilled resource to service customer demand.

### **Suppliers**

CFS looks to source cost-effective and quality services, both internal and external to the Co-operative Group. Given the reliance on our business partners who provide services and products, a major or prolonged disruption to the supply of their services and products would impact on CFS. Risks are monitored relating to the effectiveness of contracts and relationship management to ensure that CFS' expected performance levels are achieved.

### **Major IT systems/major payments systems failure**

Financial service providers have a heavy reliance on the availability and performance of underlying systems and applications, and the processes and frameworks which underpin these. Consequently the effectiveness of controls over the IT systems and infrastructure supporting IT processes and controls, major payment systems and clearing and business processes are monitored on a regular basis.

### **Change management**

Given the integration of The Co-operative Bank and the Co-operative Insurance Society businesses, and the ongoing business transformation to integrate and improve the service offerings, competitiveness and efficiency of CFS in our journey to become the UK's most admired financial services business, there is a substantial change programme in place. In order to ensure delivery to time, cost or quality, and minimise risks arising from this there is a dedicated change risk & governance team in place.

## Scope of application

The disclosure requirements of Pillar 3 as defined by BIPRU 11 are based on the Co-operative Bank Group. All subsidiaries of the Co-operative Bank are fully consolidated. There is no material, practical or legal impediment to prompt transfer of capital resources or repayment of liabilities amongst the parent undertaking and its subsidiaries.

The Bank also reports on a solo-consolidated basis. The subsidiaries excluded from the solo-consolidation are Unity Trust Bank Limited and its subsidiaries, Co-operative Bank Financial Advisers Limited and Co-operative Commercial Limited.

The FSA has granted approval for the use of IRB approach, effective from 1<sup>st</sup> January 2008. The scope of IRB permission is identified in the table below. The specialised lending portfolios are analysed using a slotting model. A number of portfolios are on a 3 year rollout to Foundation IRB approach, these include Corporates with total assets less than £350k, public sector entities (PSEs), housing associations and leveraged finance. The areas falling outside the scope of the IRB permission and remaining on standardised approach under immaterial portfolios include Unity Trust Bank, asset finance and equity shares.

The standardised approach (TSA) is used to calculate the operational risk capital requirement.

| <b>Business area</b> | <b>Portfolio</b>                             | <b>IRB exposure classes</b>                    | <b>CRD approach</b>                                    |
|----------------------|--|--|--|
| Retail               | Mortgages                                    | Retail – residential mortgages                 | Retail IRB   |
|                      | Loans  | Retail - other                                 | Retail IRB   |
|                      | Credit cards, overdrafts                     | Retail – qualifying revolving retail exposures | Retail IRB   |
| Corporate            | Corporate (Total assets >£350k)              | Corporates                                     | Foundation IRB   |
|                      | Corporate (Total assets <£350k)              | Corporates/Retail SME                          | 3 year rollout to Foundation IRB                       |
|                      | PSE  | Central governments and central banks          | 3 year rollout to Foundation IRB                       |
|                      | Housing associations                         | Corporates                                     | 3 year rollout to Foundation IRB                       |
|                      | Leveraged finance                            | Corporates                                     | 3 year rollout to Foundation IRB                       |
|                      | Specialised lending                          | Corporates                                     | Foundation IRB (slotting approach)                     |
|                      | Asset Finance                                | Corporates                                     | Standardised (immaterial portfolio)                    |
| Treasury             | Central governments and central banks        | Central governments and central banks          | Foundation IRB   |
|                      | Financial institutions                       | Institutions                                   | Foundation IRB   |
|                      | Structured investments/ Credit trading funds | Corporates                                     | Foundation IRB (Securitisation ratings based Approach) |
|                      |  |  | Standardised (immaterial Portfolio)                    |
| Other                | Equity shares                                | Equity shares                                  | Standardised (immaterial Portfolio)                    |
| Unity Trust Bank     |  | Institutions                                   | Standardised (immaterial portfolio)                    |
|                      |  | Corporates                                     | Standardised (immaterial portfolio)                    |

## Capital resources

|   | <b>2007</b>  |
|---|--------------|
|   | <b>£'m</b>   |
| <b>Core tier one capital</b>                    |              |
| Permanent share capital                         | 55.0         |
| Retained earnings                               | 652.6        |
| Share premium account                           | 8.8          |
| Core tier one capital                           | <u>716.4</u> |
| Perpetual non cumulative preference shares      | 60.0         |
| <b>Total tier one capital before deductions</b> | <b>776.4</b> |
| Intangible assets                               | (5.2)        |
| Expected loss shortfall                         | (52.4)       |
| Securitisation positions                        | (15.7)       |
| <b>Total tier one capital after deductions</b>  | <b>703.1</b> |
| <b>Tier two capital</b>                         |              |
| Long term subordinated debt                     | 298.1        |
| <b>Total tier two capital before deductions</b> | <b>298.1</b> |
| Expected loss shortfall                         | (52.4)       |
| Securitisation positions                        | (15.7)       |
| <b>Total tier two capital after deductions</b>  | <b>230.0</b> |
| <b>Total Capital Resources</b>                  | <b>933.1</b> |

### *Summary conditions on the terms and conditions of capital resources*

#### Tier One Capital

Tier one capital includes share capital, retained earnings, and perpetual non cumulative preference shares. The preference shares carry the right to a fixed non cumulative preferential dividend at a rate of 9.25%, payable 31 May and 30 November. Retained earnings exclude gains or losses on cashflow hedges and available-for-sale assets.

#### Tier Two Capital

The tier two capital includes 2 subordinated debt issues, £150m Step Up Callable Subordinated Notes 2019 and £150m Callable Subordinated Notes 2021 fixed rate until 2016, then moving to floating rate. The rights of repayment to the holders of subordinated debt are subordinated to the claims of depositors and other creditors of the Bank.

More information on these can be found in the The Co-operative Bank p.l.c. financial statements.

#### Deductions

Intangible assets are deducted from tier one capital, this represents capitalised software.

Under the IRB approach a deduction is made for expected losses in excess of impairment provisions made on customer lending. 50% is deducted from tier one capital and 50% is deducted from tier two capital.

Securitisation positions of £31.4m, relating to Structured Investments below Moody's rating Ba3 or equivalent are deducted from capital. This is split; 50% deducted from tier one capital and 50% deducted from tier two capital.

## Assessing Adequacy of Internal Capital

The Bank's approach to assessing adequacy of its internal capital to support current and future requirements is conducted via the Bank's Internal Capital Adequacy Assessment Process (ICAAP). The ICAAP has been constructed in two stages:

Stage 1 - initially assesses the capital adequacy of the Bank's Pillar 1 charge (credit, market and operational risks), and analyses and quantifies, where appropriate, additional Pillar 2 risks (including operational risk add-on, concentration risk, pension scheme, interest rate risk in the banking book (IRRBB) and trading book, liquidity risk, reputational risk, and contagion risk).

Stage 2 - models the Bank's three-year strategic plan earnings and balance sheet in order to ensure that its Pillar 1 and Pillar 2 capital requirements are met during a severe economic recession, over the plan period, utilising appropriate management actions, but without recourse to support from CFS or the Co-operative Group, except for specific event risks.

The Bank's most material risk is credit risk, making up more than 70% of the Basel II risk weighted exposure amounts (RWEA) before business risk. On this basis, the Bank's principal stress in determining its Pillar 2 capital is that of credit quality deterioration as a result of a severe economic recession and high interest rates. Having defined the severe economic recession stress test parameters, the Bank's Pillar 2 risks are analysed to determine what additional capital the Bank needs to hold in such prevailing economic conditions.

Management actions that the Bank will take to respond to the severe economic stress and their effect on the Bank's Individual Capital Assessment (ICA), capital planning and liquidity position are included within the model and reported in the ICAAP.

## Pillar 1 capital requirement

The table below analyses the Pillar 1 capital requirement by approach and exposure class:

|   | <b>Capital requirement</b> |
|---|----------------------------|
|   | <b>£'m</b>                 |
| <b><i>IRB exposure class</i></b>                        |                            |
| Central Government and Central Bank                     | 0.2                        |
| Institutions  | 39.2                       |
| Corporates  | 61.8                       |
| Securitisations   | 2.8                        |
| Retail exposures secured by real estate collateral      | 25.5                       |
| Qualifying revolving                                    | 91.1                       |
| Other Retail exposures                                  | 62.4                       |
| <b><i>Total IRB</i></b>                                 | <b>283.0</b>               |
| <b><i>Specialised lending</i></b>                       | <b>180.1</b>               |
| <b><i>Standardised exposure class</i></b>               |                            |
| Regional Governments or Local Authorities               | 3.6                        |
| Administrative Bodies and Non Commercial                | 4.0                        |
| Institutions  | 7.7                        |
| Corporates  | 82.8                       |
| Retail  | 2.6                        |
| Past due  | 1.4                        |
| Other items   | 16.2                       |
| <b><i>Total standardised</i></b>                        | <b>118.3</b>               |
| <b><i>Total credit risk capital requirement</i></b>     | <b>581.4</b>               |
| <b>Trading Book minimum capital requirements</b>        |                            |
| Interest rate position risk requirement                 | 2.2                        |
| Counterparty risk capital component                     | 0.1                        |
| In respect of all business activities                   |                            |
| Foreign currency position risk requirement              | 0.1                        |
| <b><i>Trading Book minimum capital requirements</i></b> | <b>2.4</b>                 |
| <b><i>Operational risk capital requirement</i></b>      | <b>68.6</b>                |
| <b><i>Total Pillar 1 capital requirement</i></b>        | <b>652.4</b>               |

Other items within the standardised approach include equity shares with a balance sheet value of less than £9million representing 2 separate investments. It is subject to the standardised approach as an immaterial portfolio and not considered material for Pillar 3 disclosure purposes relating to equity shares.

## Credit Risk Analysis

Credit risk exposure data in the tables below is equivalent to Exposure at Default (EAD) under the IRB approach or exposure post credit conversion factor net of individual provisions for the standardised approach.

### *Analysis of exposure (EAD) by residual maturity*

The following table represents the Bank's exposure value (equivalent to EAD) relating to both on and off balance sheet exposures including commitments analysed by approach, exposure class and residual maturity. Analysis of average exposure is also provided.

| Exposure class                            | Repay on demand | Up to 1 yr     | 1-5yrs         | 5-10yrs        | 10-20yrs       | Over 20yrs     | Total Exp       | Average Exp     |
|---|-----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|
| <b>IRB</b>                                |                 |                |                |                |                |                |                 |                 |
| Central Government and Central Bank       | -               | 268.6          | 69.8           | 8.4            | -              | -              | 346.8           | 186.9           |
| Institutions                              | -               | 2,291.8        | 799.1          | 38.2           | 1.1            | 1.4            | 3,131.6         | 3,426.7         |
| Corporates                                | -               | 656.6          | 360.6          | 109.0          | 66.6           | 0.3            | 1,193.1         | 1,347.6         |
| Retail mortgages                          | -               | 16.1           | 135.6          | 459.5          | 1,337.3        | 1,570.3        | 3,518.8         | 3,382.1         |
| Qualifying revolving                      | 2,675.2         | -              | -              | -              | -              | -              | 2,675.2         | 2,843.7         |
| Other Retail exposures                    | 37.4            | 33.5           | 571.5          | 220.6          | -              | -              | 863.0           | 867.0           |
| Securitisation positions                  | -               | -              | 25.2           | 19.6           | -              | -              | 44.8            | 90.4            |
| <b>Total IRB</b>                          | <b>2,712.6</b>  | <b>3,266.6</b> | <b>1,961.8</b> | <b>855.3</b>   | <b>1,405.0</b> | <b>1,572.0</b> | <b>11,773.3</b> | <b>12,144.4</b> |
| <b>Specialised lending</b>                | <b>-</b>        | <b>783.9</b>   | <b>844.9</b>   | <b>213.3</b>   | <b>351.4</b>   | <b>362.4</b>   | <b>2,555.9</b>  | <b>2,239.7</b>  |
| <b>Standardised</b>                       |                 |                |                |                |                |                |                 |                 |
| Regional Governments or Local Authorities | -               | 5.8            | 1.3            | 1.1            | 74.4           | 7.0            | 89.6            | 94.2            |
| Administrative Bodies and Non Commercial  | 4.7             | 5.2            | 4.3            | 34.5           | 17.6           | 2.0            | 68.3            | 91.1            |
| Institutions                              | -               | 460.4          | 2.4            | 5.3            | -              | -              | 468.1           | 451.0           |
| Corporates                                | -               | 202.4          | 346.7          | 15.7           | 133.8          | 336.7          | 1,035.3         | 739.8           |
| Retail                                    | 16.3            | 1.2            | 6.7            | 11.4           | 6.8            | 0.1            | 42.5            | 45.2            |
| Past due                                  | 11.9            | -              | -              | -              | -              | -              | 11.9            | 11.3            |
| Other items                               | 497.4           | -              | -              | -              | -              | -              | 497.4           | 513.1           |
| <b>Total standardised</b>                 | <b>530.3</b>    | <b>675.0</b>   | <b>361.4</b>   | <b>68.0</b>    | <b>232.6</b>   | <b>345.8</b>   | <b>2,213.1</b>  | <b>1,945.7</b>  |
| <b>Total credit risk exposures</b>        | <b>3,242.9</b>  | <b>4,725.5</b> | <b>3,168.1</b> | <b>1,136.6</b> | <b>1,989.0</b> | <b>2,280.2</b> | <b>16,542.3</b> | <b>16,329.8</b> |

The Co-operative Bank Group is predominantly UK based, non UK lending is not material and exposures by geographic location will not be disclosed. This is in line with the segmental analysis provided in The Co-operative Bank p.l.c. financial statements

*Analysis of exposures, impaired and past due exposures, value adjustment and provisions, charges for value adjustments during the period by exposure class*

The table provides an analysis of total exposures (equivalent to EAD) relating to both on and off balance sheet exposures including commitments by approach and exposure class. Analysis is also provided showing the amount of the total exposure that is impaired and also past due but not impaired, the value adjustment and provisions raised against the impaired assets and the charges for value adjustments made in the year.

| <b>Exposure class/Industry</b>                        | <b>Total exposure</b> | <b>Of which: Impaired exposures</b> | <b>Of which: Past due exposures not impaired</b> | <b>Value adjustments and provisions held against impaired exposures</b> | <b>Charge for value adjustments in the period</b> |
|---|-----------------------|-------------------------------------|--|---|---|
| <b>IRB</b>  |                       |                                     |  |   |   |
| Central Government and Central Bank                   | 346.8                 | -                                   | -  | -   | -   |
| Institutions  | 3,131.6               | -                                   | -  | -   | -   |
| Corporates  | 1,193.1               | 53.1                                | -  | 27.4  | 11.3  |
| Retail mortgages                                      | 3,518.8               | 9.1                                 | 7.4  | 0.3   | 0.3   |
| Qualifying revolving                                  | 2,675.2               | 165.8                               | 2.1  | 99.5  | -   |
| Other Retail exposures                                | 863.0                 | 42.3                                | 0.6  | 25.4  | -   |
| Retail SME  | -                     | -                                   | -  | -   | -   |
| Securitisations                                       | 44.8                  | -                                   | -  | -   | -   |
| <b>Total IRB</b>                                      | <b>11,773.3</b>       | <b>270.4</b>                        | <b>10.1</b>                                      | <b>152.6</b>  | <b>11.6</b>                                       |
| <b>Specialised lending</b>                            | <b>2,555.9</b>        | <b>12.9</b>                         | <b>-</b>   | <b>0.6</b>  | <b>-</b>  |
| <b>Standardised Approach</b>                          |                       |                                     |  |   |   |
| Regional Governments or Local Authorities             | 89.6                  | -                                   | -  | -   | -   |
| Administrative Bodies and Non Commercial Institutions | 68.3                  | -                                   | -  | -   | -   |
| Corporates  | 468.1                 | -                                   | -  | -   | -   |
| Retail  | 1,035.3               | -                                   | -  | -   | -   |
| Past due  | 42.5                  | 0.1                                 | 0.8  | -   | -   |
| Other items   | 11.9                  | 19.4                                | -  | 7.5   | 2.3   |
| <b>Total standardised</b>                             | <b>2,213.1</b>        | <b>19.4</b>                         | <b>0.8</b>                                       | <b>7.5</b>  | <b>2.3</b>  |
| <b>Total credit risk exposures</b>                    | <b>16,542.3</b>       | <b>302.7</b>                        | <b>10.9</b>                                      | <b>160.7</b>  | <b>13.9</b>                                       |

Within the Pillar 3 disclosure value adjustments are defined as being individual impairments and provisions are defined as collective impairments in line with BBA guidance. Individual impairments are made against corporate and retail mortgage assets.

*Analysis of exposures, impaired and past due exposures, value adjustment and provisions, charges for value adjustments during the period by industry for Corporate exposure class*

The table below provides an industrial analysis for Corporate exposure class across all approaches of total exposures (equivalent to EAD) relating to both on and off balance sheet exposures including commitments by approach and exposure class. Analysis is also provided showing the amount of the total exposure that is impaired and also past due but not impaired, the value adjustment and provisions raised against the impaired assets and the charges for value adjustments made in the year.

The industry analysis used is consistent with the industrial analysis used for management information purposes within the Bank.

The analysis includes Corporate exposure class for IRB approach and standardised approach, all specialised lending exposures in addition to past due exposure class within the standardised exposure class relating to Corporates.

| <b>Exposure class/Industry</b>           | <b>Total exposure</b> | <b>Of which: Impaired exposures</b> | <b>Value adjustments and provisions held against impaired exposures</b> | <b>Charge for value adjustments in the period</b> |
|--|-----------------------|-------------------------------------|---|---|
| <b>Corporate exposure class</b>          |                       |                                     |   |   |
| Care                                     | 191.7                 | 0.2                                 | 0.2   | -   |
| Education                                | 231.6                 | -                                   | -   | -   |
| Football clubs                           | 110.0                 | 50.9                                | 27.3  | 11.4  |
| Garages/ Retail Motor vehicles           | 100.1                 | 0.3                                 | 0.2   | -   |
| Hotels/Restaurants/Clubs/Pubs            | 172.3                 | 0.6                                 | 0.2   | -   |
| Housing Associations                     | 138.8                 | -                                   | -   | -   |
| Leasing and other Financial Institutions | 161.5                 | 8.1                                 | 1.1   | -   |
| Manufacturing                            | 251.0                 | 5.3                                 | 4.6   | 1.4   |
| Professionals                            | 98.6                  | 0.7                                 | 0.1   | -   |
| Public Sector Entities                   | 27.4                  | -                                   | -   | -   |
| Property and Construction                | 2,035.7               | 13.4                                | 0.6   | -   |
| Retail Distribution                      | 372.8                 | 0.2                                 | 0.1   | 0.1   |
| Services                                 | 594.0                 | 5.3                                 | 1.1   | 0.7   |
| Transport                                | 269.6                 | 0.3                                 | -   | -   |
| Utilities                                | 14.5                  | -                                   | -   | -   |
| Other                                    | 26.6                  | 0.1                                 | -   | -   |
| <b>Total</b>                             | <b>4,796.2</b>        | <b>85.4</b>                         | <b>35.5</b>   | <b>13.6</b>                                       |
| Analysed by Approach:                    |                       |                                     |   |   |
| IRB Corporates                           | 1,193.1               | 53.1                                | 27.4  | 11.3  |
| Specialised lending                      | 2,555.9               | 12.9                                | 0.6   | -   |
| Standardised Corporates                  | 1,035.2               | -                                   | -   | -   |
| Standardised Past due                    | 11.9                  | 19.4                                | 7.5   | 2.3   |
| <b>Total</b>                             | <b>4,796.2</b>        | <b>85.4</b>                         | <b>35.5</b>   | <b>13.6</b>                                       |

#### *Impairment on loans and advances*

Loans and securities are considered impaired where it is determined that the group will be unable to collect all principal and interest outstanding, according to the contractual terms of the agreements.

The loan portfolios are reviewed on a continuous basis to assess impairment. In determining whether a bad debt provision should be recorded, judgements are made as to whether there is objective evidence that a financial asset or portfolio of financial assets is impaired as a result of loss events that occurred after recognition of the asset and prior to the balance sheet date.

#### *Collective provisions*

Personal advances are identified as impaired by taking account of the age of the debt's delinquency, by product type.

The provision is calculated by applying a percentage rate to different categories and ages of impaired debt.

The provision rates reflect the likelihood that the debt in that category/age will be written off or charged off at some point in the future. The rates are based on historical experience and current trends, incorporate the effects of discounting at the customer interest rate and are subject to regular review. The provision is the product of the rate and the spot balance for the relevant arrears bucket.

Collective provisions are also raised against identified fraud accounts.

#### *Individual provisions*

Mortgage accounts are identified as impaired by taking account of the age of the debt's delinquency on a case-by-case basis based on arrears data held within the mortgage system.

Individual provisions are also raised on a case-by-case basis for each mortgage account in arrears.

Each corporate account is assessed and allocated a 'risk grade' to enable the Bank to monitor the overall quality of its lending assets. Those of lesser quality, where the lending is potentially at risk and provisions for future loss may be required, are centrally monitored with specific management actions taken at each stage within laid down procedures and specific provisioning criteria. Provisions represent the likely net loss after realisation of any security or management actions.

#### *Past due*

Loans and securities are considered past due where the contractual interest or principal payment are in arrears, but the Group believes that impairment is not appropriate on the basis of the level of security/collateral available and the stage of collection of amounts owed to the group.

Past due exposures are not impaired and represent mortgage and unsecured retail lending balances past due but not yet impaired.

A watchlist is used for Corporate lending, this contains accounts which have not defaulted and are not necessarily in arrears but have been identified for closer management. At the year end date the value of exposures on the watchlist was £93.0m.

## Movement in value adjustments and provisions for impairment for the year ended 12 January 2008

The following table represents the movement in allowance for impairments relating to loans and advances to customers.

The provisions within the Corporate portfolio are spread over the Corporate exposure classes for foundation IRB, specialised lending and standardised approach, in addition to Retail SMEs on the standardised approach. The retail secured provisions relate to Retail exposures secured by real estate collateral exposure class on the Retail IRB approach and the retail unsecured provisions relate to exposures within the qualifying revolving and other retail exposure classes within the Retail IRB approach.

|                        | <b>Corporate</b> | <b>Retail secured</b> | <b>Retail unsecured</b> | <b>Total</b> |
|------------------------|------------------|-----------------------|-------------------------|--------------|
| Opening Balances       | 26.9             | 0.6                   | 127.8                   | 155.3        |
| Amounts written off    | (4.6)            | (0.6)                 | (87.7)                  | (92.9)       |
| Charge against profits | 14.1             | 0.3                   | 87.6                    | 102.0        |
| Recoveries             | 0.1              | -                     | -                       | 0.1          |
| Any other Adjustments  | (1.0)            | -                     | (2.8)                   | (3.8)        |
| Closing balance        | 35.5             | 0.3                   | 124.9                   | 160.7        |

At 12<sup>th</sup> January 2008 the Bank held investments in structured investments of £63.2million, due to the current market conditions it has been necessary to make an impairment provision of £31.8million recorded directly to the income statement.

## Standardised Approach

### *Risk weighted exposure amounts calculated in accordance with the Standardised Approach*

For those exposures subject to the standardised approach a significant portion are unrated. There are some rated exposures to institutions within an immaterial portfolio. The nominated external credit assessment institutions (ECAIs) or export credit agency for these is Moody's. The bank complies with the credit quality assessment scale in allocating external credit ratings to the credit quality steps as defined by the FSA. There is no credit risk mitigation associated with the exposures on the standardised approach.

The table analyses exposures post credit conversion factor and net of provisions subject to the standardised approach by ECAI used and associated credit quality step.

|   | ECAI<br>used         | Credit Quality Step |             |          |             |          |          | Unrated        | Total          |
|---|----------------------|---------------------|-------------|----------|-------------|----------|----------|----------------|----------------|
|   |                      | 1                   | 2           | 3        | 4           | 5        | 6        |                |                |
| Regional Governments<br>or Local Authorities<br>Administrative Bodies and<br>Non Commercial |                      | -                   | -           | -        | -           | -        | -        | 89.6           | 89.6           |
| Institutions  | Moody's              | 434.3               | 26.1        | -        | -           | -        | -        | 7.7            | 468.1          |
| Corporates  | Standard<br>& Poor's | -                   | -           | -        | 17.0        | -        | -        | 1,018.3        | 1,035.3        |
| Retail  |                      | -                   | -           | -        | -           | -        | -        | 42.5           | 42.5           |
| Past due  |                      | -                   | -           | -        | -           | -        | -        | 11.9           | 11.9           |
| Other items   |                      | -                   | -           | -        | -           | -        | -        | 497.4          | 497.4          |
| <b>Total standardised approach</b>  |                      | <b>434.3</b>        | <b>26.1</b> | <b>-</b> | <b>17.0</b> | <b>-</b> | <b>-</b> | <b>1,735.7</b> | <b>2,213.1</b> |

## Specialised lending analysis by slotting category

There is a specialised lending portfolio within the Corporate sector consisting largely of lending to PFI and Property investment and development. The slotting approach is used and the table analyses exposure (EAD) by slotting category.

| <b>Slotting Category</b> | <b>Exposure value</b> |
|--------------------------|-----------------------|
| Strong                   | 226.1                 |
| Good                     | 2,261.1               |
| Satisfactory             | 55.8                  |
| Weak                     | -                     |
| Default                  | 12.9                  |
| <b>Total</b>             | <b>2,555.9</b>        |

## Securitisations

The Co-operative Bank group holds investments in structured investments (£63m) and credit trading funds (£50m). An impairment provision of £31.8m has been raised against the structured investments to reflect current market conditions. At the financial year end 2007 there was a combined exposure of £108m for capital adequacy purposes, well within the stated Board appetite. The exposure value is different to that reported in the financial statements due to the exclusion of available-for-sale fair value movements for capital adequacy purposes

The Bank is not an originator of securitisations.

The securitisation ratings based approach under foundation IRB is used to calculate risk weighted exposure amounts. ECAIs used for the securitisations are listed in the table below.

The table below provides analysis of securitisation exposures analysed by ECAI into risk weight bands.

| IRB Exposure Type | ECAI              | Total | Risk weight banding |      |       |
|-------------------|-------------------|-------|---------------------|------|-------|
|                   |                   |       | 20%                 | 75%  | 1250% |
| Corporate         | Moody's           | 88.4  | -                   | 25.2 | 63.2  |
|                   | Standard & Poor's | 19.6  | 19.6                | -    | -     |
|                   | Total             | 108.0 | 19.6                | 25.2 | 63.2  |

The structured investments have a Moody's rating Ba3 or below attracting a risk weighting of 1250% and are deducted from capital.

There were no securitised revolving exposures held during the reporting period.

## IRB Approach

The Bank has developed a range of internal ratings systems dependent on approach, asset class and product type to produce risk factors for the range of Bank products. The following diagrams illustrate the various models utilised for both Foundation and Retail IRB.

### Internal ratings systems

Figure 1 and 2 below illustrate the structure of the Bank's internal ratings systems

Figure 1: High-level map of Co-operative Bank p.l.c. IRB rating systems- for Sovereign, Institutions and Corporate CRD asset classes

|                        |  |  |  |   |   |                     |                   |      |                     |              |                         |
|------------------------|--|--|--|---|---|---------------------|-------------------|------|---------------------|--------------|-------------------------|
| <i>Legal entity</i>    | The Co-operative Bank p.l.c.               |  |  |   |   |                     |                   |      |                     |              |                         |
| <i>Approach</i>        | Foundation IRB                             |  |  |   |   |                     |                   |      |                     | IRB Slotting |                         |
| <i>Asset classes</i>   | Sovereign                                  | Institutions   | Corporate  |   |   |                     |                   |      | Specialised Lending |              |                         |
| <i>Product types</i>   | Bank of England balances<br>Bonds<br>Gilts | Otc derivatives<br>FX<br>Contingent liabilities<br>Bond<br>FRN | CD<br>Bill<br>Market loans<br>Reverse Repo           | Current account<br>Liber loans<br>Fixed rate loans<br>Variable rate loans |   |                     |                   |      |                     |              |                         |
| <i>Rating systems</i>  | Wholesale risk                             |  | Listed obligor                                       | Unlisted obligor  | SME Corp                                      | Housing Association | Leveraged Finance | PSEs | Charities           | IPRE         | PFI                     |
| <i>Internal models</i> | Limit Matrix                               |  | Master grading Scale<br>Qualitative expert judgement |   | 3 year roll out – methodology being developed |                     |                   |      |                     |              |                         |
| <i>External models</i> |  |  | MKMV Creditedge<br>Quoted UK plc                     |   |   |                     |                   |      |                     |              | IPRE slotting Framework |
|                        |  |  | MKMV Riskcalc<br>Unquoted obligors                   |   |   |                     |                   |      |                     |              | PFI slotting Framework  |

Figure 2: High-level map of Co-operative Bank p.l.c. IRB rating systems- for Retail CRD asset class

| Legal entity                             | The Co-operative Bank p.l.c.  |   |                             |                        |                              |                                     |                                     |  |                             |            |       |
|--|---|---|-----------------------------|------------------------|------------------------------|-------------------------------------|-------------------------------------|--|-----------------------------|------------|-------|
| Approach                                 | Retail IRB  |   |                             |                        |                              |                                     |                                     |  |                             |            |       |
| Asset classes                            | Retail  |   |                             |                        |                              |                                     |                                     |  |                             |            |       |
| Level of PD segmentation                 | Customer level (non default)  |   | Product level (non default) |                        |                              |                                     |                                     |  | Product level (default)     | Cust level |       |
| <i>PD rating systems</i>                 | Current ac 9+ months clean  | Behav   | Visa/VRL 5-11 months        | Behav                  | Behav                        | Other                               | Direct loan <12m                    | Mort-gages   | App                         | Retail SME |       |
|  | Behav   | Behav   |                             | App                    | Behav                        |                                     |                                     |  |                             |            | Behav |
|  | Current ac 9+ months adverse  | Behav   |                             | Behav                  | Behav                        |                                     |                                     |  |                             |            | Behav |
| <i>External scorecards for PD models</i> | Current Ac and personal loan  | Triad scorecard                                   | Triad score card            | Visa classic 18-35yrs  | Visa                         | Experian Delphi customer management | Direct loan < 30yrs                 | Experian Delphi for Customer management scorecard                        | Methodology to be developed |            |       |
|  | Current ac  |   |                             | Visa classic 36yrs+    | Current ac                   |                                     | Direct loan 30yrs+ homeowner        |  |                             |            |       |
|  | Visa/VRL  |   |                             | Visa – non classic     | Current ac and personal loan |                                     | Direct loan 30yrs+ non homeowner    |  |                             |            |       |
|  | Pathfinder  |   |                             | Current ac 18-26 yrs   | Pathfinder                   |                                     | Experian Delphi new customer        | Experian Delphi new customer   |                             |            |       |
|  |   |   |                             | Current ac 27-44 yrs   |                              |                                     |                                     |  |                             |            |       |
|  |   |   |                             | Current account >44yrs |                              |                                     |                                     |  |                             |            |       |
|  | Experian Delphi for Customer management scorecard   | Experian Delphi for Customer management scorecard |                             |                        |                              |                                     |                                     |  |                             |            |       |
| <i>EAD rating system</i>                 | Domestic/Personal loan  | Visa /VRL   |                             |                        | Domestic Personal loan       | Direct loan                         | Mortgage combined EAD and LGD model | Not Applicable-accounts have already defaulted and are allocated PD of 1 |                             |            |       |
|  | Visa/VRL  | Current Account                                   |                             |                        | Visa/VRL                     |                                     |                                     |  |                             |            |       |
|  | Direct loan   |   |                             |                        | Direct loan                  |                                     |                                     |  |                             |            |       |
|  | Cashminder  |   |                             |                        | Cashminder                   |                                     |                                     |  |                             |            |       |
|  | Pathfinder  |   |                             |                        | Pathfinder                   |                                     |                                     |  |                             |            |       |
| Current Account                          | Savings   |   |                             |                        |                              |                                     |                                     |  |                             |            |       |
| <i>LGD rating systems</i>                | Domestic up-to date   | Visa up-to-date                                   |                             |                        | Domestic up-to date          | Loan up-to date                     | Mortgage combined EAD and LGD model | Domestic accounts  |                             |            |       |
|  | Visa up-to date   | Visa arrears                                      |                             |                        | Visa up-to date              |                                     |                                     | Visa   |                             |            |       |
|  | Loan up-to date   | Domestic up to date                               |                             |                        | Loan up-to date              |                                     |                                     | Loan   |                             |            |       |
|  | Domestic arrears  | Visa arrears                                      |                             |                        | Domestic arrears             |                                     |                                     |  |                             |            |       |
|  | Visa arrears  |   |                             |                        | Visa arrears                 |                                     |                                     |  |                             |            |       |
|  | Loan arrears  |   |                             |                        | Loan arrears                 |                                     |                                     |  |                             |            |       |
| <i>External scorecards for LGD</i>       | TRIAD Behavioural scorecard, Experian Delphi (Customer Management) scorecard, Customer Management Behavioural Scorecard, new to bank application scorecards |   |                             |                        |                              |                                     |                                     | Experian Delphi for customer management scorecard                        |                             |            |       |
|  |   |   |                             |                        |                              |                                     |                                     | Experian Delphi new customer   |                             |            |       |

*The use of internal estimates other than for calculating risk weighted exposure amounts in accordance with the IRB approach*

### **Credit approval**

Within the Retail CRCU, analytical approaches to modelling credit risk have become well established over many years.

To achieve IRB compliance for retail credit, the Bank has chosen to map business as usual scorecards to Basel II specific default criteria rather than to develop Basel II specific models. This is because scorecard development approaches (with regards to sample selection, default definition, outcome period) for our core scoring systems, are designed to optimise and make most effective use of all available data.

The mapping approach undertaken has constituted a robust analytical exercise, which has been subject to independent validation against IRB standards.

### **Credit approval – unsecured lending**

The application and behavioural scoring systems which form the main components of the IRB models are integral to the credit risk management processes across the unsecured Retail business area and are used to support new lending decisions (accept / reject, pricing, limit setting) and ongoing portfolio management (card renewal, limit management, cross product sales and delinquency management).

The decision systems are generally fully automated with manual intervention only required in the event of referrals being triggered or customer appeal (although for mortgage lending, there is a greater dependency on policy rules with an element of expert judgement).

Basel PD segmentation has been developed to replicate the same hierarchical logic as the customer level segmentation used within credit risk to undertake lending decisions. The score used within a particular PD model is either the application score or behaviour score dependant upon the type and age of the product mix of a particular customer.

### **Credit approval – mortgage lending**

The Bank re-entered the mortgage market in 2000 and therefore initial models have limitations due to the amount of available data, in particular, the number of defaults. The Bank has, therefore, adopted a roadmap approach to the development of mortgage PD models whereby, initially, internal and external expert judgement has been used to augment Bank data to add robustness to the models. As more data is accumulated over time, it is expected that reliance on expert judgement will decrease.

Separate PD models have been developed for new applicants (application PD) and existing customers (behaviour PD).

One of the key drivers in the credit approval process for mortgages is the Experian Delphi Score, a generic bureau score. This score is the key component of the mortgage application PD model, alongside other key application characteristics. For existing mortgage customers, the PD models utilise a number of risk indicators alongside the generic bureau score, Delphi for Customer Management.

### **Credit approval – Corporate lending**

The CFS Corporate Banking customer engagement model comprises of Business Development Managers, Relationship Managers and Support Staff.

Corporate Banking division is separate from the Credit Risk Control Unit (CRCU) who is responsible for the development, recommendation and monitoring of Risk Appetite, Lending Policy, Rating Systems and Lending Procedures. The CRCU is, in turn, separate from the Corporate Advances team who are responsible for the sanctioning and control of the lending portfolio.

The lending portfolio is largely controlled by a small number of experienced credit risk sanctioners within the centrally based Corporate Advances team, independent from the income generating area. Lending discretions are based on the risk profile of the customer and the amount of the exposure. The

lending discretion of the Director of Banking Risk and Capital Management, Credit and Exposure Committees are operated to sanction the largest credit applications.

The Corporate Advances team are resourced by experienced lenders who use the relevant Rating Systems and other tools to analyse the underlying business and the counterparty's management to assess the risk of lending proposition and its ability to repay the borrowing. Other factors considered include the potential impact of economic changes, the stability of the counterparty and their ability to withstand such change.

#### **Individual and portfolio limit setting**

For Retail unsecured lending, there are currently no limits set at portfolio level. Individual limits are set using application score combined with income for new to bank customers or behavioural score combined with account turnover for existing customers, thus being derived from the key drivers of the IRB rating systems.

There are target limits on PD and EL in the Bank's Credit Risk Appetite statement, against which performance is monitored.

For mortgages, the Bank Credit Risk Appetite statement articulates a sector limit for non-core mortgages.

#### **Pricing and profitability**

Overall lending and credit approval strategies are determined based on profitability, via models that calculate net contribution by risk segment. The strategies are translated into score cut offs, utilising the same application or behavioural scores that are the key components of the Retail IRB models. Therefore, this ensures that there is a very strong link between the IRB models and front-line.

#### *Approach to validation*

During the development phase of the Bank's IRB capability, the commissioning and management of the independent validation of its rating systems was undertaken by the Basel II Programme and with the oversight of Basel II Steering.

All developments have been subject to assessment against a comprehensive validation framework, which incorporates all relevant requirements from BIPRU, Committee of European Banking Supervisors (CEBS), the CRD and the work of the Bank for International Settlements (BIS).

The scope of the assessment includes:

- PD Rating System Structure
- Dataset
- Sampling
- Segmentation
- Variable Analysis
- Modelling Technique
- Discrimination
- Calibration

This approach has been applied to all the unsecured Retail Credit Risk models. The results of the assessment (undertaken by an external consultant) were presented to the Risk Management Working Group (RMWG) with a full schedule of mitigating actions proposed to address any shortfalls identified. The RMWG is a designated committee who provide approval of all material aspects of the credit risk rating systems.

Where more limited statistical analysis has been possible then a subset of the full validation framework has been used. This approach has been applied to the Retail Mortgages, Treasury and Corporate Rating Systems (with the exception of the Specialised Lending portfolio modelling, where the slotting criteria is used).

For each rating system, the outcome of the validation process has been fully documented and presented to the RMWG.

Having established a clear and unambiguous framework against which the validating process can be undertaken, it is the Bank's intention to use an internal independent resource going forward.

The key forum for review and approval of the IRB rating systems and/or models is the RMWG.

The intention has been to provide this forum with sufficient information to understand:

- Broadly, how the models work with key assumptions and approach
- The key risk drivers
- The data that has been used, the amount and quality of historical data
- The calibration process including the provision of data on measures of discriminating power of the systems / models
- The independent validation process for each model, confirming it was against Basel II standards, and by whom
- Any caveats or issues arising from the independent validation and how they have been addressed

Ongoing performance monitoring of the IRB ratings systems/models are undertaken and the results are disseminated at different levels of detail across the organisation.

The independent CRCU teams, staffed with appropriately qualified and experienced professionals, play a key role in the ongoing oversight of the IRB systems/models as the second line of defence. Internal audit provide additional oversight and assurance to senior management, acting as the third line of defence.

Performance monitoring of the IRB rating systems and/or models is designed to address a number of aspects:

- Models performance as predicted
- Models discriminating effectively
- The risk profile of the population being modeled is stable or changing
- Key drivers of any changes in performance / risk profile

#### *Description of the internal ratings process*

##### **Retail models**

##### **Residential mortgages**

The Bank re-entered the mortgage market in 2000 and has observed very limited historical losses on this portfolio to date. As such, it has been necessary to use both internal and external data alongside expert view in the development of the PD and LGD models. A Roadmap Approach has been adopted for mortgage IRB model development, whereby as internal loss data increases the level of external data and expert view used within the models will diminish.

Separate PD models for both new to bank and existing customers have been built based on external bureau and loan specific information to calculate a 12 month PD. The definition of default for the mortgage portfolio is taken as 180 days past due, but also includes the relevant 'unlikelihood to pay elements' as outlined in BIPRU requirements. The ratings philosophy of these PD models has been determined to be more Point in Time (PiT) in nature. This will result in ratings migration as the quality of the portfolio changes as the economic environment changes.

Long Run PDs by grade have been developed by incorporating these PiT PDs with additional conservative estimates of how these grades would perform over an economic cycle. This is done by modelling the various risk grades under different stressed macroeconomic scenarios.

The LGD model is a parameter based system and uses a combination of statistical modelling, both internal and external expert view and information from external sources. As members of a data pooling consortium, pooled data was used to inform and validate parts of the calculation.

The key components of the model are Probability of Possession Given Default (PPGD) and expected shortfall. Any estimated recoveries post sale are excluded from the loss estimate.

The core component of the PPGD model is loan to value (LTV) and as a parameterised model it offers the flexibility to apply different scenarios.

The expected shortfall calculation uses an estimate of future house prices, a statistically based haircut scorecard (the difference between actual and forecasted house price) and projected balance at sale (including costs), along with time to possession and sale parameters.

In calculating capital, a downturn LGD is used. This is achieved by flexing the key components of the LGD model - reducing future house price estimates, increasing time to sale parameters and increasing possession rates.

The regulatory LGD floor of 10% is applied where applicable.

The models are applied to all 48,000 residential mortgage accounts, £3.4bn exposure.

### **Qualifying revolving and other retail exposures**

Rather than building bespoke Basel models the underlying business scorecards are calibrated to a Basel compliant definition of PD. The direct usage of the underlying scorecards for the derivation of PD facilitates compliance with the Use Test. The definition of default for unsecured exposures is taken as 90 days past due, but also includes the relevant 'unlikeliness to pay' elements as outlined in BIPRU requirements.

Upon acceptance, credit score is used to determine PD up until the behaviour score is deemed sufficiently mature. The ratings philosophy of the PD models is deemed to be predominantly PiT therefore changes in the quality of the portfolio will be reflected via ratings migration and default rate within pools will remain stable.

The PD models produce an initial point estimate of default rate that is then uplifted to reflect a long run average (LRA) PD. The uplifts are applied at pool level and are estimated using a combination of internal data and a cash flow model that is linked to economic scenarios. The scenarios used in the cash flow model are consistent with those used for Pillar 2 stress testing. The LRA PD is used to determine capital requirements.

Decision tree software was used to develop homogenous LGD pools across the unsecured portfolio. These models directly estimate the average loss (percentage) of Exposure at point of Default (EAD) over a 36 month recovery period for each pool. Economic impacts are then considered via assessment of key drivers and further truncations of the recoveries. Due to historical collections policies it was not possible to model LGD to write-off and as such the estimates are inherently conservative.

Standard discounting principles are applied in conjunction with the cost of collections to determine the ultimate LGD used for capital calculation.

Decision tree software was used to develop homogenous EAD pools across segments of the unsecured portfolio whereby the exposure exceeded current drawings (credit cards and current accounts).

A variable horizon, momentum approach is used to directly estimate the average default weighted EAD percentage for each homogenous pool. The EAD therefore reflects the exposure at point of default from a position of non-default, given that the account will move into a position of default at any point in a 12 month time horizon.

The EAD is inclusive of any interest accrued and collections charges.

$EAD (£) = \text{Current Exposure} * EAD (\%)$

Further adjustments are applied where necessary to ensure that the EAD (£) is sufficient to cover the pool level current drawings.

The definition of default is taken as 90 days past due in line with internal reporting, more conservative than the BIPRU definition of 180 days past due for retail exposures.

These models are applied across entire retail unsecured portfolio (credit cards, loans, current accounts) which covers approximately 2 million accounts and £5.8bn exposure.

### **Corporate models**

Corporate Banking Asset Class uses a combination of models and approaches to manage its portfolio as outlined in figure 1.

There are two externally developed PD models in use for grading and monitoring the IRB portion of the Corporate Asset Class; namely, Moody's KMV RiskCalc version 3.1 (UK) for the General Core Corporate borrowers (Total Balance Sheet Assets >£0.35m) and CreditEdge version 8 (European) for non-financial UK quoted p.l.c.s. After assessing these two external models for their suitability to grade the CFS portfolio, the Moody's KMV Expected Default Frequencies generated from the CreditEdge and RiskCalc PD models were calibrated in house to create a single Master Grading Scale (grades 1-14 with the latter being Default) and the results externally validated and approved by the RMWG.

The ratings philosophy of these PD models is defined as 'near Point in Time models'. This will result in ratings migration as the quality of the portfolio changes over the economic cycle.

The Long Run Average PD methodology benefits from the PD models being developed externally and then calibrated using the Bank's own default experience across its portfolio. In view of the relatively low number of defaults across the UK plc element of the Corporate Banking portfolio, use was made of the 'Cathcart Low Default Portfolio Model' (see FSA website for further information on this model) to inform its calibration and the Cathcart model was also used as a benchmark for the General Core Corporate PD model.

The resultant Master Grading Scale grades can only be overridden by Corporate Advances (the Credit Team) using their expert judgement based on information not available in the model such as account behaviour or other qualitative factors to ensure that the grade fully reflects all available information used to assess the credit risk of the customer. The rationale supporting such overrides is captured in a structured database to facilitate interrogation to inform future model refinement and development.

Slotting models are used to analyse and monitor the Specialised Lending exposures to Property and PFIs. The PFI and Property Investment and Development 'slotting models' are based on BIPRU criteria, which map to 5 FSA supervisory categories with predefined risk weights from Strong to Default (Slotting Model Categories 1-5 respectively).

The remainder of the Corporate Asset Class portfolio is subject to '3 year rollout to Foundation IRB'. The element of the portfolio that falls under the '3 Year Rollout to Foundation IRB' is subject to the same criteria for grading and closely monitoring higher risk (non-Default) and Default situations. Any situations that reach Default will be graded on the Master Grading Scale at Grade 14 and are the subject of separate analysis to inform the development of the new models.

In addition to grade migration arising that is either directly driven by the model or expert judgement overrides being applied, there is an additional Watchlist marker that is applied to help identify where a situation has not reached the point of Default but is one that the Corporate Advances Department merits closer management. This element of the portfolio is subject to regular review by the Heads of Corporate Advances, the Director of Banking Risk and Capital Management and the CRCU as good risk practice and a means of informing future model refinement or development with key risk drivers.

The Corporate Bank applies a single 'Definition of Default' across its whole portfolio (Foundation IRB, Specialised Lending, 3-Year Rollout and Immaterial). This is taken as 90 days past due or earlier in the event of an act of default being committed (i.e. filing for Receivership, Liquidation, etc) which is more conservative than the BIPRU definition of a combination of 90 and 180 days past due which can be applied for different elements of the Corporate Asset Class.

Under Foundation IRB, the regulatory given criteria for LGD (Secured by real estate collateral 35% and Senior Unsecured 45%) and EAD (100%) are applied to the PD elements of the Corporate Asset Class. The FSA prescribed risk weightings for the Slotting Models are applied to the Specialised Lending element of the Corporate Asset Class and the Standardised approach is used for the remainder of the Corporate portfolio in accordance with the CRD Approach agreed with the FSA. The actual outturn for LGD and EAD will continue to be monitored and reported to RMWG as part of good credit risk management practice within the CRCU.

Regular Model Performance Monitoring Reports are produced to inform risk management decisions and credit control committees. Whilst the models might appear to be operating within agreed and expected tolerances evidenced through these reports, all models are subject to Annual Reviews to monitor accuracy and identify any changes that are required to improve their ability to differentiate levels of credit risk. If the actual performance falls outside of expected criteria then this review process will be undertaken earlier. In all instances, the results of the CRCU Review will be subject to independent internal review before being reviewed by the Director Banking Risk & Capital Management and presented to the RMWG for the approval of any required action or acceptance as appropriate.

The total Corporate Banking committed exposure across the different Basel exposure classes at the end of 2007 analysed by the IRB Models was £1,320m, of which £279m related to credit edge and the remainder of exposures by Moody's. Exposures of £750m were analysed using the PFI slotting model and £2,069m using the IPRE (income producing real estate) model.

#### **Wholesale model**

The wholesale model is used for all Treasury counterparts, which are largely institutions but also include Central Government and Central Bank.

Credit ratings from ECAs, Moody's and Fitch, and expert judgement are used to assign an appropriate Internal Rating Grade (IRG) 1-10, and associated Probability of default (PD). More conservative, judgmental adjustment to Counterparts' IRG (downward overrides) may be applied provided the credit rationale is clearly stated in the appropriate credit review.

The PD methodology, provided by Ernst & Young (E&Y), is based upon annual corporate bond default statistics sourced from Moody's and Standard & Poor's. PDs are recalibrated annually and noted by Credit Committee.

Being based upon corporate default data PDs are deemed to be conservative for the mainly bank / sovereign Treasury portfolio for Pillar I and Pillar II (ICAAP) purposes, given that banks fail but are supported and seldom default.

The PD model cumulative PD datasets enables the calculation of a one-year average default probability for each rating grade. Individual one-year default observations are extremely rare for investment grade ratings and in most datasets result in zero defaults being recorded. Forward 1-year PDs are calculated separately from each of Moody's and S&P's cumulative PDs for years 1 to 10. The spread of these forward 1-year PDs exhibit exponential characteristics; hence a 'Best fit' Linear Trend analysis has been performed taking the PDs' natural LOG resulting in the extrapolation of PDs (long run cumulative average forward 1 year PDs).

Central governments and central banks may attain a zero PD within the limit matrix.

These models are used across the Treasury Portfolio representing exposures of £3.5bn at the reporting date.

*IRB Approach: exposures values and exposure weighted average risk weight for each exposure class by PD band for Foundation IRB*

The table below analyses exposure (exposure at default), and risk weight percentage for each IRB exposure class by PD band for exposures subject to Foundation IRB approach.

| Exposure value                      | PD band    |            |            |            | 1-5%  | 5-10% | 10-50% | 50-99% defaulted | Total   |
|-------------------------------------|------------|------------|------------|------------|-------|-------|--------|------------------|---------|
|                                     | 0.00-0.10% | 0.11-0.20% | 0.21-0.30% | 0.31-1.00% |       |       |        |                  |         |
| IRB Exposure class                  |            |            |            |            |       |       |        |                  |         |
| Central Government and Central Bank | 346.8      | -          | -          | -          | -     | -     | -      | -                | 346.8   |
| Institutions                        | 2,681.9    | 330.2      | 114.4      | 5.1        | -     | -     | -      | -                | 3,131.6 |
| Corporates                          | 30.2       | 158.3      | 253.7      | 528.0      | 123.6 | 42.4  | 3.7    | -                | 1,193.1 |
| Total Foundation IRB                | 3,058.9    | 488.5      | 368.1      | 533.1      | 123.6 | 42.4  | 3.7    | -                | 4,671.5 |
| <b>RW %</b>                         |            |            |            |            |       |       |        |                  |         |
| IRB Exposure class                  |            |            |            |            |       |       |        |                  |         |
| Central Government and Central Bank | 1%         | -          | -          | -          | -     | -     | -      | -                | 1%      |
| Institutions                        | 12%        | 29%        | 47%        | 72%        | -     | -     | -      | -                | 16%     |
| Corporates                          | 26%        | 35%        | 47%        | 77%        | 94%   | 153%  | 162%   | -                | 65%     |
| Total Foundation IRB                | 11%        | 31%        | 47%        | 77%        | 94%   | 153%  | 162%   | -                | 27%     |

*IRB Approach: exposures values analysed by EL grades*

The table below analyses each Retail IRB exposure class by EL grade, calculated as expected loss as percentage of EAD.

| IRB exposure class    | EL grade 1 | EL grade 2 | EL grade 3 | EL grade 4 | EL grade 5 | EL grade 6 | Default | Total   |
|-----------------------|------------|------------|------------|------------|------------|------------|---------|---------|
| Residential Mortgages | 3,007.2    | 77.5       | 185.0      | 78.4       | 151.9      | 9.7        | 9.1     | 3,518.8 |
| Qualifying Revolving  | 115.8      | 297.9      | 593.1      | 510.0      | 426.1      | 559.8      | 172.5   | 2,675.2 |
| Other Retail          | 51.6       | 0          | 0          | 202.7      | 275.5      | 296.9      | 36.3    | 863.0   |
| Total Retail IRB      | 3,174.6    | 375.4      | 778.1      | 791.1      | 853.5      | 866.4      | 217.9   | 7,057.0 |

EL grades are defined below:

|            |                        |
|------------|------------------------|
| EL grade 1 | EL% < 0.05%            |
| EL grade 2 | 0.05% =< EL% < 0.07%   |
| EL grade 3 | 0.07% =< EL% < 0.20%   |
| EL grade 4 | 0.20% =< EL% < 0.40%   |
| EL grade 5 | 0.40% =< EL% < 2.00%   |
| EL grade 6 | 2.00% =< EL% < 100.00% |

EL = EAD x PD x LGD

EL% = EL / EAD

*IRB Approach: Actual value adjustments in the preceding period*

Within the Pillar 3 disclosure value adjustments are defined as being individual impairments and provisions are defined as collective impairments in line with BBA guidance. The table below analyses individual impairments made in the reporting period. Individual impairments are made against the corporate and retail mortgage IRB exposure classes.

| <b>IRB Exposure class</b>                          | <b>Actual value adjustments in the year</b> |
|--|---|
| Central Government and Central bank Institutions   | -   |
| PSEs   | -   |
| Corporates   | 11.3  |
| Retail SME's                                       | -   |
| Retail Exposures secured by real estate collateral | 0.3   |
| Qualifying revolving                               | -   |
| Other retail exposures                             | -   |
| Total  | 11.6  |

The actual value adjustment made in the year represents the individual impairment charge relating to exposures on the IRB approach.

The Corporate impairment charge tends to be more volatile due to the nature and timing of one off charges. In the last year issues arising from the higher risk sectors have continued to be addressed and the increase in the charge compared to last year reflects these actions.

The secured mortgage book continues to enjoy extremely low levels of default and subsequent impairment which reflects the relatively low average loan to value ratio and the affordability tests applied within our credit assessments.

No defaults were observed for Treasury exposures.

*IRB Approach: Firms estimates against actual losses over a longer period*

This information will not be disclosed until 2010 in line with the Basel II Accord as proposed by the BBA Pillar 3 working group. This will allow for more meaningful comparative data to be collected.

*IRB Approach: PD, LGD and EAD outcomes against estimates*

This information will not be disclosed until 2010 in line with the Basel II Accord as proposed by the BBA Pillar 3 working group. This will allow for more meaningful comparative data to be collected.

## Credit risk mitigation

The Bank uses collateral and guarantees to mitigate credit risk. Collateral is regularly revalued and guarantees reviewed to ensure continuing effectiveness.

The majority of collateral held is not eligible financial collateral, but is real estate collateral either as retail mortgages or real estate collateral held against Corporate lending.

When calculating the value of collateral for regulatory capital risk mitigation purposes, the appropriate valuation criteria contained within BIPRU is applied. When assessing the collateral valuations for Corporate Lending Policy purposes, a more conservative written down value is used, stepped according to the risk level of the asset.

Property collateral for Corporate lending is categorised as security for property development or investment customers (i.e. "property" lending) or owner occupied premises to secure mainstream loan and overdraft facilities. Other security is taken, but only in modest proportion to the total portfolio, includes Life Policies, Stocks & Shares, cash cover and debentures / floating charges. Where exposures are agreed on a secured basis, security cover is recognised only where:

- the security is legally enforceable and is of a tangible nature and type;
- an appropriate, recent and reliable valuation is held;
- a prudent margin is applied to the valuation, for the type of security involved;

Third party unsupported guarantees are generally excluded unless the guarantor has a risk grade better than the first party being guaranteed and is considered good for their security. Any shortfall of security for an exposure is regarded as unsecured and assessment includes this element of residual risk.

Risk mitigation is not material to the Treasury portfolio, comprising parental guarantees in support of trading activity of subsidiaries; Repo agreements (currently UK Gilts); and cash collateralised long dated swaps providing hedges for corporate loans. Credit risk policy determines parameters within which risk may be mitigated and is managed accordingly.

Robust policies are in place to manage collateral and valuation with daily monitoring undertaken within Treasury operations. Repos and secured lending positions are revalued daily and whilst monitored daily, margin calls on collateralised swaps are on a weekly basis.

Eligible financial collateral for Basel reporting include gilts held as part of reverse repo agreements and cash as part of collateralised swaps or against corporate lending. The guarantees are parental guarantees held against subsidiary exposures. The table below analyses exposure values covered by eligible financial collateral by IRB exposure class.

| <b>Exposure class covered by collateral /guarantee</b> | <b>Exposure value covered by collateral after haircut</b> | <b>Exposure value covered by guarantee after haircut</b> |
|--|---|--|
| Institutions   | 651.5   | 273.8  |
| Corporates   | 0.2   | -  |

## Counterparty credit risk

The table shows the Bank's exposure to over-the-counter (otc) derivatives.

| In relation to counterparty credit risk | Banking Book | Trading Book | Total |
|---|--------------|--------------|-------|
| Gross positive fair value of contracts  | 78.6         | 9.6          | 88.2  |

The Bank does not utilise netting agreements for the settlement of otc derivatives and no cash collateral was held against otc derivatives at the reporting date.

The Counterparty Credit Risk mark to market method is used to measure exposure value for counterparty credit risk.

The Bank does not utilise credit derivatives within its credit risk management framework.

In the use of Treasury credit ratings from ECAs (External Credit Assessment Institutions), Moody's and Fitch, and expert judgement the Bank assigns an appropriate Internal Rating Grade (IRG) 1-10, and associated Probability of Default (PD), based upon a limit matrix, which determines the Total Potential Limit (TPL) capacity for any single counterparty or counterparty group. Derivative limits are established, as for other traded products with reference to the limit matrix. The maximum term permitted for Treasury products differs dependent upon the IRG shown on the limit matrix table. The provision of collateral can be used to extend term beyond that shown on the limit matrix.

All counterparties are pro-actively monitored through real-time external rating alerts, and media intelligence gathering. Management actions are taken promptly in response to adverse market conditions or ratings actions and counterparties reviewed on a rolling programme basis in accordance with Credit Risk Policy taking a 'risk based approach'.

Credit trends, credit spreads and market intelligence are under close review day-to-day as are annual, semi-annual and quarterly interim results and loss announcements as they emerge.

There is only one agreement in place where the bank would be required to provide collateral based on a downgrade in credit rating, the amount against which collateral would be required to be provided is equivalent to a VaR figure as determined by the counterparty on the basis of 95<sup>th</sup> percentile statistical confidence of 10 days volatility for transactions falling under the CSA.

Wrong way risk is not material to the Treasury portfolio, however, it may occur. An example of conjectural wrong way risk is that fluctuations in the interest rate causes changes in the value of the derivative transactions but could also impact the credit worthiness of the counterparty. Or, for instance, a macro factor wrong way risk, as an additional source of risk, is rightly of concern to banks and regulators. Such factors are taken into account when counterparty/ country reviews are undertaken.