The Co-operative Bank plc

Pillar 3 Disclosures 2016

Contents

The glossary for this document can be found at www.co-operativebank.co.uk/investorrelations/financialresults

1. Overview

1.1 Background

This document sets out the Pillar 3 disclosures for The Co-operative Bank plc and its subsidiaries (the Bank) as at 31 December 2016. These disclosures have been prepared to give information on the basis of calculating capital requirements and on the management of risks faced by the Bank in accordance with the rules laid out in the Capital Requirements Regulation (Part 8), unless otherwise stated and should be read in conjunction with the Risk sections of the Bank's Annual Report and Accounts (ARA) including the Risk Management section and the Principal risks and Uncertainties section. These are available on the Investor Relations section of the Bank's website www.co-operativebank.co.uk/investorrelations/financialresults

The European Union Capital Requirements Directive (CRD) came into effect on 1 January 2007. Commonly referred to as Basel II, the legislative framework introduced capital adequacy standards and an associated supervisory framework in the European Union (EU). This was replaced by the Capital Requirements Regulation (CRR) and the Capital Requirements Directive (together collectively known as CRD IV) which came into force on 1 January 2014. In the UK, implementation of the Directive has been through rules introduced by the Prudential Regulation Authority (PRA). These are known as Pillar 3 disclosures because they complement the minimum capital requirements in Pillar 1 and the supervisory review process in Pillar 2. The Pillar 3 disclosures are aimed at promoting market discipline by providing information on risk exposures and the management of those risks.

The Bank has a PRA permission to use the Internal Ratings Based (IRB) approach to credit risk. This allows the Bank to calculate capital requirements for some of the Retail, Corporate and Treasury assets classes using internally developed models that reflect the credit quality of the assets. The Bank is in discussion with the PRA to remediate areas of non-compliance related to the use of IRB approaches. Please refer to the Bank's 2016 Annual Report and Accounts, Principal risks and Uncertainties section, for further details of this issue.

The Bank currently has approval to use the following IRB approaches outlined below:

- Retail IRB - internal calculations of Probability of Default (PD), Loss Given Default (LGD) and credit conversion factors are used to model risk exposures;
- Foundation IRB - uses internal calculation of PD, but standardised regulatory defined LGD and credit conversion factors;
- Foundation IRB (slotting approach) - exposures are modelled and mapped to five supervisory categories from strong to default (slotting categories 1-5 respectively) with prescribed risk weights and expected losses;
- Foundation IRB (securitisation ratings based approach) - external credit ratings are used to map exposures to regulatory defined risk weights.

The European Banking Authority (EBA) published in December 2016 its final Guidelines on regulatory disclosure requirements following an update of the Pillar 3 requirements by the Basel Committee in January 2015. The Guidelines while not changing the requirements of the regulatory disclosures defined in Part Eight of the CRR, provide further guidance and support to institutions in complying with both the CRR and the Pillar 3 framework requirements. The Guidelines apply to Global Systemically Important Institutions (G-SIIs) and Other Systemically Important Institutions (O-SIIs) and apply from 31 December 2017. The Co-operative Bank plc is not a G-SIIs or an O-SIIs but is reviewing the document for applicability and best market practice for the 2017 report.

The table below illustrates the portfolios where the Bank has permission to use each of the IRB approaches:

Asset	Portfolio	IRB exposure classes	CRD approach
Retail	Mortgages (including Buy to Let Mortgages)	Retail - secured by immovable property	Retail IRB
	Credit cards/Overdrafts	Qualifying revolving retail exposures Retail other non-SME	Retail IRB
	Loans		Retail IRB
Corporate	Corporate (total assets >£350k)	Corporates	Foundation IRB
	Business Banking	Corporates	Foundation IRB
	Registered social landlords (RSL)/housing associations	Corporates	Foundation IRB
	Specialised lending	Corporates	Foundation IRB (slotting approach)
Treasury	Financial institutions	Institutions	Foundation IRB
	Structured investments/credit trading funds	Corporates	Foundation IRB (securitisation ratings based method)
	Securitisation positions	Securitisation positions	Foundation IRB (securitisation ratings based method)

For other exposures and risk areas, the standardised approach is adopted, which uses capital risk weighting percentages set by regulatory defined requirements.

1.2 Basis and frequency of disclosures
In meeting these disclosure requirements, the Bank has also considered recommendations made by the Enhanced Disclosure Task Force (EDTF) which seeks to give enhanced information above and beyond the minimum Pillar 3 disclosure requirements. These are set out in more detail in Section 2: Changes to disclosures.

Basel III was implemented in the UK from 1 January 2014, through both the European CRR and the Capital Requirements Directive (CRD IV) and through the PRA's policy statement PS7/13 www.bankofengland.co.uk/pra/Pages/publications/implemcrdiv.aspx. The term CRD IV is used throughout these disclosures as a collective term for CRD IV, CRR and the PRA's policy statement.

These disclosures may differ from similar information in the 2016 Annual Report and Accounts prepared in accordance with International Financial Reporting Standards, with the information included in Pillar 3 being prepared in accordance with CRD IV; the information in these disclosures may therefore not be directly comparable with that information. All figures are as at 31 December 2016, the Bank's year end, unless otherwise stated.

Disclosures are issued on an annual basis and published on the same day as publication of the Annual Report and Accounts.

1.3 Location and verification
This report was prepared and approved in line with the Bank's Pillar 3 policy, which is updated on a yearly basis. No significant changes have been made to the Pillar 3 policy compared to the prior year.

Internal suppliers of the data attest to the accuracy of their data and at the same time consistency checks and reconciliations were performed with the Bank's 2016 Annual Report and Accounts and regulatory returns where applicable. The disclosures have been subject to internal verification and reviewed by the Bank's Audit Committee (AC) on behalf of the Board but have not been, and are not required to be subject to independent external audit. They are published on the Bank's website
www.co-operativebank.co.uk/investorrelations/financialresults

1.4 Scope of disclosure
The Pillar 3 disclosures in this document relate to The Co-operative Bank plc (PRA firm reference number 121885). The principal subsidiary undertakings included within these disclosures are:

Operating company	Nature of business	Consolidated capital regulatory returns	Solo consolidated capital returns
The Co-operative Bank plc	Banking	Yes	Yes
Co-operative Commercial Limited	Investment company	Yes	No*
Britannia Treasury Services Limited	Holding company	Yes	No*
Platform Funding Limited, Platform Home Loans Limited	Mortgage origination, Platform servicing company	Yes	No*
Platform Group Holdings Limited, Platform Consumer Services Limited, Roodhill Leasing Limited	Entities in liquidation	Yes	No*
Mortgage Agency Services Number One, Two, Four, Five, Six Limited	Mortgage lending (acquired)	Yes	No*
First Roodhill Leasing, Second Roodhill Leasing, Third Roodhill Leasing, Fourth Roodhill Leasing,	Leasing	Yes	Yes
Britannia Asset Management Limited	Holding company	Yes	Yes
Britannia Development and Management Company Limited	Property Investments	Yes	Yes
Britannia Life Direct Limited	Financial Services	Yes	Yes
Moorland Covered Bonds LLP	Mortgage acquisition and guarantor of covered bonds	Yes	No
Leek Finance (Number Nineteen) plc	Securitisation vehicles	Yes	No
Silk Road Finance Number Three plc	Securitisation vehicle	Yes	No
Meerbrook Finance Number Eight Limited	Securitisation vehicle	Yes	No
Calico Finance Number One Limited	Securitisation vehicle	Yes	No

* A capital deduction is made at a solo consolidated level to represent the equity investment in these companies. No equity investment is held in securitisation vehicles hence there is no capital deduction at a solo consolidated level.

All entities are fully consolidated (i.e. none are proportionally consolidated) and registered and operating in the UK.

Until its expiry in September 2014, the Bank had regulatory approval to operate with a 'solo-consolidation' permission, which allowed it to be regulated for prudential purposes as though the Bank and specified solo-consolidated subsidiaries formed a single legal entity. The PRA extended the Bank's solo consolidation permission in March 2016, though with respect to a smaller number of subsidiaries as per the table above. In addition the Bank in 2016 had been granted regulatory approval for a Core UK Group permission to allow its exposures to those FCA-authorised subsidiaries no longer part of its solo-consolidation, to be exempt from large exposure thresholds. This waiver expired in December 2016. The scope of the Bank's prudential consolidation is the same as its consolidation for accounting purposes.

1.5 Non-disclosure
In accordance with European Banking Authority (EBA) guidelines on materiality, proprietary and confidentiality and on disclosure frequency, the Bank has not included the following disclosures on the grounds of immateriality:

- CRR Article 442(d),(h) split of geographical exposures. The Bank's exposures are predominately within the UK (2016: 0.18% overseas 2015: 1.47% overseas) and therefore the geographical split has not been disclosed;
- CRR Article 447 regarding equity disclosures (Exposure At Default (EAD) of £52.8m as at 31 December 2016 and £60.5m as at 31 December 2015).

The Bank did not omit any disclosures on the grounds of proprietary or confidential information.

1.6 Pillar 3 requirements disclosed in the 2016 Annual Report and Accounts
1.6.1 Biographies of the Board
The number of directorships held by members of the management body, their actual knowledge, skills and expertise have been disclosed in the 2016 Annual Report and Accounts, Corporate Governance section, while the policy on diversity with regard to selection of members of management body and recruitment policy has been disclosed in the 2016 Annual Report and Accounts, Nomination Committee report.

1.6.2 Remuneration
In order to comply with the disclosure requirements of CRD IV and the PRA's Remuneration Code, the responsibilities and decision making process for determining remuneration policy, the link between pay and performance and the design and structure of remuneration, including performance pay plans, have been disclosed in the 2016 Annual Report and Accounts, Directors' Remuneration report.

1.7 Regulatory position
As at 31 December 2016, the Bank did not meet its Individual Capital Guidance (ICG): the PRA's statement as to the regulatory capital (Pillar 1 and Pillar 2a) it expects the Bank to hold. However, a deficit was anticipated within the Bank's Updated Plan. The Bank has received an updated ICG from the PRA which came into force from 1 November 2016. As at 31 December 2016, the Bank's Pillar 2a requirement was set at 14.49% of RWAs or £967.4m.

The Bank anticipates that if the capital raising actions within the Plan are successful along with the successful remediation of Capital Requirements Regulation non-compliance issues outlined in the Annual Report and Accounts (Going Concern) it will return to sustainable ICG compliance following the tier 2 capital issuance in 2018, be PRA buffer compliant by the end of the planning horizon and have a leverage ratio which is sustainably above 3%. In addition, on the basis the capital raising is successful the Plan assumes the Bank can begin MREL debt issuances commencing in 2018 to ensure the Bank will be compliant with the Bank of England's transitionary MREL requirements as outlined in Policy Statement 30/16 published in November 2016.

There are no current or foreseen material restrictions or legal impediments to the movement of capital or to the repayment of liabilities between UK based consolidated entities, with the exception of:

- securitisation vehicles and Covered Bond LLP with assets being ring-fenced within such entities.
- FCA regulated entities where minimum capital requirements apply.

1.8 Summary of key capital ratios
The Bank's key capital ratios are included below:

Table 1 CRD IV key capital ratios

	2016	2015
Common Equity Tier 1 ratio	**11.0%**	15.5%
Total Capital Ratio	**17.7%**	21.6%
Risk Weighted Assets (£m)	**6,676.1**	7,422.9
Leverage ratio	**2.6%**	3.8%

Further details on the Bank's capital and leverage positions can be found in section 3 of this document.

2. Changes to Disclosures
The Bank has continued to review its disclosures in line with EDTF recommendations. For 2016 the reporting of the Leverage ratio has been updated to be in line with the EBA publication of ITS on disclosure of the Leverage ratio in March 2016. This harmonises the reporting of the Leverage Ratio. A new table for the Countercyclical Buffer (CCyB) has been included. This is in line with the reporting requirements set out in the EBA final draft regulatory standards published in December 2014, which became applicable from 1st January 2016. This also harmonises reporting of the CCyB. In prior years the Bank has included a narrative stating that all of the Bank's exposures could be deemed to be UK as they were below the 2% threshold.

Further information regarding the EDTF recommendations can be found at www.fsb.org/2014/09/r_140930a/

Table 2 EDTF disclosure

The table below provides an index to the Bank's disclosures in accordance with the EDTF's recommendations either within its Annual Report and Accounts or Pillar 3 disclosures

Type of risk	Recommendation	Disclosure	Section in Pillar 3	Section in Risk Management within the ARA	Related sections of the ARA
General	1	Risks to which the business is exposed	5	Risk Management objectives and policies 1.1-1.5	Strategic report
	2	Definition of risk terminology, principles and appetite	5		
	3	Top and emerging risks and the changes during the reporting period	5		
	4	Analysis of future regulatory developments affecting our business model and the Bank's profitability	5		
Risk governance and risk management	5	The Bank's risk management organisation, process and key functions	4	Risk Management objectives and policies 1.1-1.5	Strategic report
	6	Risk culture and risk governance and ownership	4		
	7	Key risks, risk appetite and risk management	4, 5		
	8	Stress testing and the underlying assumptions	3	Capital Management	
Capital adequacy	9	Minimum Pillar 3 disclosure requirements	3	Capital Management	
	10	Reconciliation of accounting balance sheet to regulatory balance sheet	3		
	11	Flow statement of movements in regulatory capital since the previous reporting period including changes in Common Equity Tier 1, Tier 1 and Tier 2 Capital	3		
	12	Discussion of targeted level of capital and how this will be established	1, 3, 5		
	13	Analysis of Risk Weighted Assets	3		
	14	Analysis of capital requirements for each Basel asset class	3		
	15	Analysis of credit risk for each Basel asset class	3		
	16	Flow statements reconciling the movements in Risk Weighted Assets for each Risk Weighted Asset type	3		
	17	Discussion of Basel credit risk model performance	5		
Liquidity and funding	18	Analysis of the Bank's liquid asset buffer	5	Liquidity risk	
	19	Encumbered and unencumbered assets analysed by balance sheet category	5		
	20	Consolidated total assets, liabilities and off-balance sheet commitments analysed by remaining contract maturity at the balance sheet date	5		
	21	Analysis of the Bank's sources of funding	5		
Market risk	22	Relationship between the market risk measures for trading and non-trading portfolios and the balance sheet	5	Market risk	
	23	Discussion of significant trading and non-trading market risk factors	5		
	24	VaR assumptions, limitations and validation	5		
	25	Description of the primary risk management techniques employed by the Bank	5		
Credit risk	26	Analysis of the aggregate credit risk exposures	5	Credit risk 2.1- 2.3	Note 15: loans and advances to banks
	27	Describe the policies for identifying impaired and non-performing loans	5	Credit risk 2.2	Note 16a: loans and advances to customers
	28	Reconciliation of the opening and closing balances of non- performing or impaired loans in the period	5	Credit risk 2.2	Note 17: investment securities
	28	Analysis of counterparty credit risk that arises from derivative transactions	5	Credit risk 2.2.4	Note 18: derivative financial instruments
	30	Discussion of credit risk mitigation, including collateral held for all sources of risk	5	Credit risk 2.2 - 2.3	
Other risks	31	Description of other risks	5	Pension risk, Regulatory risk, Conduct risk 5-7	Note 31: Provisions for liabilities and charges
	32	Discussion of publicly known risk events	5	Pension risk, Regulatory risk, Conduct risk 5-7	Note 34: Contingent liabilities and commitments

3. Capital Adequacy

3.1 Assessing the adequacy of internal capital

Capital resources are held by the Bank to protect its depositors, to cover its inherent risks, to absorb unexpected losses, and to support the development of the business.

The Bank manages and calculates its capital adequacy in accordance with CRD IV, implemented in the European Union through publication of Capital Requirements Regulation (CRR) and a further iteration of the Capital Requirements Directive (CRD). Together this package of requirements is known as CRD IV and came into force from 1 January 2014. The European Banking Authority is providing technical standards relating to CRD IV, some of which are not yet finalised. CRD IV disclosures in this document are based on the Bank's interpretation of published rules.

Throughout 2016 the Bank has continued to make progress towards reducing its overall risk profile. Non-core RWAs have reduced to £2.0bn from £2.8bn due to continued deleverage activity in its Legacy Portfolio. Core Credit Risk RWAs have increased by £0.2bn to £3.9bn reflecting growth in the Bank's retail mortgage assets.

The Bank is seeking to enhance its credit modelling capability in a number of key portfolios and is in discussion with the PRA with regards to the approval and implementation of these enhancements during 2017.

In June 2013 the Bank initially assessed the impact of potential enhancements to its credit modelling capability which drove a £1.0bn increase in the underlying RWAs calculated from the models at that time. The increase predominantly related to the Optimum portfolio and the £1.0bn adjustment had been included within the Optimum RWAs. This is referred to as a temporary adjustment.

Following the significant deleverage of the Optimum balances in 2015, the Bank judged it appropriate to reduce the temporary adjustment from £1.0bn to £0.3bn in line with the balance reduction in order to ensure that the Optimum RWAs were more reflective of the underlying credit quality of the reduced size of the portfolio. Having conducted further analysis the Bank now intends to remove the remaining £0.3bn temporary adjustments in March 2017.

The Bank continues to meet its Pillar 1 capital requirements under normal economic conditions. This is the minimum required under the CRR. The PRA provides Individual Capital Guidance (ICG) for each bank, which represents guidance on the additional capital (Pillar 2a) a firm should hold in excess of Pillar 1. The PRA issued the Bank a revised ICG requirement in 2016 which came in force from 1 November 2016. Due to ongoing losses, the Bank breached its ICG throughout 2016 prior to the receipt of its new ICG and is in deficit to its new requirements at 31 December 2016. The Bank does not currently have sufficient capital resources to withstand a severe stress scenario under its current in force PRA buffer.

For any forward looking statements on capital refer to the Principal Risks and Uncertainties and Going Concern disclosures in the Annual Report and Accounts.

Key capital highlights are:

- CET1 ratio has decreased to 11.0% as at 31 December 2016 (31 December 2015: 15.5%) with a decrease in risk weighted assets of £0.7bn and a reduction in CET1 of £0.4bn.

- The Bank's leverage ratio is 2.6%, down 1.2% from 31 December 2015 reflecting the reduction in CET1 capital driven by the statutory loss in the year. The Bank is not currently subject to the 3% minimum requirement as it has retail deposit levels below £50bn, the threshold at which it becomes a binding requirement.

- The Bank is in breach of its ICG, being the PRA's statement as to the regulatory capital it expects the Bank to hold, due to the Bank's ongoing losses. The Bank met the Pillar 1 requirement throughout 2016.

3.2 Capital stress testing

The Bank uses stress testing as part of its assessment of capital adequacy within its

- Annual strategic planning process;
- ICAAP; and
- forecasting exercises.

Stress testing is embedded within the Bank's financial planning process, with stressed scenarios and sensitivities applied to the Bank's latest forecasts at least on an annual basis or more frequently where required. This enables the Bank's senior management and Board to assess the Bank's latest Plan or forecast under adverse scenarios to ensure it remains within risk appetite. Where outcomes fall outside of risk appetite, management actions are identified and embedded to return the position to within the risk appetite or they are either risk accepted.

Scenarios capture a selection of macroeconomic variables including GDP, interest rates, unemployment, house prices and commercial real estate prices. An example scenario includes Euro sovereign debt concerns and weakening global economic activity causing UK exports to recede. The Bank also performs stress testing against PRA defined scenarios, as well as its own bespoke idiosyncratic scenarios.

Individual business areas prepare business plans as part of the Strategic Planning process. Stress testing models are utilised to stress business plans over a forward looking planning horizon.

Stress testing results are prepared on both a pre and post management action basis, and compared to both risk appetite and minimum regulatory requirements. Review and challenge of stress testing results are undertaken by the business and the second line of defence as part of the Bank's RMF.

The Bank also undertakes reverse stress testing to assess the point at which the Bank is likely to fail on both an individual and combined event basis. The Bank currently has limited resiliency to severe stress.

The Co-operative Bank was a participant in the Bank of England 2014 UK concurrent stress test of the eight major UK banks and building societies. This was designed specifically to assess resilience to a very severe housing market shock and to a sharp rise or change in interest rates. This was not a forecast or expectation by the Bank of England regarding the likelihood of a set of events materialising, but a coherent severe 'tail risk' scenario.

Results of this exercise were published on 16 December 2014 and can be found on the Bank of England website: www.bankofengland.co.uk
As a result of the stress test the Bank submitted a Revised Plan which was accepted by the PRA in December 2014. This Plan was designed to enable the Bank to withstand a severe stress by the end of the planning horizon.

Following the stress assessment the Bank was not included in the 2015 or 2016 Bank of England stress test, as these tests are designed to assess resilience to a deterioration in global economic conditions. The Bank was not included as a result of the size of the Bank's balance sheet, which is significantly smaller than the other Banks that were included in the stress test; therefore the resilience of the Bank is unlikely to affect the resilience of the financial system as a whole.

The Bank remains a non-member of the UK concurrent stress testing regime. However, as part of its annual planning process the Bank undertakes appropriate stress testing and the results are discussed with the regulator as part of the ICAAP submission.

3.3 Capital adequacy

CET1 ratio has decreased to 11.0% from 15.5% as at 31 December 2015. This reflects a reduction in CET1 of £0.4bn partially offset by a decrease in risk weighted assets of £0.7bn. The move in CET1 reflects a £418.7m regulatory loss for the year.

Non-core RWAs have reduced from £2.8bn to £2.0bn, driven by the continued deleverage of the Legacy Portfolio and natural run off within Optimum.

Core Credit Risk RWAs have increased by £0.2bn primarily driven by an overall increase in the mortgage portfolio. Operational Risk RWAs have decreased by £0.2bn following the annual recalculation of the Pillar 1 operational risk requirement subsequent to the 2015 year end results.

3.4 Capital ratios

The Bank's capital ratios are as follows:

Table 3 Capital ratios

	2016	2015
Common Equity Tier 1 ratio	**11.0%**	15.5%
Tier 1 ratio	**11.0%**	15.5%
Total Capital Ratio	**17.7%**	21.6%

Within its Policy Statement PS7/13, the PRA implemented CET1 deductions and prudential filters in full. The 2016 minimum CET1 ratio is 4.5% and minimum Tier 1 ratio is 6.0%. The Bank has no AT1 capital in issue as at 31 December 2016 and thus the Bank's CET 1 ratio minimum aligns to the Tier 1 ratio minimum of 6.0%. As at 31 December 2016 the Bank's CET1 ratio of 11.0% is 5.0% higher than the 6.0% minimum CET1 ratio and the Bank's Tier 1 ratio of 11.0% is 5.0% higher than the 6.0% minimum Tier 1 ratio.

3.5 Capital buffers

The Bank is not classified as a Global Systemically Important Institution (G-SII), and hence does not have a requirement to hold a G-SII buffer. The Bank is also not defined as an Other Systemically Important Institution (O-SII) by the PRA and hence does not have a requirement to hold an O-SII buffer; furthermore HM Treasury has also confirmed that it will set the UK O-SII buffer at 0%.

The capital conservation buffer introduced from 1 January 2016 includes a transitional requirement and increases by 0.625% per annum until the final requirement of 2.5% is reached from 1 January 2019. The capital conservation buffer was 0.625% as at 31 December 2016.

The Bank is required to calculate its institution specific countercyclical buffer dependent upon the geographic location of obligors. The European Commission published a Regulatory Technical Standard (EU Regulation No 1152/2014) in 2014 to define the location of obligor. Under this methodology, the Bank's exposures can all be classified as UK. The UK countercyclical buffer rate is therefore directly applicable to the Bank. The Financial Policy Committee confirmed in November 2016 that the UK countercyclical buffer rate remains at 0%.

Table 4 Countercyclical capital buffer

The table below shows the countercyclical capital buffer requirement.

	General credit exposures		Trading book exposures		Securitisation exposures		Own funds requirements. Of which exposures:					
Country:	SA £m	IRB £m	SA £m	Internal models £m	SA £m	IRB £m	General credit £m	Trading book £m	Securi-tisation £m	Total £m	Own fund weight %	CCyB %
All individual countries greater than or equal to a 2% own funds requirement weighting												
UK	869.7	20,157.1	-	-	-	2,739.2	393.8	-	59.1	453.0	100.00%	0.00%
Total	869.7	20,157.1	-	-	-	2,739.2	393.8	-	59.1	453.0	100.00%	0.00%

Amount of institution specific countercyclical capital buffer	
Total risk exposure amount	23,766.0
Countercyclical buffer rate	0.00%
Countercyclical buffer requirement	0.0

3.6 Capital resources

The following table shows the capital resources of the Bank.

Table 5 - Total capital resources

	2016 £m	2015 £m
Common Equity Tier 1 (CET1): instruments and reserves		
Permanent share capital and the related share premium account	**1,759.5**	1,759.5
Retained earnings	**(896.4)**	(273.1)
Available for sale and cash flow hedge reserves	**94.6**	90.2
Defined Benefit Pension Reserves	**9.5**	-
Other Reserves[1]	**410.0**	410.0
CET1 before regulatory adjustments	**1,377.2**	1,986.6
CET1: regulatory adjustments		
Prudential valuation in trading book	**(5.4)**	(0.8)
Intangible assets (net of related tax liability)	**(100.1)**	(142.8)
Defined Benefit Pension	**(15.3)**	-
Deferred tax assets not arising from temporary differences	**-**	(4.0)
Cash flow hedge reserves	**(56.4)**	(34.6)
Expected loss shortfall	**(44.4)**	(30.0)
Losses for the period	**(418.7)**	(623.3)
Total regulatory adjustments to CET1	**(640.3)**	(835.5)
CET1	**736.9**	1,151.1
Additional Tier 1 (AT1) capital: instruments		
Total regulatory adjustments to AT1 capital	**-**	-
Total Tier 1 capital (T1 = CET1 +AT1)	**736.9**	1,151.1
Tier 2 (T2) capital: instruments and provisions		
Capital instruments	**447.0**	448.4
Credit risk adjustments	**-**	-
T2 capital before regulatory adjustments	**447.0**	448.4
Total regulatory adjustments to T2 capital	**-**	-
T2 capital	**447.0**	448.4
Total capital (TC = T1 + T2)	**1,183.9**	1,599.5

1. Other Reserves represent the £410m capital redemption reserve created as a result of the Bank's Liability Management Exercise (LME) in 2013.

Table 6 Movement in capital resources during the year
The following table is a flow statement of movements in the Bank's available capital resources detailing the change between opening and closing position for the period.

	2016 £m	2015 £m
CET1 capital after regulatory adjustments at the beginning of the year	**1,151.1**	1,606.9
Permanent share capital	**-**	-
Retained earnings	**-**	-
Minority interests	**-**	(6.1)
Losses for the period	**(418.7)**	(623.3)
Share premium account	**-**	-
Defined Benefit Pension Reserve	**(5.8)**	-
Deferred tax assets not arising from temporary differences	**4.0**	-
Intangible assets	**42.7**	(39.1)
Available for sale reserve	**(17.4)**	55.6
Capital Redemption Reserve	**-**	-
Expected loss shortfall	**(14.4)**	161.5
Prudent valuation	**(4.6)**	(0.4)
Unrealised gains or losses on available for sale assets (revaluation reserve)	**-**	(4.0)
CET1 capital after regulatory adjustments at the end of year	**736.9**	1,151.1
AT1 capital after regulatory adjustments at the beginning of the year	**-**	22.9
Minority Interest	**-**	(22.9)
AT1 capital after regulatory adjustments at the end of year	**-**	-
Total Tier 1 after regulatory adjustments at the end of year	**736.9**	1,151.1
T2 capital after regulatory adjustments at the beginning of the year	**448.4**	249.4
Paid up capital instruments and subordinated loans	**(1.4)**	252.0
Minority Interest	**-**	(0.8)
IRB Excess of provisions over expected losses eligible	**-**	(52.2)
T2 capital after regulatory adjustments at the end of year	**447.0**	448.4
Total capital resources at the end of year	**1,183.9**	1,599.5

Table 7 Reconciliation of capital resources to statutory balance sheet

Balance sheet presentation	Balance per accounts £m	Regulatory presentation	Regulatory Balance treatment £m	Cash flow hedge reserve £m	Regulatory treatment of deferred tax liabilities/ assets £m	Expected losses £m	Prudent valuation in trading book £m	Capital Resources £m
Equity								
Ordinary share capital	**22.6**	Paid up capital instruments	**22.6**	**-**	**-**	**-**	**-**	**22.6**
Share premium account	**1,736.9**	Share Premium	**1,736.9**	**-**	**-**	**-**	**-**	**1,736.9**
Retained earnings	**(1,315.1)**	Retained earnings	**(896.4)**	**-**	**-**	**-**	**-**	**(896.4)**
		Regulatory losses for the period	**(418.7)**	**-**	**-**	**-**	**-**	**(418.7)**
Available for sale reserve	**38.2**	Available for sale reserve	**38.2**	**-**	**-**	**-**	**-**	**38.2**
Cash flow hedging reserve	**56.4**	Cash flow hedging reserve	**56.4**	**(56.4)**	**-**	**-**	**-**	**-**
Defined Pension Benefit Reserve	**9.5**	Defined Pension Benefit Reserve	**9.5**	**-**	**(15.3)**	**-**	**-**	**(5.8)**
Capital redemption reserve	**410.0**	Other reserves	**410.0**	**-**	**-**	**-**	**-**	**410.0**
		Total Equity	**958.5**	**(56.4)**	**(15.3)**	**-**	**-**	**886.8**
		Non-equity						
Other borrowed funds	**447.0**	Capital instruments	**447.0**	**-**	**-**	**-**	**-**	**447.0**
Intangible assets	**(100.1)**	Intangible assets (net related tax liability)	**(100.1)**	**-**	**-**	**-**	**-**	**(100.1)**
Credit risk adjustment[1]	**112.0**	Expected loss shortfall	**112.0**	**-**	**-**	**(156.4)**	**-**	**(44.4)**
		Expected loss Tier 2 add-back	**-**	**-**	**-**	**-**	**-**	**-**
		Prudent valuation	**-**	**-**	**-**	**-**	**(5.4)**	**(5.4)**
		Total Non-Equity	**458.9**	**-**	**-**	**(156.4)**	**(5.4)**	**297.1**
		Total balances subject to own funds calculations	**1,417.4**	**(56.4)**	**(15.3)**	**(156.4)**	**(5.4)**	**1,183.9**

1. Credit risk adjustment is made up of impairment provision and credit related fair value adjustments, relating to exposures calculated under the IRB approach to credit risk which are applicable for the calculation of EL gap per CRR. Therefore the impairment provision number included in the table above relates to IRB exposures only, and is a subset of the Bank's total impairment and fair value.

The Bank's issued Capital resources defined in the above table comprise the following:

- Share Capital of 454m Ordinary shares of 5p each. The original issue date of 254m shares took place in December 2013 during the Bank's LME, where by all previous shares were cancelled. A further issuance of 200m shares took place during May 2014;
- The share premium of £1.7bn is attributable to the issuance of the Ordinary shares and reflects both the premium paid for the shares issued and the debt restructuring effected during the LME;
- Subordinated debt of £447.0m following two Tier 2 eligible debt issuances. During the LME, £206m was issued with an additional issuance of £250m during July 2015. The amount held as Tier 2 is the net amount excluding the cost of issuance to be amortised over the term.

Further details including any specific terms of the Ordinary Shares and Tier 2 instruments can be found in Appendix 2. Full details of the Terms & Conditions of the Ordinary Shares can be found in the Articles of the Association on the Bank's website: www.co-operativebank.co.uk/investorrelations

3.7 Pillar 1 capital requirements and Risk Weighted Assets

The following table analyses the Pillar 1 capital requirement by approach and exposure class. In the table below and throughout the document, unless otherwise stated, the documented exposures are reported as EAD (see Table 11). For IRB exposures EAD is defined as the amount estimated to be outstanding at the time of default, including the estimation of credit conversion factors to undrawn commitments. For standardised exposures EAD includes undrawn commitments post credit conversion factors defined in CRR Article 111 and is net of eligible provisions.

In accordance with CRR Article 150 (Conditions for permanent partial use) the Bank has received permission from the regulator to exempt its exposures to certain counterparty classes, namely Central governments and central banks and Multilateral development banks from the IRB Approach for the purposes of the calculation of both risk-weighted exposure and expected loss amounts, instead applying the Standardised Approach for these exposures.

The Bank does not hold exposure positions in all exposure classes as defined within CRR. The exposure classes not applicable to the Bank and which haven't been presented in the tables disclosing exposures classes throughout this document are as follows:

- IRB approach: Central government and central bank, Retail SME, Equity exposures and Other non-credit obligation assets; and
- Standardised approach: International organisations, Securitisation positions, Exposures associated with particularly high risks, Short term claims on institutions and corporates and Collective investment undertakings.

The following table analyses the capital requirements by approach and exposure class:

Table 8 Pillar 1 capital requirements
2016

IRB exposure class	Capital requirement £m	Risk weighted asset £m	Exposure at default £m	Average risk weight %	Average exposure at default £m
Institutions	12.3	153.3	582.4	26%	787.8
Corporates	41.2	515.5	945.4	55%	1,075.1
Retail secured by immovable property	174.9	2,186.7	16,124.4	14%	15,873.5
Qualifying revolving retail exposures	33.3	415.8	1,935.9	22%	1,980.5
Retail other non-SME	13.4	167.8	181.5	93%	254.9
Securitisation positions	59.1	739.2	2,622.7	28%	2,835.2
Total IRB	334.2	4,178.3	22,392.3	19%	22,807.0
Specialised lending	68.0	850.0	1,093.4	78%	1,328.2
Standardised exposure class					
Central government or central banks	-	-	4,572.7	-	4,653.7
Regional governments or local authorities	-	0.6	2.9	21%	3.4
Public sector entities	0.2	2.9	14.7	20%	18.5
Multilateral development banks	-	-	530.2	-	520.5
Institutions	10.0	125.1	73.1	171%	73.9
Corporates	19.3	241.0	241.0	100%	283.6
Retail exposures	3.8	46.9	62.6	75%	67.9
Secured by mortgages on immovable property[1]	-	0.1	0.2	75%	0.2
Exposures in default	1.5	18.3	13.0	141%	35.2
Covered bonds	-	-	-	-	-
Equity exposures	4.9	61.8	52.8	117%	55.4
Other items[2]	33.5	419.0	467.2	90%	584.6
Total standardised	73.2	915.7	6,030.4	15%	6,296.9
Total credit risk	475.4	5,944.0	29,516.1	20%	30,432.1
Total market risk	-	-	N/A	N/A	N/A
Operational risk	58.6	732.1	N/A	N/A	N/A
Total Pillar 1	534.0	6,676.1	N/A	N/A	N/A

2015

IRB exposure class	Capital requirement £m	Risk weighted asset £m	Exposure at default £m	Average risk weight %	Average exposure at default £m
Institutions	17.6	220.5	836.0	26%	945.8
Corporates	48.6	606.9	1,152.2	53%	1,220.5
Retail secured by immovable property	159.0	1,987.5	15,563.6	13%	16,764.9
Qualifying revolving retail exposures	35.6	444.9	2,031.9	22%	2,075.8
Retail other non-SME	23.6	294.4	288.7	102%	350.9
Securitisation positions	52.7	658.2	3,038.0	22%	2,501.1
Total IRB	337.1	4,212.4	22,910.4	18%	23,859.0
Specialised lending	104.0	1,299.4	1,496.2	87%	2,085.7
Standardised exposure class					
Central government or central banks	-	-	5,465.4	0%	7,092.9
Regional governments or local authorities	0.1	1.0	5.0	20%	11.3
Public sector entities	0.3	4.0	20.0	20%	27.9
Multilateral development banks	-	-	500.9	0%	557.2
Institutions	8.6	107.7	72.8	148%	185.8
Corporates	25.6	320.1	320.1	100%	648.1
Retail exposures	4.6	58.1	77.4	75%	113.0
Secured by mortgages on immoveable property[1]	-	0.1	0.2	75%	28.4
Exposures in default	4.8	60.4	41.0	147%	50.2
Covered bonds	-	-	-	-	70.8
Equity exposures	5.4	67.8	60.5	112%	21.1
Other items[2]	30.9	386.6	461.8	84%	609.6
Total standardised	80.3	1,005.8	7,025.1	14%	9,416.3
Total credit risk	521.4	6,517.6	31,431.7	21%	35,361.0
Total market risk	-	-	N/A	N/A	N/A
Operational risk	72.4	905.3	N/A	N/A	N/A
Total Pillar 1	593.8	7,422.9	N/A	N/A	N/A

1. The Standardised Secured by mortgages on immovable property class contains a small number of legacy mortgages not included within the IRB portfolio. The 75% RW% is accurate however due to the small level of exposure rounded values do not allow the arithmetic calculation in the table.
2. Other items relate to accounting adjustment applied to customer balances and investments, and non-customer related assets on the balance sheet (e.g. Cash, Property Plant & Equipment, Tax).

Counterparty risk arising from derivative exposures is reported within the appropriate exposure classes, dependent upon the counterparty classification.

Institutions calculated under the standardised approach include £95.2m of RWA’s (2015: £145.0m) and £7.6m (2015:12.0m) capital requirement relating to the calculation of Credit Valuation Adjustments for derivatives.

The Bank does not have a trading book.

Table 9 Flow statement of Risk Weighted Assets

A flow statement for the movement in Credit risk RWAs during the year is set out in the table below:

	Corporate £m	Retail Unsecured £m	Retail Secured £m	Treasury £m	Other £m	Total £m
Credit Risk RWAs as at 31 December 2015	**2,289.9**	**799.4**	**1,956.4**	**1,017.5**	**454.4**	**6,517.6**
Book size[1]	**(438.8)**	**(109.3)**	**186.0**	**7.5**	**(34.6)**	**(389.2)**
Book quality[2]	**(92.0)**	**(19.8)**	**21.4**	**-**	**37.6**	**(52.8)**
Model updates[3]	**-**	**-**	**22.9**	**-**	**-**	**22.9**
Methodology and policy[4]	**-**	**-**	**-**	**-**	**34.2**	**34.2**
Acquisitions and Disposals[5]	**(133.2)**	**(37.3)**	**-**	**(7.4)**	**(10.8)**	**(188.7)**
Credit Risk RWAs as at 31 December 2016	**1,625.9**	**633.0**	**2,186.7**	**1,017.6**	**480.8**	**5,944.0**

1. Book size - organic changes in book size and composition (including new business, maturing loans and individual customer deleverage).
2. Book quality - quality of book changes caused by experience such as underlying customer behaviour or demographics, including changes through model calibrations/realignments.
3. Model updates - Model implementation, change in model scope or any change to address model malfunctions.
4. Methodology and policy - methodology changes to the calculations including those driven by regulatory policy change.
5. Acquisitions and Disposals - significant acquisition or disposal of distinct portfolios.

Corporate RWAs have reduced by 29.0% during 2016, predominantly as a result of the decrease in book size (29.0% reduction in Standardised, 35.0% reduction in Specialised Lending and 16.0% reduction in other Foundation IRB portfolios). This continues to be driven by the deleveraging activity within the Legacy portfolio with £133.2m attributable to the corporate asset disposals in 2016. Book size has decreased more generally due to reduced Wholesale lending activity. The key reductions in RWAs have been observed in the property sector £(324.0)m.

The movement in Retail Unsecured RWAs has largely been driven by a decrease in book size with small decline in asset quality, across loans (£100.3m lower RWA) and credit cards (£30.3m lower RWA). The £37.3m RWA movement within 'Acquisitions and Disposals' can be attributed to a £45m debt sale in December 2016.

Retail Secured RWA's increased by 11.8% to £2,186.7m, driven mainly by an increase in book size due to higher lending volumes on Platform new business. New lending resulted in an EAD increase of £3.4bn and a £402.0m RWA increase, offset largely by amortisation/maturity of other Secured portfolios resulting in an EAD decrease of £2.1bn and RWA decrease of £206.0m. Secured RWA was also impacted by the addition of a £22.9m temporary model adjustment to cover deficiencies in the implementation of the Secured LGD models.

Table 10 Reconciliation of statutory balance sheet to gross drawn credit risk exposure

The table below reconciles the statutory balance sheet included within the Annual Report and Accounts to gross drawn credit risk exposure.

	Balance sheet assets under the regulatory scope of consolidation £m	Credit risk adjustments £m	Derivative netting £m	Regulatory adjustments £m	Other adjustments £m	Gross drawn credit risk exposure £m
Cash and balances with central banks	**2,848.2**	**-**	**-**	**-**	**(50.5)**	**2,797.7**
Loans and advances to banks	**836.9**	**-**	**-**	**-**	**(10.4)**	**826.5**
Loans and advances to customers	**19,584.3**	**139.4**	**-**	**-**	**(226.6)**	**19,497.1**
AFS financial assets	**3,538.1**	**-**	**-**	**-**	**-**	**3,538.1**
Treasury bills/other eligible bills	**13.8**	**-**	**-**	**-**	**-**	**13.8**
Derivatives and SFTs (e.g. reverse repos)	**425.5**	**-**	**(74.4)**	**17.0**	**(7.5)**	**360.6**
Equity shares	**46.8**	**-**	**-**	**-**	**-**	**46.8**
Investments in group undertakings	**6.0**	**-**	**-**	**-**	**-**	**6.0**
Intangible assets	**100.1**	**-**	**-**	**(100.1)**	**-**	**-**
Deferred tax assets	**-**	**-**	**-**	**-**	**6.7**	**6.7**
Other assets	**188.6**	**-**	**-**	**-**	**271.9**	**460.5**
Total balance sheet	**27,588.3**	**139.4**	**(74.4)**	**(83.1)**	**(16.4)**	**27,553.8**

Table 11 Reconciliation of gross drawn credit risk exposure to Exposures at Default

	Gross drawn exposure £m	Off-balance sheet items under regulatory scope £m	Gross exposure pre-CRM £m	Credit conversion factor %	Credit risk mitigation £m	Net exposure post-CRM £m	Other regulatory adjustments £m	Exposure at default £m
IRB approach								
Central government and central bank	-	-	-	-	-	-	-	-
Institutions	889.7	427.6	1,317.3	0%	(734.9)	582.4	-	582.4
Corporates	1,918.0	178.7	2,096.7	73%	(0.4)	2,047.3	(8.5)	2,038.8
Retail secured by immovable property	15,354.8	459.9	15,814.7	91%	-	15,771.4	353.0	16,124.4
Qualifying revolving retail exposures	442.3	1,622.0	2,064.3	91%	-	1,917.3	18.6	1,935.9
Retail other non-SME	181.5	-	181.5	-	-	181.5	-	181.5
Securitisation positions	2,739.2	-	2,739.2	-	(116.5)	2,622.7	-	2,622.7
Total	**21,525.5**	**2,688.2**	**24,213.7**		**(851.8)**	**23,122.6**	**363.1**	**23,485.7**
Standardised approach								
Central government or central banks	4,500.9	-	4,500.9	-	71.5	4,572.7	-	4,572.7
Regional governments or local authorities	2.5	1.6	4.1	23%	-	2.9	-	2.9
Public sector entities	14.7	3.0	17.7	0%	-	14.7	-	14.7
Multilateral development banks	530.2	-	530.2	-	-	530.2	-	530.2
Institutions	134.8	831.5	966.3	0%	(893.1)	73.1	-	73.1
Corporates	235.6	23.0	258.6	29%	(1.2)	241.0	-	241.0
Retail exposures	62.6	-	62.6	-	-	62.6	-	62.6
Secured by mortgages on immoveable property	0.2	-	0.2	-	-	0.2	-	0.2
Exposures in default	26.8	1.4	28.2	36%	(0.4)	26.8	(13.8)	13.0
Equity exposures	52.8	-	52.8	-	-	52.8	-	52.8
Other items	467.2	-	467.2	-	-	467.2	-	467.2
Total	**6,028.3**	**860.5**	**6,888.8**		**(823.2)**	**6,044.2**	**(13.8)**	**6,030.4**
Overall total	**27,553.8**	**3,548.7**	**31,102.5**		**(1,675.0)**	**29,166.8**	**349.3**	**29,516.1**

The Off-balance sheet items include future commitments to lend subject to conversion factors and Repurchase Agreements (Repos) that are required under regulatory scope. Credit Conversion Factors (CCF) applicable under the Standardised approach per CRR Article 111 are 0%, 20%, 50% or 100% dependent upon the credit facility available. Where values differ in the table above this is a result of a mixed basis of credit facility within the given exposure class. CCF for IRB exposure classes relate specifically to Off-Balance sheet exposures calculated by the EAD model.

Credit Risk Mitigation (CRM) has been calculated in line with CRR regulation Part 3, Title II, Chapter 4. For IRB institutions, £508.1m of the CRM relates to pledged collateral against Repos and £226.8m relates to derivative collateral. For standardised institutions, £803.2m of the CRM relates to pledged collateral against Repos and £89.9m relates to derivative collateral

Net exposure post-CRM is the sum of gross drawn exposures and Off-balance sheet items following the application of CCF and CRM. EAD is the final exposure value used in the calculation of capital following the application of Other regulatory adjustments.

Other regulatory adjustments in the IRB section relate specifically to the amount applied to drawn exposures calculated by the EAD model.

Other regulatory adjustments in the Standardised section relate specifically to the allocation of Provisions and relate to Corporate exposures within the Exposures in default asset class.

Refer to Table 16 for EAD movements by exposure class and residual maturity between 2015 and 2016.

3.8 Leverage Ratio

Table 12 Leverage ratio common disclosure

		2016 £m	2015 £m
	On-balance sheet exposures (excluding derivatives and STFs)		
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	**26,999.5**	28,751.0
2	(Asset amounts deducted in determining Tier 1 capital)	**(221.6)**	(212.2)
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)**	**26,777.9**	28,538.8
	Derivative exposures		
4	Replacement cost associated with all derivatives transactions (i.e. net of eligible cash variation margin)	**318.8**	244.0
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	**42.9**	100.5
EU -5a	Exposure determined under Original Exposure Method	**-**	-
6	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	**316.7**	229.3
7	(deductions of receivables assets for cash variation margin provided in derivatives transactions)	**-**	-
8	(Exempted CCP leg of client-cleared trade exposures)	**-**	-
9	Adjusted effective notional amount of written credit derivatives	**-**	-
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	**-**	-
11	**Total derivative exposures**	**678.4**	573.8
	Securities financing transaction exposures		
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	**1,436.1**	731.4
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	**(1,347.4)**	(671.3)
14	Counterparty credit risk exposure for SFT assets	**36.1**	26.0
EU-14a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of regulation (EU) No 575/2013		
15	Agent transaction exposures	**-**	-
EU-15a	(Exempted CCP leg of client-cleared SFT exposure)	**-**	-
16	**Total securities financing transaction exposures**	**124.8**	86.1
	Other off-balance sheet exposures		
17	Off-balance sheet exposures at gross national amount	**2,289.6**	2,592.8
18	(Adjustments for conversion to credit equivalent amounts)	**(1,471.0)**	(1,654.2)
19	**Total off-balance sheet exposures**	**818.6**	938.6
	Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)		
EU- 19a	(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation EU No 575/2013 (on and off balance sheet))	**-**	-
EU-19b	(Exposures exempted in accordance with Article 429(14) of Regulation (EU)No 575/2013 (on and off balance sheet)	**-**	-
	Capital and total exposures		
20	**Tier 1 capital**	**736.9**	1,15.1
21	**Total leverage ratio exposures**	**28,399.7**	30,137.3
	Leverage ratio		
22	**Leverage ratio**	**2.6%**	3.8%
	Choice on transitional arrangements and amount of derecognized fiduciary items		
EU-23	Choice on transitional arrangements for the definition of the capital measure	Fully phased in	
EU-24	Amount of derecognised fiduciary items in accordance with Article 429(11) or Regulation (EU) No 575/2013		

The leverage ratio has been calculated using the exposure basis within the European Commission delegated act.

Table 12a LRQua: Leverage ratio common qualitative disclosure

1	**Description of the processes used to manage the risk of excessive leverage**
	The Bank is not subject to a regulatory minimum in relation to the leverage ratio however, leverage ratio remains embedded within the Bank's Planning and Reporting processes. The leverage ratio is part of the Bank's risk appetite framework, and is part of the management information provided to the Asset and Liability Committee (ALCO) and Capital Management Forum (CMF) and is a key consideration in the Bank's Strategic Planning process. Additionally, the leverage ratio is stressed as part of the Bank's ICAAP.
2	**Description of the factors that had an impact on the leverage ratio during the period to which the disclosed leverage ratio refers**
	The Bank's leverage ratio is 2.6%, down 1.2% from 31 December 2015 reflecting the reduction in CET1 capital driven by the statutory loss in the year. Leverage ratio exposures have reduced by £1.7bn primarily as a result of contraction in the Bank's balance sheet particularly the Non-core portfolios.

Table 13 Summary reconciliation of accounting assets and leverage ratio exposures

		2016 £m	2015 £m
1	Total assets as per published financial statements	**27,588.3**	29,028.3
2	Adjustments for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	**-**	-
3	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio exposure measure in accordance with Article 429 (13) of Regulation (EU) No 575/2013 "CRR")	**-**	-
4	Adjustments for derivative financial instruments	**252.9**	203.7
5	Adjustment for securities financing transactions "SFTs"	**(53.9)**	86.1
6	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	**818.6**	938.6
EU-6a	(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	**-**	-
EU-6b	(Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013)	**-**	-
7	Other adjustments	**(206.2)**	(119.4)
8	**Total Leverage ratio exposure**	**28,399.7**	30,137.3

Table 14 LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)

		2016 £m	2015 £m
EU-1	**Total on-balance sheet exposures (Excluding derivatives, SFTs and exempted exposures) of which:**	**26,999.5**	28,751.0
EU-2	Trading book exposures	**-**	-
EU-3	**Banking book exposures, of which:**	**26,999.5**	28,751.0
EU-4	Covered bonds	**-**	-
EU-5	Exposures treated as sovereigns	**5,102.8**	5,966.4
EU-6	Exposures to regional governments, MDB, international organisations and PSE NOT treated as sovereigns	**17.2**	22.1
EU-7	Institutions	**328.9**	582.2
EU-8	Secured by mortgages of immovable properties	**15,480.3**	14,849.9
EU-9	Retail exposures	**643.0**	737.4
EU-10	Corporate	**1,890.9**	2,456.2
EU-11	Exposures in default	**283.7**	442.9
EU-12	Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	**3,252.7**	3,693.9

4. Risk Management Governance

4.1 Overview

The Bank has a formal structure for identifying, reporting, monitoring and managing risks. This comprises, at its highest level, of Risk Appetite statements which are set and approved by the Board and are supported by granular Risk Appetite measures across the Bank's principal risk categories. This is underpinned by a Risk Management Framework (RMF) which sets out the high level policy, standards, roles, responsibilities, governance and oversight for the management of all risks across the Bank.

During 2016 the Bank continued to review its RMF which focused on aligning roles and responsibilities between the 1st and 2nd lines of defence, updating the Bank's policy framework and the Bank's committee structure.

Material risks and issues, whether realised or emerging, inclusive of those observed in relation to the RMF itself are detailed within the Principal Risks and Uncertainties of the Annual Report and Accounts.

4.2 Risk governance structure

The diagram below illustrates the Bank's governance structure as at the end of 2016. The Bank continues to review and refine this structure.

<table>
<tr><th colspan="2">Board Committee</th><th colspan="2">Executive committee</th><th>Executive sub committee</th><th>Sub committee</th></tr>
<tr><td rowspan="6">The Co-operative Bank PLC Board</td><td rowspan="6">Remuneration Committee
Audit Committee
Risk Committee
Nomination Committee
Value & Ethics Committee</td><td rowspan="6">CEO</td><td rowspan="6">Executive Committee (ExCo)</td><td>Transformation Committee (TC)</td><td>Bank Design Authority (BDA)
Project Oversight Committee (POC)</td></tr>
<tr><td>Executive People Committee (EPC)</td><td>Diversity Committee</td></tr>
<tr><td>Assets and Liability Committee (ALCO)</td><td>Strategic Transaction Committee (STC)
Pension Strategy Committee</td></tr>
<tr><td>Enterprise Risk Oversight committee (EROC)</td><td>Credit Risk Oversight Committee (CROC)
Operational Risk Oversight Committee (OROC)
Conduct & Regulatory Risk Oversight Committee (CRROC)</td></tr>
<tr><td>Technology Steering Committee (TSC)</td><td></td></tr>
<tr><td>Model and Rating System Oversight Committee (MRSOC)</td><td>Model Risk Management Review Committee (MRMRC)</td></tr>
</table>

4.3 Executive and management committees

The Board is the key governance body and is responsible for the Bank's strategy, performance, and ensuring appropriate and effective risk management. It has delegated responsibility for the day to day running of the business to the Chief Executive. The Chief Executive has established the Executive Committee to assist in the management of the business and deliver against the strategy in an effective and controlled manner.

The Board has established Board Committees and senior management committees as well as appropriate forums to oversee the RMF, including identifying the key risks facing the Bank and assessing the effectiveness of any risk management actions.

Committee	Reports to:	Risk focus
Board		The Board has collective responsibility for the long term success of the Bank. Its role is to provide leadership of the Bank within a framework of prudent and effective controls which enable risk to be assessed and managed. It sets the Bank's values and standards and ensures that its obligations to its shareholders, customers and other stakeholders are understood and met. The Board sets the Bank's strategy and approves plans presented by management for the achievement of the strategic objectives it has set. It determines the nature and extent of the significant risks it is willing to take in achieving its strategic objectives and is responsible for ensuring maintenance of sound risk management and internal control systems.
Risk Committee of the Bank (RC)	Board	RC is responsible for the review and reporting of its conclusions to the Board in respect of the Bank's risk appetite and RMF, taking a forward looking perspective and anticipating changes in business conditions.

Committee	Reports to:	Risk focus
Executive Committee (ExCo)	CEO	ExCo is responsible for defining and successfully implementing the Board approved strategy by monitoring and managing delivery against plan and applying appropriate risk management actions to emerging risks.
Transformation Committee (TC)	ExCo	TC is responsible for ensuring the successful implementation, prioritisation and funding of projects across the Bank in line with the Board's strategic plan. As such the committee assists the Chief Operating Officer (COO) in prioritising projects within available resources and agreed investment budgets, overseeing the Bank's change funding position and the Bank's change policies, as well as processes and standards to effectively manage the Bank's change risk profile.
Executive People Committee (EPC)	ExCo	EPC provides assurance on the effectiveness of the Bank's people management policies and procedures. EPC is responsible for the review of key people data within the Bank such as headcount, retention and to oversee the hiring of senior, business critical or regulatory roles and all remuneration policies below the Executive level. There is also a Diversity Committee reporting into EPC.
Asset and Liability Committee (ALCO)	ExCo	ALCO is primarily responsible for overseeing the management of capital, market, earnings, liquidity and funding risks. Its responsibilities include identifying, managing and controlling the Bank's balance sheet risks in executing its chosen business strategy, ensuring that the capital and liquidity position of the Bank is managed in line with policy and that adequate capital is maintained at all times, overseeing and monitoring relevant risk control frameworks and recommending relevant principal risk policies, detailed risk appetite limits for approval and approval of all product pricing proposals. There is also a Pension Strategy Committee reporting into ALCO.
Enterprise Risk Oversight Committee (EROC)	ExCo	EROC provides a mechanism to ensure all the Bank's risks are reviewed, challenged and approved in line with decisions made at the ExCo (with escalation to RC where required). EROC achieves some of its objectives through delegating responsibility to sub-committees, Conduct & Regulatory Risk, Operational Risk and Credit Risk Oversight Committees. The sub-committees will approve, discuss or note papers and escalate to the EROC where relevant or where required by governance. EROC will escalate where appropriate to the Board via RC.
Model & Rating System Oversight Committee (MRSOC)	ExCo	MRSOC is an executive sub-committee authorised by and reporting into the Bank's ExCo with an additional reporting channel via the Chief Risk Officer (CRO) to RC. The primary objective of the committee is to support the CRO in ensuring, on an ongoing basis, that the Bank's rating systems and material models are operating effectively. This includes providing executive level review and challenge of the Bank's model risk and the impact of model risks on the Bank's business model and strategy.
Technology Steering Committee (TSC)	ExCo	TSC acts to support the Chief Technology Officer (CTO) in developing and executing the Bank's IT strategy. The TSC provides a forum for Executive input to strategic IT decisions, policy, planning and prioritisation, maintaining alignment between IT strategy and Business strategy. TSC assesses potential risks and benefits from future technology changes.
Project Oversight Committee (POC)	TC	POC is responsible for overseeing and challenging the delivery of the Bank's Change Portfolio ensuring there is clarity of delivery outcomes, that benefits are delivered within the agreed time, cost and quality thresholds, that sponsors have the necessary executive support to deliver successfully and that key risks and issues threatening delivery are being effectively managed.
Bank Design Authority (BDA)	TC	BDA is a forum that acts as the guardian of how the Bank's Strategy is implemented. The forum oversees and directs strategic design choices relating to proposed changes to the Bank's operating model from a customer, business process, colleague, data, technology, finance, and risk perspective.

Strategic Transactions Committee (STC)	ALCO	STC reviews, challenges and approves (where permitted within the authority delegated to it) strategic transactions designed to achieve a de-leveraging of the balance sheet in line with the strategy outlined by the Board for Non-core assets. In making its decisions it ensures that sanctioned deals are approved in line with delegated financial authorities and risk assessments are carried out by the CRO or other directors in the Risk function.
Credit Risk Oversight Committee (CROC)	EROC	CROC's purpose is to monitor significant credit risks and issues with the entire credit life cycle, the controls and management actions being taken to mitigate them and to hold to account the executives responsible for actions. This includes, but is not limited to, proposing, monitoring and reviewing the credit risk appetite (current and emerging) of the Bank ensuring that key risk exposures are managed within risk appetite, and reported to EROC, and that appropriate mitigating actions are taken; and that operational adherence to the RMF through a process of ongoing continuous improvement and review of the credit risk strategy is achieved while making recommendations to EROC as appropriate.
Operational Risk Oversight Committee (OROC)	EROC	OROC oversees the design and maintenance of the Bank's Operational Risk Framework and the risk control frameworks. In addition to this the OROC recommends to the CEO, CRO and the EROC relevant underlying policies and detailed risk appetite limits for approval.
Conduct and Regulatory Risk Oversight Committee (CRROC)	EROC	CRROC provides oversight of the Bank's RMF in respect of regulatory, conduct, fraud, anti-money laundering and product risks.
Model Risk Management Review Committee (MRMRC)	MRSOC	MRMRC is a sub-committee of MRSOC. MRMRC supports MRSOC in ensuring, on an ongoing basis, that the Bank's rating systems and models are operating effectively. This includes providing review and challenge to the outputs of the model Working Groups, reviewing assumptions, limitations, sensitivities, impacts etc. in light of the Bank's wider business model and strategy. The committee is required to authorise or reject Medium materiality models and to reject or recommend High materiality models to MRSOC.

A number of senior management committees are supported by either management forums or sub-committees. The purpose of these is to assist the senior management committees to exercise their respective mandate. They either do not hold any delegated authorities or decision making powers as these are retained by the respective senior management committee or they have some limited delegated authority for specific tasks. The key forums and sub-committees are:

Forums/Sub-committees	Risk focus
Liquidity and Market Risk Forum (LMRF)	The LMRF is a forum reporting to the ALCO. The role of the LMRF is to define the lower level governance requirements for liquidity and market risk across the Bank. The forum oversees and challenges all aspects of liquidity and market risk management and makes appropriate recommendations to ALCO as required.
Capital Management Forum (CMF)	The role of the CMF is to review, challenge and monitor the Bank's capital adequacy, in line with Capital policy and within risk appetite and review of capital adequacy stress testing. The CMF is responsible for making recommendations to ALCO as appropriate.
Secured Funding Review Forum (SFRF)	The primary monitoring of SFRF is via the forum and is responsible for making appropriate recommendations to ALCO as required.
Strategic Asset Review Committee (SAR)	SAR is a committee, established by Legacy Portfolio Operating Committee for the strategic review of Corporate Performing and Non-performing assets within Legacy Portfolio. Lending proposals presented to SAR are sanctioned within the Credit Discretion Matrix.
Treasury Credit Risk Management Forum (TCRMF)	The Treasury Credit Risk Management Forum is a management forum that supports the Treasury Risk Director in discharging his duties with regard to the approval and management of credit limits extended to Treasury counterparties. TCRMF oversees and challenges all aspects of credit risk management within the Bank in relation to Treasury activity defining the lower level governance requirements and making recommendations accordingly.

4.4 Risk Committee (RC)

The Risk Committee met in total nine times during the financial year. In performing its duties, the Committee has access to the services of the Chief Risk Officer, the Chief Executive Officer, the Chief Financial Officer, the Director of Internal Audit and the General Counsel, as well as external professional advisors. To support the interplay between the role of the Risk Committee and the Audit Committee, the Chairman of the Audit Committee is a member of the Risk Committee and the Chairman of the Risk Committee is a member of the Audit Committee. A member of the Remuneration Committee, Laura Carstensen, was appointed as a member of the Risk Committee to ensure that qualitative and quantitative advice is provided to the Remuneration Committee on risk weightings to be applied to performance objectives incorporated in executive remuneration. Prior to Laura's appointment to the Risk Committee Graeme Hardie, as a member of both Remuneration and Risk Committees, had provided the cross over between the work of the two committees.

During 2016 the risk management structure continued to be strengthened alongside the cultural transformation programme across the Bank. The continued embedding of the Risk Management Framework is a key component in the transformation of culture in the organisation and significant progress has been made. The Committee has worked closely with the Audit Committee to monitor risk management and internal controls.

5. Risks and their management

5.1 Overview

Risk profile of the Bank

This diagram below shows the business activities of each of the divisions of the Bank and the RWAs which reside in each division.

The Co-operative Bank plc	**Retail**	**Business Activities:** • Deposits • Credits and lending to retail	**Loans and advances to customers (£m)** 14,863.8	**RWAs (£m)** Credit risk: 1,919.9 Operational Risk: 506.8
	BaCB	**Business Activities**: • Lending to SME sector	**Loans and advances to customers (£m)** 498.0	**RWAs (£m)** Credit risk: 485.3 Operational Risk: 353.6
	Treasury & Other	**Business Activities:** • Cash flow and liquidity management, FX	**Credit risk balances (£m)** 4,814.3[1]	**RWAs (£m)** Credit risk: 1,498.4 Operational Risk: (52.6)[2]
	Non-core	**Business Activities:** • Historic corporate loans • Closed residential mortgage book	**Loans and advances to customers(£m)** 4,090.9	**RWAs (£m)** Credit risk: 2,040.4 Operational Risk: (75.7)[2]

1. Combination of Loans and advances to Banks, Investment securities and Derivative financial instruments as per the Annual Report and Accounts.
2. The capital requirement for operational risk is calculated using three prior years' operating income; both Treasury and Non-core income has been a loss resulting in a negative calculation of RWA. CRR allows for positive income values in business line activity to be offset by negative income providing the overall total is not less than zero.

5.2 Risk Management objectives and policies

5.2.1 Approach to risk management

Responsibility for risk management resides at all levels of the Bank from the Board and the Executive Committee supported by Senior Management Committees through the organisation to each business area subject to appropriate oversight. In line with this approach the Bank adopts the three lines of defence governance model which is outlined below:

- 1st Line - The Bank's business teams are the Risk Owners (ROs) and sit within the 1st Line. ROs are responsible for owning and managing all risks within the business within defined appetites, ensuring supporting procedures are written, and are responsible for reporting the performance, losses, near misses and status of risks through governance. ROs are also responsible for the design, maintenance and testing of the control environment;

- 2nd Line - The Bank's Compliance and Risk functions act as the 2nd Line of defence. The Risk Framework Owners (RFOs) generally sit within the 2nd Line and where there are exceptions for some specialist areas, and the RFO sits within 1st Line (for example; Legal and Financial Reporting), the 2nd line Risk Function will provide oversight over the RFO activities. RFOs are accountable for ensuring there is an appropriate risk framework, oversight activity, challenging and monitoring the implementation of the risk framework and underlying Policies and Control Standards;

- 3rd Line - The Bank's Internal Audit function assesses the adequacy and effectiveness of the Bank's control environment and independently challenges the overall management of the RMF.

5.3 Risk management strategy and appetite

The Board has primary responsibility for identifying the key business risks facing the Bank, approving the Bank's Risk Management Strategy which includes setting Risk Appetite which defines the type and amount of risk the Bank is prepared to accept both qualitatively and quantitatively, in pursuit of its strategic objectives. In addition the Board approves key regulatory documents including the Internal Liquidity Adequacy Assessment Process (ILAAP) and the Internal Capital Adequacy Assessment Process (ICAAP) which also includes appropriate stress testing, scenario analysis and contingency planning allowing the Board to understand the impact of potentially severe risks to ensure the Bank remains resilient to them.

The Bank's Risk Appetite is translated into specific risk measures which are tracked and monitored and reported to the appropriate risk committees of the Bank and the Board. The Bank's risk appetite framework has been designed to create clear links to the Bank's strategic planning process whereby appropriate metrics and limits for each risk category are clearly established, calibrated and reported.

5.4 Principal risk categories

The Bank has an established RMF which is defined within the RMF policy which has established principles for managing risk throughout the organisation. It sets out the principles by which the Bank defines the risk taxonomy, identifies processes, ownership, responsibilities and the risk oversight required to support effective implementation across the Bank.

However, there are four main constituent risk types that cover all the Risks within the framework taxonomy - this is articulated within the table below:

Principal Risk	Definition	Risk Taxonomy
Capital risk	Capital risk is defined as the risk that the Bank's regulatory capital is inadequate to cover its capital requirements.	• Credit Risk • Model Risk • Market Risk • Pension Risk • Strategic Risk • Operational Risk
Operational risk (subset of Capital risk)	Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or external events.	• Regulatory Risk • Conduct Risk • Product Risk • Fraud Risk • AML Risk • Financial Reporting Risk • Information & Data Risk • Payments Risk • Legal Risk • Technology Risk • Change Risk • People Risk • Third Party Supplier Risk • Physical Assets Risk (including Health & Safety) • Insurance Risk • Business Continuity Risk
Liquidity and funding risk	Liquidity and funding Risk is the risk that the Bank is unable to meet its obligations as they fall due or can only do so at excessive cost.	
Reputational risk	Reputational Risk is the risk of damage to how the Bank's reputation, brand or image are perceived by its internal or external stakeholders as a result of its conduct, performance, or the impact of operational failures or other external issues. See section1.4 of the Annual Report and Accounts for further detail.	

The Board is the key governance body and is responsible for the Bank's strategy, performance, and ensuring appropriate and effective risk management. It has delegated responsibility for the day to day running of the business to the Chief Executive. The Chief Executive has established the Executive Committee to assist in the management of the business and deliver against the strategy in an effective and controlled manner.

The Board has established Board Committees and senior management committees as well as appropriate forums to oversee the RMF, including identifying the key risks facing the Bank and assessing the effectiveness of any risk management actions - these are documented within section 4.3.

5.5 Credit risk

Credit Risk is the risk to the Bank's earnings and capital arising from a customer's failure to meet their legal and contractual obligations. The Bank's arrears strategy plays a key part to Credit Risk, it is therefore crucial that arrears management effectiveness is identified, measured, managed, monitored and reported appropriately and aligns to the Bank's Credit Risk strategy.

There are three risks with the Risk Management Framework (RMF) that underpin Credit Risk:
- Retail Credit Risk
- Corporate & Commercial Credit Risk
- Treasury Credit Risk

The objectives of the management of Retail and Corporate & Commercial Credit Risk include providing a framework to ensure that all lending within Retail & SME Bank & Legacy portfolios are responsible, appropriate, fair and consistent and that the following key Credit Risk principles are applied:
- The Bank will only lend to customers who understand the commitment(s) they are entering into
- The Bank will lend to customers whom we believe have the financial capability and willingness to meet the repayments of their credit agreement
- Lending decisions are fair and consistent for all customers
- Credit Risk and Bank wide strategies are executed appropriately and consistently
- The level of lending must be identified, monitored, measured, managed and reported in line with the Bank's risk appetite
- Strategies in support of the collection and recovery of delinquent lending are fair and consistent

The objectives of the management of Treasury Credit Risk include to control Treasury Credit Risk in accordance with limits and credit quality measures and to ensure that approved credit limits remain at appropriate levels.

Treasury Credit Risk monitors exposures against the following limits:

- Capital Consumption
- Individual counterparty or groups of counterparty
- Country
- Concentration by Internal Rating Grade (IRG) including minimum acceptable grade
- Product and tenor
- Large Exposures

5.5.1 Management of Credit risk
All authority to take credit risk derives from the Board. This authority is delegated to the CEO and CRO who may then sub-delegate to defined role holders, to use at an individual level or in their capacity as Chair at the appropriate committee. The level of credit risk authority delegated depends on seniority and experience.

The Board requires that the credit business is managed in line with the risk strategy and risk appetite set by the Board. Risk measurement is based on a set of metrics, which are aligned with the Board agreed risk appetite and support the limits framework.

The oversight of Credit Risk is undertaken by:

- The Credit Risk Oversight Committee (CROC) – see section 4.3 for a full description of the risk focus of CROC.

- The CROC has formal delegated authority from the EROC to provide oversight and reporting in relation to credit activity.

- The Treasury Credit Risk Management Forum (TCRMF) - which provides day-to-day oversight of wholesale credit risk exposure and supports the CRO in exercising their delegated lending discretion.

5.5.2 Credit risk control
Retail Credit Risk
Credit approval and individual limit setting
The Bank's criteria on retail secured and unsecured credit is to establish credit criteria that determine the balance between volume growth (generating higher income) and higher arrears and losses, so as to ensure the return is commensurate with the Bank's risk appetite, strategic objectives and enables sustainable growth. Retail credit risk related decisions are based on a combination core documentation, including, Retail Credit Risk Policy, supporting Control Standards and Lending Criteria, along with the use of bespoke scorecards derived from historical data. Monthly reporting on the performance of portfolios is provided to senior management and presented to the Bank's CROC.

Unsecured lending
Application and behavioural scorecards are used to support new lending decisions and ongoing portfolio management. These scores are used, in combination with information from Credit Reference Agencies, policy criteria and an assessment of affordability, to determine whether we will lend to an individual borrower and to set individual limits on the amount we will lend. Application scorecards are used to determine lending decisions to those customers with no or limited existing relationship with the Bank. The characteristics of existing customers are assessed on a monthly basis using behavioural scorecards and the resulting scores are used to make lending decisions for existing customers, including credit limit increases/decreases, authorisation decisions and card reissue. Decisions are generally fully automated with manual intervention only required in the event of referrals being triggered or customer appeal. The application and behavioural scorecards used for lending decisions and customer management actions form the main components of the IRB models.

Mortgage lending (credit approval)
Scorecards are also used to assess new mortgage applications. The models have all been developed based on the profile of mortgage applicants received by the specific asset class. Each model uses a combination of external credit reference data and information collected as part of the application process. The calculation of the application scores is fully automated within the application processing system. The score is used in association with lending policy and affordability checks to make a decision on whether an application will be approved. More complex higher risk applications or those outside of standard lending policy are reviewed by more senior underwriters to ensure compliance with policy and to allow expert judgment within agreed levels of authority.

Individual and portfolio limit setting
Portfolio limits are in place for specific lending sectors based on an overall assessment of our appetite for exposure to that sector. This includes an assessment of risk based on the capital requirement of each sector based on the IRB models.

Retail pricing and profitability
The IRB models, or the underlying credit risk scorecards upon which the IRB models are based, are used as inputs to pricing/profitability models across the Retail secured portfolios.

Corporate Credit Risk
The Bank's policy on new Corporate lending is to consider relatively low risk and senior (not subordinated) exposures from UK customers provided they meet the criteria contained in the corresponding sector strategy, while avoiding excess single name or sector concentrations. During 2016 very little new Corporate lending was undertaken. Individual cases which show signs of unsatisfactory performance are managed through the Strategic Asset Review (SAR). The CROC and EROC (and by exception the RC) receive regular reports on the performance of the portfolio.

Corporate lending and credit approval
The Bank operates lending criteria that requires borrowers to meet criteria as laid down in individual sector strategy guidelines and strict policy with regards to single name and sector concentrations.

Legacy Portfolio lending decisions over £250k are made by the Strategic Asset Review (SAR) group. SAR lending comprises of first and second line business and credit risk representatives where the majority of decisions are taken to set run-off or exit strategies.

Monitoring of portfolios and impairment provisioning governance is in place across the portfolios.

Wholesale Treasury credit risk
The Bank's Treasury portfolio is held primarily for liquidity management purposes and, in the case of derivatives, for the purpose of managing market risk.

The Treasury Credit Risk Policy sets out a risk based approach which monitors counterparty limits and exposure via a credit risk register. Both the counterparties and assets held are monitored against a Board approved matrix of risk tolerance and associated indicators. The credit risk register is updated for rating actions, market events and financial results as they are announced, which may influence a change in risk status and possible escalation requiring management actions and inclusion on the Watchlist.

The Treasury Risk team monitors the portfolio and Watchlists daily for appropriate risk status bandings and any associated management actions. As at 31 December 2016 there were no red (highest risk) exposures outstanding (2015: nil).

Default
For retail, defaults are recorded at account level. The definition of default for secured retail exposures is taken as 180 days past due in arrears, but also includes the relevant unlikeliness to pay elements such as bankruptcy and litigation. The definition of default for unsecured retail exposures is taken as 90 days past due and also includes relevant unlikeliness to pay elements.

For the Corporate portfolio defaults are recorded at borrower level and is defined as being one or more of the following:
- where the Bank considers that the borrower is unlikely to repay its credit obligations without recourse by the Bank to actions such as realising security (if held) or the borrower has committed an act of default (i.e. bankruptcy, filing for administration, liquidation etc.); and/or
- the borrower is past due more than 90 days on any material credit obligation.

For wholesale exposures, default is deemed to have occurred following:
- a missed or delayed contractually obliged interest or principle payment (excluding missed payments cured within an agreed grace period);
- a bankruptcy filing or legal receivership by the obligor that will likely cause a miss or delay in future obligated debt service payments;
- a distressed exchange or debt restructure resulting in a diminished value relative to the original obligation.

5.5.3 Models used

5.5.3.1 Retail models residential mortgages

Probability of Default (PD) models

Underlying scorecards are calibrated to provide a PD for each loan. The application credit score is used for new lending to determine PD up until sufficient internal account performance data is available, at which time the behaviour score will be used to determine PD. The ratings philosophy of the PD models is deemed to be hybrid with the point-in-time score mapped to a long run average PD grade. The long run grades have been determined using historical data and an assessment of PD performance over an economic cycle.

Loss Given Default (LGD) models

The key components of the LGD models are the Probability of Possession given Default (PPD) and expected shortfall, calibrated to reflect a downturn environment. Any post sale recoveries are excluded from the loss estimate. The expected shortfall calculation uses an estimate of house price at sale, a forced sale discount, projected balances (Exposure At Default) and costs, along with time to possession and sale parameters and standard discounting principles.

5.5.3.2 Qualifying revolving and other retail exposures

Probability of Default (PD) models

Underlying business scorecards are calibrated to provide a PD for each loan. The application credit score is used for new lending to determine PD up until sufficient internal account performance data is available, at which time the behaviour score will be used to determine PD. The ratings philosophy of the PD models is deemed to be predominantly point-in-time and therefore changes in the quality of the portfolio will be reflected via a movement in ratings.

Loss Given Default (LGD) models

These models estimate the average loss percentage of snapshot balances for the three population segments: default, non- default and charge off. The LGD is calculated from discounted recoveries, cost of collections and downturn stress. In addition, the downturn LGD is based on the worst (highest) LGD observed during the development window.

Exposure at Default (EAD)

For credit cards and current accounts, EAD is equal to expected exposure by risk segment. For loan accounts, the EAD is set at 100% of current balance, in line with regulatory guidance.

5.5.3.3 Corporate models

Probability of Default (PD) models

There are four PD models in use for grading and monitoring exposures to corporates. Two of them (CreditEdge and RiskCalc) are external vendor models which are used industry-wide to rate general corporates. The other two are internally developed and are used to rate Registered Social Landlords (i.e. Housing Associations) and Business Banking customers, respectively. The ratings philosophy of these PD models is defined as 'near point-in-time models'. The output of all PD models is mapped to the 13 grades of the internal Grading Scale (with a 14th grade indicating default).

Loss Given Default (LGD) models

Capital adequacy for customers rated with a PD model is calculated under the foundation IRB approach and therefore regulatory prescribed LGD rates apply (from 35% for senior exposures fully secured by real estate collateral to 45% for senior unsecured exposures).

Supervisory slotting approach

Supervisory slotting criteria are used to analyse and monitor the specialised lending exposures to PFIs and commercial real estate. The Private Finance Initiative (PFI) and property investment and development 'slotting models' are regulatory approaches and their output is mapped to four supervisory categories from strong to weak (slotting categories 1-4 respectively) or default with prescribed risk and expected loss weights.

Overrides

The PD and slotting grades can be overridden by exception in line with policy to ensure that the grades fully reflect all available information.

Exposure at Default (EAD)

EAD across the whole Corporate portfolio is calculated by applying regulatory prescribed Credit Conversion Factors (CCFs).

5.5.3.4 Financial Institution model

Under Foundation IRB we use modelled PD for Treasury counterparties that are financial institutions and a regulatory defined LGD. Credit ratings are derived from External Credit Assessment Institution (ECAI) (Moody's and Fitch) to assign an appropriate Internal Rating Grade (IRG) 1-10. The ratings are calibrated to externally available bond default statistics. Qualitative overlays to counterparties IRG may be applied with the supporting credit rationale clearly stated in the appropriate credit review.

5.5.3.5 Model performance and back testing

This section provides analysis of the performance of IRB models over 2015 and 2016.

The table below outlines the estimated and actual performance for PD, EAD and LGD by exposure class. All figures reported are taken from the regulatory capital models.

For PD and EAD the calculation shown assesses the non-defaulted portfolio at the start of the period and measures the default emergence over the following year. These are measured on an account weighted basis. For LGD, the calculation shown assesses the losses of the defaulted population, with actuals measured at the end of the period. The estimates are taken from 4 years previous for unsecured (to allow time for recoveries) and 2 years previous for secured (to allow time for the default to progress to sale).

To ensure fair comparisons can be made over the period in regards to Retail secured by immovable property, exposures now securitised through Warwick Finance One & Two transactions are removed from all estimated and actual performance.

Table 15 Model performance

	PD				EAD	
Exposure class	**Long run estimate at 2015 %**	**Actual 2016 %**	Long run estimate at 2014 %	Actual 2015 %	**Downturn estimate to actual ratio 2016 %**	Downturn estimate to actual ratio 2015 %
Retail						
Retail secured by immovable property	**1.3%**	**0.2%**	1.4%	0.5%	**101.9%**	101.5%
Qualifying revolving retail exposures	**0.7%**	**0.4%**	0.9%	0.5%	**130.3%**	128.6%
Retail and other non - SME	**4.4%**	**1.9%**	4.5%	2.2%	**129.2%**	116.0%
Corporate	**1.5%**	**1.0%**	1.1%	1.1%	**-**	-

Note: The Corporate portfolio operates under the Foundation IRB Approach under which EADs and LGDs are not modelled. No defaults have been recorded in Treasury's Financial Institution portfolio and its model's performance is not included in the table above.

	LGD			
Exposure Class	**Downturn estimate at 2016 %**	**Actual 2016 %**	Estimate at 2015 %	Actual 2015 %
Retail				
Retail secured by immovable property	**16.3%**	**1.4%**	16.8%	3.2%
Qualifying revolving retail exposures	**86.4%**	**72.9%**	81.6%	76.1%
Retail and other non - SME	**86.1%**	**57.0%**	81.4%	71.7%
Unsecured charged-off	**94.1%**	**92.6%**	91.1%	92.4%

Retail unsecured (Qualifying revolving retail exposures and Retail other non-SME)
Note that a small proportion of the Retail unsecured portfolio is excluded from these comparisons. This covers immaterial products from a capital perspective such as basic bank accounts (approximately 0.36% of Retail unsecured non-default RWA is excluded as at 31 December 2016).

The estimated performance is substantially higher than the recent actual performance as a result of the following:

- The PDs used for capital are predominantly Point-in-Time (PiT) with an add-on. Hence the actual default rates are significantly lower than estimates used for capital; EAD and LGD models are similar to PD models with layers of add-ons to the PiT estimates included to reflect the downturn.
- Additionally due to changes in the underlying performance of the portfolio from a mix of portfolio and strategy changes and debt sale activity that haven't yet been reflected in the model.

Retail secured by immovable property
As with Unsecured, the actual outcomes for the Secured portfolio are lower than the estimates for all metrics:

- The Secured Retail PDs used within the regulatory capital models are based on long-run averages. The recent actual default rates are significantly lower than estimates due to the continued benign economic environment.
- The actual LGDs are significantly lower than estimates. The reasons are twofold: the model predicts losses in a downturn environment, and that house price increases over the last 2 years are not reflected in the model.

Corporate
The Corporate portfolio operates under the Foundation IRB Approach under which EADs and LGDs are not modelled. The Commercial Real Estate (CRE) and Project Finance Initiative (PFI) models use the Foundation IRB Specialised Lending (slotting) methodology which assigns prescribed risk weights and expected losses and are not included in the table. The table also excludes performance in those sectors where the standardised approach is adopted, typically due to low volumes or a low default history of a particular sector. Overall, corporate year on year actual defaults have remained stable and in line with expected default rates. Estimated PDs for 2016 exceed actual default rates. This is driven by the low exposure, high volume Business Banking portfolio, which while representing the highest proportion of actual defaults, in terms of volumes, represents only 2.0% of exposures within the portfolios covered by FIRB PD models.

5.5.4 Model risk management

The Model Risk framework applies to ratings models to ensure that Model Risks faced by the Bank are appropriately managed under the Bank's RMF. Model governance is documented in the Model Risk Policy and Control Standards, defining the Risk Owners, Risk Framework Owners and governance committee structure for Model Risk (refer to section 4.3). All model developments and adjustments are subject to this framework.

The key principles of the Bank's Model Risk Framework are:

- ownership of each model along with the associated model risk by the Business Owner and Model Owner;
- responsibility by owners for the use, control, management, and governance of the model and the associated model risk in line with the Bank's model risk framework, and accountability for inappropriate model use;
- senior management awareness of the model risk framework, and the Bank's models, including associated regulatory requirements, at an appropriate level of detail to enable them to effectively discharge their management, oversight, and governance responsibilities;
- an effective model development process that includes detailed testing and analysis to demonstrate that the model works as intended, and complies with regulatory requirements;
- effective and independent challenge of the development of all of the Bank's models by Independent Model Validation;
- approval of all models first by Independent Model Validation and then through the appropriate Bank model governance forum in line with model materiality;
- maintenance of a complete and accurate model inventory that includes the key attributes of each model;
- regular monitoring of the use and performance of all models in production to confirm that they continue to perform in line with original approvals; and
- retirement of models when they are found to be no longer fit for purpose or are replaced by better models.

5.5.5 Credit risk exposures

The following table represents the Bank's EAD analysed by approach, exposure class and contractual maturity.

Table 16 Analysis of EAD by residual contractual maturity

2016 Exposure class	Repayable on demand / undated £m	Up to 1 year £m	1-5 years £m	5-10 years £m	10-20 years £m	>20 years £m	Total £m
IRB							
Institutions	284.1	217.9	80.1	-	0.3	-	582.4
Corporates	-	37.3	181.3	191.9	437.0	97.9	945.4
Retail secured by immovable property	-	168.7	677.0	1,808.9	6,597.2	6,872.6	16,124.4
Qualifying revolving retail exposures	1,935.9	-	-	-	-	-	1,935.9
Retail other non-SME	15.9	13.8	140.3	11.5	-	-	181.5
Securitisation positions	-	-	-	1,301.5	-	1,321.2	2,622.7
Total IRB	**2,235.9**	**437.7**	**1,078.7**	**3,313.8**	**7,034.5**	**8,291.7**	**22,392.3**
Specialised lending	**-**	**86.3**	**173.9**	**94.2**	**479.7**	**259.3**	**1,093.4**
Standardised							
Central government or central banks	2,829.9	90.6	560.9	1,015.1	76.2	-	4,572.7
Regional governments or local authorities	-	0.3	0.3	-	-	2.3	2.9
Public sector entities	-	0.1	2.2	4.1	6.8	1.5	14.7
Multilateral development banks	-	-	508.4	21.8	-	-	530.2
Institutions	44.8	28.3	-	-	-	-	73.1
Corporates	-	25.2	77.3	63.2	46.5	28.8	241.0
Retail exposures	0.5	2.3	46.5	13.3	-	-	62.6
Secured by mortgages on immoveable property	-	-	0.2	-	-	-	0.2
Exposures in default	0.1	0.8	3.2	8.8	0.1	-	13.0
Covered bonds	-	-	-	-	-	-	-
Equity exposures	52.8	-	-	-	-	-	52.8
Other items	105.3	14.7	186.9	54.5	101.8	4.0	467.2
Total standardised	**3,033.4**	**162.3**	**1,385.9**	**1,180.8**	**231.4**	**36.6**	**6,030.4**
Total credit risk exposures	**5,296.3**	**686.3**	**2,638.5**	**4,588.8**	**7,745.6**	**8,587.6**	**29,516.1**

Re-presented 2015 Exposure class	**Repayable on demand / undated £m**	**Up to 1 year £m**	**1-5 years £m**	**5-10 years £m**	**10-20 years £m**	**>20 years £m**	**Total £m**
IRB							
Institutions	436.2	242.2	115.9	40.3	1.4	-	836.0
Corporates	-	61.6	224.6	270.4	276.8	318.8	1,152.2
Retail secured by immovable property	-	173.7	709.0	1,842.9	6,917.5	5,920.5	15,563.6
Qualifying revolving retail exposures	2,031.9	-	-	-	-	-	2,031.9
Retail other non-SME	51.1	21.0	203.5	13.1	-	-	288.7
Securitisation positions	-	-	-	1,423.2	-	1,614.8	3,038.0
Total IRB	2,519.2	498.5	1,253.0	3,589.9	7,195.7	7,854.1	22,910.4
Specialised lending	-	213.2	320.6	178.5	374.5	409.4	1,496.2
Standardised							
Central government or central banks	2,632.3	314.7	1,387.3	1,060.8	70.3	-	5,465.4
Regional governments or local authorities	-	0.1	2.5	-	-	2.4	5.0
Public sector entities	-	0.1	2.9	2.4	13.1	1.5	20.0
Multilateral development banks	-	69.2	344.5	87.2	-	-	500.9
Institutions	27.7	28.5	16.6	-	-	-	72.8
Corporates	-	17.3	99.8	79.7	94.5	28.8	320.1
Retail exposures	0.5	3.0	58.8	15.1	-	-	77.4
Secured by mortgages on immoveable property	-	-	0.2	-	-	-	0.2
Exposures in default	-	19.1	21.4	0.2	0.2	0.1	41.0
Covered bonds	-	-	-	-	-	-	-
Equity exposures	60.5	-	-	-	-	-	60.5
Other items	165.2	25.4	147.7	69.8	51.7	2.0	461.8
Total standardised	2,886.2	477.4	2,081.7	1,315.2	229.8	34.8	7,025.1
Total credit risk exposures	5,405.4	1,189.1	3,665.3	5,083.6	7,800.0	8,298.3	31,431.7

2015 has been re-presented to reflect the change in maturity profile of the Central Governments or central banks and standardised institutions.

Movement in EAD by Maturity Profile 2015 to 2016:

- Foundation IRB Corporates: Reduction in EAD is due to continued deleverage of the Legacy portfolio.
- Retail secured by immovable property: The Core mortgage book continues to grow over the period due to increased completions through Platform. EAD over the period increased by 3.6% from £15,563.6m to £16,124.4m.
- Retail other non-SME: Decrease largely driven by a reduction in new lending volumes during 2016 and also unsecured loan debt sale in December 2016. EAD over the period reduced by 37.1% from £288.7m to £181.5m.
- Specialised lending: Reduction in EAD driven largely by deleverage of property related and PFI assets.
- Standardised Corporates: EAD reduction primarily due to continued deleverage of individual assets.
- The reduction in Central government or central banks exposures reflects a reduced liquid assets requirement as the Bank deleverages its balance sheet.

5.5.6 Impaired and past due exposures

The following table represents the Bank's EAD, impaired and past due exposures and impairment analysed by approach and exposure class.

Table 17 Analysis of impaired and past due exposures
2016

Exposure class	Exposure at default £m	Of which: impaired exposures £m	Of which: past due exposures not impaired £m	Specific and general credit risk adjustments £m	Charges for specific and general credit risk adjustments during the reporting period £m
IRB					
Institutions	**582.4**	**-**	**-**	**-**	**-**
Corporates	**945.4**	**21.9**	**-**	**2.3**	**(3.3)**
Retail secured by immovable property	**16,124.4**	**392.8**		**20.0**	**1.6**
Qualifying revolving retail exposures	**1,935.9**	**46.6**	**-**	**32.6**	**6.2**
Retail other non-SME	**181.5**	**27.9**	**-**	**25.0**	**(5.4)**
Securitisation positions	**2,622.7**	**-**	**-**	**13.4**	**-**
Total IRB	**22,392.3**	**489.2**	**-**	**93.3**	**(0.9)**
Specialised lending	**1,093.4**	**109.5**	**-**	**31.4**	**4.6**
Standardised					
Central government or central banks	**4,572.7**	**-**	**-**	**-**	**-**
Regional governments or local authorities	**2.9**	**-**	**-**	**-**	**-**
Public sector entities	**14.7**	**0.4**	**-**	**-**	**-**
Multilateral development banks	**530.2**	**-**	**-**	**-**	**-**
Institutions	**73.1**	**-**	**-**	**-**	**-**
Corporates	**241.0**	**14.1**	**-**	**0.9**	**(1.3)**
Retail exposures	**62.6**	**0.5**	**-**	**-**	
Secured by mortgages on immoveable property	**0.2**	**0.2**	**-**	**-**	**-**
Exposures in default	**13.0**	**13.0**	**-**	**13.8**	**14.4**
Covered bonds	**-**	**-**	**-**	**-**	**-**
Equity exposures	**52.8**	**-**	**-**	**-**	**-**
Other items	**467.2**	**-**	**-**	**-**	**-**
Total standardised	**6,030.4**	**28.2**	**-**	**14.7**	**13.1**
Total credit risk exposures	**29,516.1**	**626.9**	**-**	**139.4**	**16.8**

2015

Exposure class	Exposure at default £m	Of which: impaired exposures £m	Of which: past due exposures not impaired £m	Specific and general credit risk adjustments £m	Charges for specific and general credit risk adjustments during the reporting period £m
IRB					
Institutions	836.0	-	-	-	-
Corporates	1,152.2	49.6	-	17.9	(3.7)
Retail secured by immovable property	15,563.6	369.2	-	17.0	(45.6)
Qualifying revolving retail exposures	2,031.9	44.3	-	30.8	9.0
Retail other non-SME	288.7	84.6	-	69.7	(3.2)
Securitisation positions	3,038.0	-	-	-	-
Total IRB	22,910.4	547.7	-	135.4	(43.5)
Specialised lending	1,496.2	275.5	-	97.5	17.3
Standardised					
Central government or central banks	5,465.4	-	-	-	-
Regional governments or local authorities	5.0	-	-	-	-
Public sector entities	20.0	0.5	-	-	-
Multilateral development banks	500.9	-	-	-	-
Institutions	72.8	-	-	-	-
Corporates	320.1	21.3	-	1.1	(5.3)
Retail exposures	77.4	0.7	-	-	-
Secured by mortgages on immoveable property	0.2	-	-	-	-
Exposures in default	41.0	41.0	-	11.2	(6.2)
Covered bonds	-	-	-	-	-
Equity exposures	60.5	-	-	-	-
Other items	461.8	-	-	-	-
Total standardised	7,025.1	63.5	-	12.3	(11.5)
Total credit risk exposures	31,431.7	886.7	-	245.2	(37.7)

Specific and general credit risk adjustments include specific and collective impairments plus remaining Fair Value adjustments on Optimum.

5.5.7 Analysis of Corporate exposures impaired and past due

The following table represents, for Corporate assets (excluding Securitisations), the Bank's EAD, impaired exposures and impairment analysed by approach and exposure class:

Table 18 Analysis of Corporate EAD by sector

2016

Sector	Exposure at default £m	Of which: Impaired exposures £m	Specific and general credit risk adjustments £m	Charges for specific and general credit risk adjustments during the reporting period £m
Accommodation, food and licensed services	**48.9**	**15.2**	**10.9**	**12.2**
Care	**74.0**	**2.5**	**-**	**0.8**
Education	**65.6**	**2.6**	**0.1**	**(0.1)**
Financial Services	**65.0**	**0.4**	**0.1**	**(0.1)**
Football Clubs	**14.3**	**1.0**	**0.9**	**-**
Housing associations	**607.8**	**-**	**-**	**(0.1)**
Manufacturing	**8.3**	**1.6**	**0.2**	**-**
Motor trade and garages	**2.2**	**0.7**	**-**	**-**
PFI	**658.0**	**-**	**0.5**	**(10.8)**
Professional Services	**7.3**	**0.8**	**0.3**	**(0.5)**
Property and Construction				
Commercial investment	**329.7**	**80.1**	**29.7**	**5.2**
Residential investment	**74.9**	**15.8**	**1.4**	**1.2**
Commercial development	**13.0**	**4.2**	**2.2**	**9.4**
Residential development	**3.5**	**1.3**	**-**	**(0.2)**
Public sector entities	**2.9**	**-**	**-**	**-**
Renewable energy	**88.8**	**10.9**	**0.6**	**(0.1)**
Retail and wholesale trade	**128.2**	**4.1**	**0.1**	**(0.4)**
Services	**63.4**	**11.6**	**1.1**	**(1.4)**
Transport, storage and communication	**4.7**	**3.2**	**0.1**	**(0.1)**
Utilities	**2.7**	**0.1**	**-**	**(0.9)**
Other	**45.0**	**0.6**	**0.3**	**0.1**
Total	**2,308.2**	**156.7**	**48.5**	**14.2**
IRB Corporates	**945.4**	**21.9**	**2.3**	**(3.3)**
Specialised lending	**1,093.4**	**109.5**	**31.4**	**4.6**
Standardised corporates	**258.6**	**14.5**	**0.9**	**(1.3)**
Standardised past due corporates	**10.8**	**10.8**	**13.9**	**14.2**
Total	**2,308.2**	**156.7**	**48.5**	**14.2**

2015

Sector	Exposure at default £m	Of which: Impaired exposures £m	Specific and general credit risk adjustments £m	Charges for specific and general credit risk adjustments during the reporting period £m
Accommodation, food and licensed services	126.4	36.6	11.7	(2.1)
Care	120.2	32.6	6.5	2.1
Education	70.3	3.0	0.2	(0.2)
Financial Services	36.9	3.0	0.2	-
Football Clubs	16.7	1.0	0.9	0.1
Housing associations	719.1	0.3	0.1	(0.3)
Manufacturing	13.2	1.2	0.2	(0.5)
Motor trade and garages	5.1	0.9	-	(0.7)
PFI	698.4	18.0	13.0	9.8
Professional Services	14.4	1.5	0.9	(0.1)
Property and Construction				
Commercial investment	552.7	167.9	50.8	9.6
Residential investment	125.2	34.0	2.9	(8.6)
Commercial development	75.3	58.8	31.6	7.8
Residential development	10.7	3.0	0.2	(0.5)
Public sector entities	5.1	-	-	-
Renewable energy	122.4	-	0.6	(8.2)
Retail and wholesale trade	166.4	9.1	2.3	(0.2)
Services	95.3	13.2	3.7	(6.6)
Transport, storage and communication	9.1	0.7	0.2	(0.4)
Utilities	6.0	0.8	1.2	0.8
Other	43.8	0.5	0.5	0.3
Total	3,032.7	386.1	127.7	2.1
IRB Corporates	1,152.2	49.6	17.9	(3.7)
Specialised lending	1,496.2	275.5	97.5	17.3
Standardised corporates	345.1	21.8	1.1	(5.3)
Standardised past due corporates	39.2	39.2	11.2	(6.2)
Total	3,032.7	386.1	127.7	2.1

5.5.8 IRB approach

Foundation

The table below analyses EAD for each IRB exposure class by PD band and discloses average risk weight percentage for exposures subject to the foundation IRB approach.

Table 19 Foundation IRB EAD by PD band

Internal grades	PD range %	Mapped external rating	Exposure value at pre-CCF £m	Exposure at default £m	Average PD %	Average LGD %	RW %	RWA £m
2016								
Institutions								
1 / 2	0.00 to 0.04	AAA to AA	41.3	41.3	0.03%	45.0%	10.9%	4.5
3	0.04 to 0.06	AA-	352.5	212.7	0.05%	45.0%	23.6%	50.1
4	0.06 to 0.08	A+	-	-	-	-	-	-
5	0.08 to 0.20	A	487.3	257.0	0.09%	45.0%	23.5%	60.4
6	0.20 to 0.30	A- to BBB+	422.7	69.1	0.28%	45.0%	52.5%	36.3
7	0.30 to 1.00	BBB to BBB-	13.4	2.2	0.66%	45.0%	86.4%	1.9
8	1.00 to 5.00	BB+ to BB-	0.1	0.1	2.04%	45.0%	100.0%	0.1
9	5.00 to 99.99	B+ to C	-	-	-	-	-	-
10	100.00	Default	-	-	-	-	-	-
Total Institutions			1,317.3	582.4	0.09%	45.0%	26.3%	153.3
Central governments and central banks								
1 / 2	0.00 to 0.04	AAA to AA	-	-	-	-	-	-
3	0.04 to 0.06	AA-	-	-	-	-	-	-
4	0.06 to 0.08	A+	-	-	-	-	-	-
5	0.08 to 0.20	A	-	-	-	-	-	-
6	0.20 to 0.30	A- to BBB+	-	-	-	-	-	-
7	0.30 to 1.00	BBB to BBB-	-	-	-	-	-	-
8	1.00 to 5.00	BB+ to BB-	-	-	-	-	-	-
9	5.00 to 99.99	B+ to C	-	-	-	-	-	-
10	100.00	Default	-	-	-	-	-	-
Total Central governments and central banks			-	-	-	-	-	-
Corporates								
1	0.0 to 0.03	A	-	-	-	-	-	-
2	0.03 to 0.06	A-	-	-	-	-	-	-
3	0.06 to 0.16	BBB+	517.0	507.1	0.14%	36.6%	41.6%	211.0
4	0.16 to 0.26	BBB	223.9	218.0	0.22%	38.7%	55.5%	121.0
5	0.26 to 0.40	BBB-	159.7	144.6	0.33%	42.5%	75.3%	108.9
6	0.40 to 0.65	BBB-	7.1	6.2	0.51%	40.3%	50.0%	3.1
7	0.65 to 1.10	BB+	19.7	14.9	0.85%	40.6%	83.2%	12.4
8	1.10 to 1.90	BB	21.7	20.7	1.50%	43.0%	115.5%	23.9
9	1.90 to 3.30	BB-	8.0	7.2	3.00%	44.0%	100.0%	7.2
10	3.30 to 10.00	B	22.4	21.4	6.00%	38.5%	121.5%	26.0
11	10.00 to 15.00	B-	0.4	0.3	13.00%	45.0%	233.3%	0.7
12	15.00 to 20.00	CCC+	0.1	0.1	18.00%	45.0%	200.0%	0.2
13	20.00 to 99.99	CCC	0.6	0.6	22.00%	36.3%	183.3%	1.1
14	100.00	Default	4.5	4.3	100.00%	36.3%	-	-
Total Corporates			985.1	945.4	0.86%	38.3%	54.5%	515.5

Internal grades	PD range %	Mapped External rating	Exposure value at pre-CCF £m	Exposure at default £m	Average PD %	Average LGD %	RW %	RWA £m
2015								
Institutions								
1 / 2	0.000 to 0.040	AAA to AA	25.8	25.8	0.03%	45.0%	10.9%	2.8
3	0.040 to 0.060	AA-	404.9	335.8	0.05%	45.0%	21.2%	71.2
4	0.060 to 0.080	A+	-	-	-	-	-	-
5	0.080 to 0.200	A	491.8	364.8	0.10%	45.0%	27.0%	98.4
6	0.200 to 0.300	A- to BBB+	345.3	109.3	0.28%	45.0%	43.8%	47.9
7	0.300 to 1.000	BBB to BBB-	0.2	0.2	0.66%	45.0%	50.0%	0.1
8	1.000 to 5.000	BB+ to BB-	0.1	0.1	2.04%	45.0%	100.0%	0.1
9	5.000 to 99.999	B+ to C	-	-	-	-	-	-
10	100.00	Default	-	-	-	-	-	-
Total Institutions			1,268.1	836.0	0.10%	45.0%	26.4%	220.5
Central governments and central banks								
1 / 2	0.000 to 0.040	AAA to AA	-	-	-	-	-	-
3	0.040 to 0.060	AA-	-	-	-	-	-	-
4	0.060 to 0.080	A+	-	-	-	-	-	-
5	0.080 to 0.200	A	-	-	-	-	-	-
6	0.200 to 0.300	A- to BBB+	-	-	-	-	-	-
7	0.300 to 1.000	BBB to BBB-	-	-	-	-	-	-
8	1.000 to 5.000	BB+ to BB-	-	-	-	-	-	-
9	5.000 to 99.999	B+ to C	-	-	-	-	-	-
10	100.00	Default	-	-	-	-	-	-
Total Central governments and central banks			-	-	-	-	-	-
Corporates								
1	0.00 to 0.03	A	-	-	-	-	-	-
2	0.03 to 0.06	A-	-	-	-	-	-	-
3	0.06 to 0.16	BBB+	605.1	571.9	0.14%	35.9%	42.5%	243.1
4	0.16 to 0.26	BBB	290.0	280.8	0.22%	37.3%	52.6%	147.7
5	0.26 to 0.40	BBB-	171.2	154.0	0.33%	43.5%	68.5%	105.5
6	0.40 to 0.65	BBB-	26.3	24.6	0.51%	38.1%	59.3%	14.6
7	0.65 to 1.10	BB+	27.6	26.0	0.85%	41.4%	74.6%	19.4
8	1.10 to 1.90	BB	21.3	19.9	1.50%	42.8%	114.6%	22.8
9	1.90 to 3.30	BB-	9.5	9.0	3.00%	40.1%	100.0%	9.0
10	3.30 to 10.00	B	30.9	29.6	6.00%	39.2%	125.0%	37.0
11	10.00 to 15.00	B-	3.1	3.1	13.00%	44.9%	206.5%	6.4
12	15.00 to 20.00	CCC+	0.1	0.1	18.00%	45.0%	200.0%	0.2
13	20.00 to 99.99	CCC	0.6	0.6	22.00%	37.8%	200.0%	1.2
14	100.00	Default	32.9	32.6	100.00%	40.4%	-	-
Total Corporates			1,218.6	1,152.2	3.28%	37.8%	52.7%	606.9

External ratings as shown in table mapped to distinct PD's. See section 5.5.3.4 for detail.

In accordance with CRR Article 150 (Conditions for permanent partial use) the Bank has received permission from the regulator to exempt its exposures to certain counterparty classes, namely central governments (sovereigns) and central banks and multilateral development banks, from the IRB Approach for the purposes of the calculation of both risk-weighted exposure and expected loss amounts, instead applying the standardised approach for these exposures.

Corporate IRB exposures reduced by 19.1% driven by deleverage of Non-core assets, whilst the mix of deleverage has seen the RW% increase by 1.8% to 54.5%.

IRB approach: EAD analysed by Expected Loss (EL) grades
The table below analyses each retail IRB exposure class by EL grade, calculated as expected loss as a percentage of EAD.

Table 20 Retail IRB EAD by EL grade

2016

	EL grade 1 £m	**EL grade 2 £m**	**EL grade 3 £m**	**EL grade 4 £m**	**EL grade 5 £m**	**EL grade 6 £m**	**Default £m**	**Total £m**
IRB exposure class								
Retail secured by immovable property	**10,534.2**	**1,045.2**	**2,656.5**	**711.6**	**744.9**	**219.0**	**213.0**	**16,124.4**
Qualifying revolving retail exposures	**428.2**	**474.7**	**245.2**	**168.1**	**384.6**	**205.3**	**29.8**	**1,935.9**
Retail other non-SME	**-**	**-**	**-**	**67.3**	**61.7**	**33.4**	**19.1**	**181.5**
Total retail IRB	**10,962.4**	**1,519.9**	**2,901.7**	**947.0**	**1,191.2**	**457.7**	**261.9**	**18,241.8**

2015

	EL grade 1 £m	EL grade 2 £m	EL grade 3 £m	EL grade 4 £m	EL grade 5 £m	EL grade 6 £m	Default £m	Total £m
IRB exposure class								
Retail secured by immovable property	10,676.9	1,179.1	2,035.6	644.4	549.3	247.3	231.0	15,563.6
Qualifying revolving retail exposures	419.2	550.8	266.4	191.1	374.3	203.2	26.9	2,031.9
Retail other non-SME	-	-	-	2.4	154.6	62.0	69.7	288.7
Total retail IRB	11,096.1	1,729.9	2,302.0	837.9	1,078.2	512.5	327.6	17,884.2

Definition in grading for expected loss grade

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%

Retail other Non-SME 'default' grade has reduced in size by £50.6m, driven mainly by the Unsecured Loan debt sale of non-performing exposures in December 2016. Increased volumes of new mortgage lending have caused the EAD distribution for the 'Retail secured by immovable property' asset class to increase across most EL grades particularly 3 to 5.

Table 21 Retail IRB RWA by PD grade

The table below analyses each retail IRB exposure class by PD grade.

2016

Internal grades	PD range	Exposure value pre-CCF	Exposure at default	Average PD	Average LGD	RW	RWA
	%	£m	£m	%	%	%	£m
Retail secured by immovable property							
1	0.00 to 0.04	2,351.3	2,410.6	0.04%	6.4%	0.7%	17.4
2	0.04 to 0.07	3,005.2	3,079.1	0.06%	8.8%	1.7%	51.3
3	0.07 to 0.31	2,644.6	2,705.3	0.16%	10.2%	3.7%	100.5
4	0.31 to 1.00	4,685.9	4,786.4	0.53%	11.4%	10.4%	499.1
5	1.00 to 3.00	2,090.8	2,137.9	1.55%	14.5%	29.3%	627.4
6	3.00 to 15.32	260.4	266.7	7.23%	15.7%	76.0%	202.8
7	15.32 to 99.99	563.5	525.3	30.81%	7.4%	29.6%	155.3
8	100.00	213.0	213.1	100.00%	17.2%	250.1%	532.9
Total Retail secured by immovable property		15,814.7	16,124.4	2.85%	10.4%	13.6%	2,186.7
Qualifying revolving retail exposures							
1	0.00 to 0.04	88.9	428.2	0.04%	74.4%	2.2%	9.4
2	0.04 to 0.07	-	-	-	-	-	-
3	0.07 to 0.12	596.7	485.9	0.09%	80.4%	4.5%	21.8
4	0.12 to 0.31	459.8	234.1	0.22%	79.9%	9.8%	22.9
5	0.31 to 0.50	382.9	259.5	0.42%	79.8%	16.4%	42.6
6	0.50 to 1.00	98.6	94.0	0.72%	80.0%	24.9%	23.4
7	1.00 to 5.00	324.1	320.7	1.97%	79.4%	52.5%	168.4
8	5.00 to 10.00	66.3	69.6	5.76%	81.7%	114.8%	79.9
9	10.00 to 20.00	8.1	6.3	14.05%	81.4%	192.1%	12.1
10	20.00 to 50.00	7.7	6.5	39.75%	80.8%	260.0%	16.9
11	50.00 to 99.99	1.4	1.3	61.35%	82.4%	246.2%	3.2
12	100.00	29.8	29.8	100.00%	90.9%	51.0%	15.2
Total Qualifying revolving retail exposures		2,064.3	1,935.9	2.45%	79.0%	21.5%	415.8
Retail other non-SME							
1	0.00 to 0.04	-	-	-	-	-	-
2	0.04 to 0.07	-	-	-	-	-	-
3	0.07 to 0.12	-	-	-	-	-	-
4	0.12 to 0.31	0.1	0.1	0.27%	80.8%	-	-
5	0.31 to 0.50	67.2	67.2	0.41%	-	55.2%	37.1
6	0.50 to 1.00	0.1	0.1	5.80%	80.1%	-	-
7	1.00 to 5.00	81.2	81.2	2.43%	80.1%	109.4%	88.8
8	5.00 to 10.00	6.8	6.8	9.14%	80.4%	139.7%	9.5
9	10.00 to 20.00	0.2	0.2	18.76%	78.5%	150.0%	0.3
10	20.00 to 50.00	6.6	6.6	34.85%	80.2%	218.2%	14.4
11	50.00 to 99.99	0.2	0.2	62.03%	74.4%	250.0%	0.5
12	100.00	19.1	19.1	100.00%	88.4%	90.1%	17.2
Total Retail other non-SME		181.5	181.5	13.50%	81.4%	92.5%	167.8

2015

Internal grades	PD range	Exposure value pre-CCF	Exposure at default	Average PD	Average LGD	RW	RWA
	%	£m	£m	%	%	%	£m
Retail secured by immovable property							
1	0.00 to 0.04	2,668.4	2,739.4	0.04%	7.3%	0.8%	22.4
2	0.04 to 0.07	3,517.6	3,606.4	0.06%	9.8%	1.8%	65.7
3	0.07 to 0.31	2,567.2	2,630.8	0.16%	10.7%	3.9%	102.6
4	0.31 to 1.00	3,660.3	3,751.0	0.53%	11.3%	10.1%	380.1
5	1.00 to 3.00	1,664.6	1,705.6	1.57%	12.4%	25.8%	439.8
6	3.00 to 15.32	312.8	320.8	7.28%	15.5%	74.1%	237.7
7	15.32 to 99.99	619.3	578.6	57.72%	8.4%	31.1%	179.8
8	100.00	231.0	231.0	100.00%	17.9%	242.2%	559.4
Total Retail secured by immovable property		15,241.2	15,563.6	4.13%	10.3%	12.8%	1,987.5
Qualifying revolving retail exposures							
1	0.00 to 0.04	91.0	419.2	0.04%	74.5%	2.2%	9.2
2	0.04 to 0.07	-	-	-	-	-	-
3	0.07 to 0.12	719.9	562.0	0.09%	80.8%	4.5%	25.2
4	0.12 to 0.31	509.8	255.3	0.22%	80.1%	9.9%	25.2
5	0.31 to 0.50	378.4	300.7	0.44%	78.0%	16.5%	49.7
6	0.50 to 1.00	143.4	94.5	0.66%	83.3%	24.2%	22.9
7	1.00 to 5.00	309.1	278.3	2.31%	79.8%	59.2%	164.9
8	5.00 to 10.00	79.4	76.3	6.16%	82.7%	120.7%	92.1
9	10.00 to 20.00	14.3	11.9	13.15%	80.9%	184.9%	22.0
10	20.00 to 50.00	5.0	4.9	40.96%	79.1%	255.1%	12.5
11	50.00 to 99.99	1.9	1.9	60.58%	79.3%	210.5%	4.0
12	100.00	26.9	26.9	100.00%	89.4%	63.9%	17.2
Total Qualifying revolving retail exposures		2,279.1	2,031.9	2.26%	79.1%	21.9%	444.9
Retail other non-SME							
1	0.00 to 0.04	-	-	-	-	-	-
2	0.04 to 0.07	-	-	-	-	-	-
3	0.07 to 0.12	-	-	-	-	-	-
4	0.12 to 0.31	0.7	0.7	0.27%	81.2%	42.9%	0.3
5	0.31 to 0.50	1.7	1.7	0.39%	81.2%	52.9%	0.9
6	0.50 to 1.00	-	-	-	-	-	-
7	1.00 to 5.00	196.3	196.3	1.77%	79.9%	96.7%	189.8
8	5.00 to 10.00	10.0	10.0	9.03%	79.7%	138.0%	13.8
9	10.00 to 20.00	0.9	0.9	17.55%	80.6%	177.8%	1.6
10	20.00 to 50.00	9.0	9.0	36.40%	79.5%	220.0%	19.8
11	50.00 to 99.99	0.4	0.4	62.79%	79.3%	225.0%	0.9
12	100.00	69.7	69.7	100.00%	89.3%	96.6%	67.3
Total Retail other non-SME		288.7	288.7	26.95%	82.2%	102.0%	294.4

In both the Retail Secured by immovable property and retail other non-SME the average PD% has declined. In both cases this reflects the reduction in balances in high PD cases, with the other non-SME being almost all due to lower defaulted cases.

The Retail secured by immovable property includes an RWA temporary adjustment of £0.3bn in relation to the Optimum portfolio. The temporary adjustment reflects the assessed impact of potential enhancements on the current models. This value has been used since 2015 and reflects the post-Liger securitisation position of the Optimum book. Having conducted further analysis the Bank now intends to remove the remaining £0.3bn temporary adjustments in March 2017.

5.5.9 Standardised approach

Analysis of exposures calculated in accordance with the standardised approach

For standardised exposures that are rated the nominated ECAI is Moody's. The Bank complies with the credit quality assessments scale in allocating external credit ratings to the credit quality steps as defined by the PRA.

The table analyses exposures post CCF and net of provisions subject to the standardised approach by associated credit quality step.
The Bank complies with the credit quality assessments scale in allocating external credit ratings to the credit quality steps as defined by the PRA within Supervisory Statement 10/13: www.bankofengland.co.uk/pra/Documents/publications/policy/2013/standardappr1013.pdf

Table 22 EAD post CRM calculated under the standardised approach
2016

	Credit quality step							
	1	**2**	**3**	**4**	**5**	**6**	**Unrated**	**Total**
	£m	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**	**£m**
Central government or central banks	**4,572.7**	**-**	**-**	**-**	**-**	**-**	**-**	**4,572.7**
Regional governments or local authorities	**-**	**-**	**-**	**-**	**-**	**-**	**2.9**	**2.9**
Public sector entities	**-**	**-**	**-**	**-**	**-**	**-**	**14.7**	**14.7**
Multilateral development banks	**530.2**	**-**	**-**	**-**	**-**	**-**	**-**	**530.2**
Institutions	**-**	**-**	**-**	**-**	**-**	**-**	**73.1**	**73.1**
Corporates	**-**	**-**	**-**	**-**	**-**	**-**	**241.0**	**241.0**
Retail exposures	**-**	**-**	**-**	**-**	**-**	**-**	**62.6**	**62.6**
Secured by mortgages on immoveable property	**-**	**-**	**-**	**-**	**-**	**-**	**0.2**	**0.2**
Exposures in default	**-**	**-**	**-**	**-**	**-**	**-**	**13.0**	**13.0**
Covered bonds	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Equity exposures	**-**	**-**	**-**	**-**	**-**	**-**	**52.8**	**52.8**
Other items	**-**	**-**	**-**	**-**	**-**	**-**	**467.2**	**467.2**
Total standardised approach	**5,102.9**	**-**	**-**	**-**	**-**	**-**	**927.5**	**6,030.4**

2015

	Credit quality step							
	1	2	3	4	5	6	Unrated	Total
	£m	£m	£m	£m	£m	£m	£m	£m
Central government or central banks	5,465.4	-	-	-	-	-	-	5,465.4
Regional governments or local authorities	-	-	-	-	-	-	5.0	5.0
Public sector entities	-	-	-	-	-	-	20.0	20.0
Multilateral development banks	500.9	-	-	-	-	-	-	500.9
Institutions	-	-	-	-	-	-	72.8	72.8
Corporates	-	-	-	-	-	-	320.1	320.1
Retail exposures	-	-	-	-	-	-	77.4	77.4
Secured by mortgages on immoveable property	-	-	-	-	-	-	0.2	0.2
Exposures in default	-	-	-	-	-	-	41.0	41.0
Covered bonds	-	-	-	-	-	-	-	-
Equity exposures	-	-	-	-	-	-	60.5	60.5
Other items	-	-	-	-	-	-	461.8	461.8
Total standardised approach	5,966.3	-	-	-	-	-	1,058.8	7,025.1

Note: Unrated includes exposures where customers individual credit rating does not impact RWAs under the standardised approach. Corporate standardised exposures have decreased compared to last year as the Bank continues with its deleveraging strategy. The reduction in exposures central governments & central banks reflects a lower liquid assets requirement as the Bank deleverages its balance sheet.

5.5.10 Supervisory slotting approach

The Corporate sector includes a specialised lending portfolio, consisting of lending to PFIs and property investment and development. For the specialised lending portfolio, the supervisory slotting approach is used. The table analyses EAD (including undrawn commitments post CCF) by slotting category.

Table 23 Specialised lending by slotting category

	2016 £m	2015 £m
Slotting category		
Strong	**286.1**	72.4
Good	**682.0**	1,063.8
Satisfactory	**23.6**	80.1
Weak	**12.4**	93.0
Default	**89.3**	186.9
Total	**1,093.4**	1,496.2

Slotting models are used to analyse and monitor specialised lending exposures to property which are assigned to PRA supervisory categories with predefined risk weights. The exposures have reduced since last year, reflective of the Bank's continued Non-core deleveraging strategy. There has been a movement from Good to Strong for a number of PFI borrowers following a review of the rating.

5.5.11 Credit risk mitigation

5.5.11.1 Retail and Corporate

Collateral

The Bank uses various forms of collateral to mitigate credit risk. Collateral is regularly reviewed to ensure continued effectiveness as part of the credit review process. 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. For general lending, in addition to taking charges over property assets owned by the customer, other security is taken in modest proportion to the total portfolio. This includes debentures, floating charges and guarantees (often supported by tangible security, where appropriate, including property, life policies and stocks & shares) and cash cover.

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 and reliable valuation is held; and
- a prudent margin is applied to the valuation, for the type of security involved.

Valuations are performed under Bank instruction by an approved panel of external valuers. When cases are placed into the Recoveries team and an LPA (Law of Property Act) Receiver is appointed then the valuation used will be an Expected Outcome Statement (EOS).
Property valuations are obtained when the facility is first approved and lending procedures typically require collateral to be revalued every two years or more frequently in higher risk situations (typically annually or when a material change has occurred that is likely to affect the value and/or recoverability of the debt). For sectors such as Housing Associations, which have exhibited zero defaults historically, revaluations would be required every three years. In certain circumstances, such as syndicates, the multi bank facility letter may preclude revaluations at the customer's expense of all the assets as frequently as this and a decision is required by all banks involved to decide if they require the updates more frequently.
In addition, the values held in the Bank's systems are indexed for risk assessment and capital calculation using appropriate regional and asset type indices where available, otherwise the national average index is applied.

Single name concentration risk

Single name concentration risk is the concentration in exposures to single counterparties. During 2016, the Banks single name concentration risk exposure has remained stable:

- as at 31 December 2016, six customers were on book with individual exposure exceeding £50m, totaling £419m (18% of total Corporate portfolio). All customers have a performing status and sit within low risk categories, mainly in the Housing Association sector.

- as at 31 December 2015, six customers were on book with individual exposure exceeding £50m, totaling £455m (15% of total Corporate portfolio). All customers were performing with five of the six assets categorised in the low risk Housing Association sector.

5.5.11.2 Wholesale credit risk
The Bank's Treasury portfolio is held primarily for liquidity management purposes and, in the case of derivatives, for the purpose of managing market risk.

The Treasury Credit Risk Policy sets out a risk based approach which monitors counterparty limits and exposure via a credit risk register. Both the counterparties and assets held are monitored against a Board approved matrix of risk tolerance and associated indicators. The credit risk register is updated for rating actions, market events and financial results as they are announced, which may influence a change in risk status and possible escalation requiring management actions and inclusion on the Watchlist.

The Treasury Risk team monitors the portfolio and Watchlist daily for appropriate risk status bandings and any associated management actions. As at 31 December 2016 there were no red (highest risk) exposures outstanding (2015: nil).

Table 24 IRB exposures covered by collateral

	2016		2015	
	Exposure value covered by Collateral after haircut £m	**Exposure value covered by guarantee after haircut £m**	Exposure value covered by collateral after haircut £m	Exposure value covered by guarantee after haircut £m
Central governments and central banks	**-**	**-**	-	-
Institutions	**336.7**	**-**	169.3	-
Corporates	**-**	**-**	-	-
Totals	**336.7**	**-**	169.3	-

Collateral held represents the value of cash collateral held in relation to repurchase agreement (repo) activity and cash and debt securities held in relation to derivative activity after the application of applicable regulatory haircuts as prescribed under CRR Articles 223 and 224 (Financial Collateral Comprehensive Method).

The increase in cash collateral seen during 2016 reflects higher term repo funding undertaken by the Bank.

The Bank also utilises a number of methods to reduce the credit risks associated with its activities. The form and scope of credit risk mitigation will vary dependent upon factors such as the counterparty and underlying transaction type amongst others. These mitigation methods are summarised below:

Netting policies and processes
The Bank documents its derivative activity through the use of bilateral netting master agreements (typically industry standard International Swaps and Derivatives Association (ISDA) agreements) allowing close out netting with a single net settlement of all derivative contracts covered under each agreement concluded with the same legal counterparty in the event of default. This is achieved through the offsetting of all positive and negative market values under the derivative contracts outstanding with the given counterparty. Such agreements effectively serve to eliminate the counterparty credit risk associated with favourable contracts such that unfavourable contracts with the same legal counterparty are not settled before favourable contracts.

Collateral management and valuation policies and processes for derivatives
The Bank only accepts cash deposits, UK government bonds or other debt securities issued by a central government or qualifying multi-lateral development bank with a minimum rating of AA. It is also a requirement of the Treasury Credit Risk Policy that all securities received as collateral are valued on a daily basis and collateral calls made in line with the relevant legal agreement.

In conjunction with the execution of each ISDA Master Agreement a collateral agreement known as a Credit Support Annex (CSA) will typically be established in order to further mitigate credit risk associated with derivative activity. These agreements govern the collateral amounts to be posted or received by the Bank during the contract term. The terms of each CSA may vary according to each party's view of the other party's creditworthiness. Some agreements are linked to external credit ratings such that in the event of a deterioration of a party's (the Bank or a counterparty) external rating, it may be required to lodge collateral.

In the case of repurchase transactions documentation takes the form of the Global Master Repurchase Agreement (GMRA), with collateral valuations calculated by reference to the market prices associated with the underlying debt security.

The Bank's collateralised exposures as at 31 December 2016 was £407.9m (31 December 2015: £752.4m). Collateral lodged with the Bank comprised of cash held in connection with repurchase agreement activity of £1,169.3m (31 December 2015: £671.3m), cash held in connection with derivative activity of £0.0m (31 December 2015: £9.6m) and government debt securities held in connection with derivative activity of £71.5m (31 December 2015: £71.5m). The credit risk mitigation effect of all collateral held will reflect any reduction in value resulting from the application of prescribed regulatory haircuts.

Wrong Way risk

This type of risk occurs when exposure to counterparty is adversely correlated with the credit quality of that counterparty. The Bank ensures that the issuer of collateral is neither the same nor connected to the counterparty to a transaction.

5.5.12 Derivative credit exposure

The Bank enters into a variety of derivative contracts for the purposes of hedging its market risk exposures such as interest rate and foreign exchange risks.

Counterparty Credit risk

Counterparty credit risk in derivative transactions arises from the risk of counterparty default prior to the settlement date of derivative contracts with the counterparty unable to fulfil present and future contractual payment obligations. The amount at risk may change over time as a function of the underlying market parameters up to the positive value of the contract in favour of the Bank.

A key difference between derivatives and other asset types is that whereas the credit risk of other financial assets is generally represented by the principal amount net of any applicable allowance for credit losses, the counterparty credit risk associated with derivative instruments will ordinarily represent an amount significantly lower than the notional amount of the derivative instrument.

Except where such are settled via central counterparties, the counterparty credit risk associated with over-the-counter derivative instruments will usually be greater than with those traded through recognised exchanges given the more formal regulation and centralised management of the latter contracts.

Gross credit risk exposure is comprised of the estimated replacement cost, or positive fair value for all contracts plus an add-on for potential future exposure (PFE). The add-on amount is based upon the formula prescribed within Article 274 (Mark-to-Market Method) of the CRR.
The following tables summarise the gross credit exposure associated with the Bank’s derivative financial instruments and underlying Mark-to-Market (MtM) and PFE values.

The table below provides an overview of the aggregate notional amounts under the Bank’s outstanding derivative contracts by underlying product. The notional amounts shown represent the reference amount to which a rate or price is applied in order to determine the cash flows to be exchanged during the life of the underlying transactions and are not in themselves a measure of potential credit or market risk, rather they provide an illustration of transactional volumes outstanding. All 2015 tables have been re-stated for the inclusion of Corporate derivatives.

Table 25 Mark-to-Market and Potential Future Exposures

	2016				Restated 2015			
	Notional Amount £m	**PFE £m**	**Positive MtM £m**	**Negative MtM £m**	Notional Amount £m	PFE £m	Positive MtM £m	Negative MtM £m
Interest Rate Contracts								
Exchange-traded								
Futures	**-**	**-**	**1.7**	**24.6**	-	15.7	10.2	28.8
Options	**-**	**-**	**-**	**-**	-	-	-	-
	-	**-**	**1.7**	**24.6**	-	15.7	10.2	28.8
Over-the-Counter								
Interest Rate Swaps	**7,625.6**	**42.7**	**218.2**	**279.5**	12,504.6	84.2	172.4	305.0
Currency Interest Rate Swaps	**295.6**	**3.0**	**123.3**	**0.5**	948.4	22.5	160.2	0.3
Collars	**-**	**-**	**-**	**-**	-	-	-	-
Caps	**30.2**	**0.3**	**0.3**	**-**	80.0	0.3	0.2	-
	7,951.4	**46.0**	**341.8**	**280.0**	13,533.0	107.0	332.8	305.3
Over-the-Counter (settled via CCP)								
Interest Rate Swaps	**6,818.4**	**36.3**	**73.7**	**163.7**	4,475.7	25.3	17.4	44.3
Currency Interest Rate Swaps	**-**	**-**	**-**	**-**	-	-	-	-
Collars	**-**	**-**	**-**	**-**	-	-	-	-
	6,818.4	**36.3**	**73.7**	**163.7**	4,475.7	25.3	17.4	44.3
Total Interest Rate Contracts	**14,769.8**	**82.3**	**417.2**	**468.3**	18,008.7	148.0	360.4	378.4
Foreign Exchange Contracts								
Exchange-traded								
Futures	**-**	**-**	**-**	**-**	-	-	-	-
Options	**-**	**-**	**-**	**-**	-	-	-	-
Over-the-counter								
Foreign Exchange Swaps	**41.1**	**0.4**	**-**	**0.2**	9.9	0.1	-	0.1
Spot Foreign Exchange	**1.0**	**-**	**-**	**-**	2.2	-	-	-
Forward Foreign Exchange	**39.6**	**0.3**	**0.3**	**0.1**	55.4	0.4	0.1	1.8
	81.7	**0.7**	**0.3**	**0.3**	67.5	0.5	0.1	1.9
Over-the-Counter (settled via CCP)								
Foreign Exchange Swaps	**-**	**-**	**-**	**-**	-	-	-	-
Spot Foreign Exchange	**-**	**-**	**-**	**-**	-	-	-	-
Forward Foreign Exchange	**-**	**-**	**-**	**-**	-	-	-	-
Total Foreign Exchange Contracts	**81.7**	**0.7**	**0.3**	**0.3**	67.5	0.5	0.1	1.9
Other Derivative Contracts								
Exchange-traded								
Equity Swaps	**-**	**-**	**-**	**-**	-	-	-	-
Credit Default Swaps	**-**	**-**	**-**	**-**	-	-	-	-
Over-the-Counter								
Equity Swaps	**9.4**	**0.6**	**2.6**	**-**	60.5	3.8	18.6	-
Credit Default Swaps	**-**	**-**	**-**	**-**	-	-	-	-
	9.4	**0.6**	**2.6**	**-**	60.5	3.8	18.6	-
Over-the-Counter (settled via CCP)								
Equity Swaps	**-**	**-**	**-**	**-**	-	-	-	-
Credit Default Swaps	**-**	**-**	**-**	**-**	-	-	-	-
Total Other Derivative Contracts	**9.4**	**0.6**	**2.6**	**-**	60.5	3.8	18.6	-
Total Derivative Notional, PFE and MtM	**14,860.9**	**83.6**	**420.1**	**468.6**	18,136.7	152.3	379.1	380.3

Reduction in Over-the-Counter (OTC) interest rate swaps and increase in OTC (settled via Central Clearing Counterparty (CCP)) interest rate futures reflects the maturing of existing derivative non CCP trades and the vast majority of new derivative trades through a CCP. Movement in OTC equity swaps over 2016 reflects maturing equity swaps within the year and no new trades within the year.

Table 26 Derivative contracts Credit risk exposures

	2016		Restated 2015	
	Notional amount £m	**Gross Credit risk exposure[1] £m**	Notional amount £m	Gross Credit risk exposure[1] £m
Interest rate contracts				
Exchange-traded				
Futures	**-**	**1.7**	-	26.0
Options	**-**	**-**	-	-
	-	**1.7**	-	26.0
Over-the-Counter				
Interest rate swaps	**7,625.6**	**261.0**	12,504.6	256.6
Currency interest rate swaps	**295.6**	**126.2**	948.4	117.2
Collars	**-**	**-**	-	-
Caps	**30.2**	**0.6**	80.0	0.5
	7,951.4	**387.8**	13,533.0	374.3
Over-the-Counter (settled via CCP)				
Interest rate swaps	**6,818.4**	**110.0**	4,475.7	42.7
Currency interest rate swaps	**-**	**-**	-	-
Collars	**-**	**-**	-	-
	6,818.4	**110.0**	4,475.7	42.7
Total Interest Rate Contracts	**14,769.8**	**499.5**	18,008.7	443.0
Foreign Exchange Contracts				
Exchange-traded				
Futures	**-**	**-**	-	-
Options	**-**	**-**	-	-
	-	**-**	-	-
Over-the-Counter				
Foreign Exchange Swaps	**41.1**	**0.4**	9.9	0.1
Spot Foreign Exchange	**1.0**	**-**	2.2	-
Forward Foreign Exchange	**39.6**	**0.7**	55.4	0.6
	81.7	**1.1**	67.5	0.7
Over-the-Counter (settled via CCP)				
Foreign Exchange Swaps	**-**	**-**	-	-
Spot Foreign Exchange	**-**	**-**	-	-
Forward Foreign Exchange	**-**	**-**	-	-
Total Foreign Exchange Contracts	**81.7**	**1.1**	67.5	0.7
Other Derivative Contracts				
Exchange-traded				
Equity Swaps	**-**	**-**	-	-
Credit Default Swaps	**-**	**-**	-	-
	-	**-**	-	-
Over-the-Counter				
Equity Swaps	**9.4**	**3.2**	60.5	22.4
Credit Default Swaps	**-**	**-**	-	-
	9.4	**3.2**	60.5	22.4
Over-the-Counted (settled via CCP)				
Equity Swaps	**-**	**-**	-	-
Credit Default Swaps	**-**	**-**	-	-
Total Other Derivative Contracts	**9.4**	**3.2**	60.5	22.4
Total Notional and Gross Credit Risk	**14,860.9**	**503.8**	18,136.7	466.1
Netting Benefit[2]		**(142.0)**		(121.6)
Credit Risk post Netting		**361.8**		344.5
Collateral Held[3]		**-**		(9.6)
Net Credit Risk Exposure		**361.8**		334.9

1. Credit risk prior to the application of netting benefit and credit risk mitigation via collateral held.
2. Netting benefit includes both Mark-to-Market and Potential Future Credit Exposure impacts.
3. Collateral Held comprises cash and debt securities as valued post the application of regulatory haircuts.

The net credit risk exposure figure at the foot of the above table represents the Bank's credit exposure through derivative transactions after recognition of legally enforceable netting agreements and the application of eligible financial collateral held.

Table 27 Derivative Credit risk exposure maturity
The table below analyses OTC derivatives by maturity.

2016

	< 1 year £m	**≥ 1 year to < 5 years £m**	**≥ 5 years to < 10 years £m**	**≥ 10 years to < 20 years £m**	**≥ 20 years £m**	**Total £m**
Interest Rate Contracts						
Interest Rate Swaps	**4,221.0**	**7,405.3**	**1,757.8**	**706.3**	**353.6**	**14,444.0**
Currency Interest Rate Swaps	**295.6**	**-**	**-**	**-**	**-**	**295.6**
Collars	**-**	**-**	**-**	**-**	**-**	**-**
Caps	**10.0**	**2.1**	**11.6**	**6.5**	**-**	**30.2**
Total Interest Rate Contracts	**4,526.6**	**7,407.4**	**1,769.4**	**712.8**	**353.6**	**14,769.8**
Foreign Exchange Contracts						
Foreign Exchange Swaps	**41.1**	**-**	**-**	**-**	**-**	**41.1**
Spot Foreign Exchange	**1.0**	**-**	**-**	**-**	**-**	**1.0**
Forward Foreign Exchange	**36.9**	**2.7**	**-**	**-**	**-**	**39.6**
Total Foreign Exchange Contracts	**79.0**	**2.7**	**-**	**-**	**-**	**81.7**
Other Derivative Contracts						
Equity Swaps	**9.4**	**-**	**-**	**-**	**-**	**9.4**
Credit Default Swaps	**-**	**-**	**-**	**-**	**-**	**-**
Total Other Derivative Contracts	**9.4**	**-**	**-**	**-**	**-**	**9.4**
Total Derivative Notional Amounts	**4,615.0**	**7,410.1**	**1,769.4**	**712.8**	**353.6**	**14,860.9**

Restated 2015

	< 1 year £m	≥ 1 year to < 5 years £m	≥ 5 years to < 10 years £m	≥ 10 years to < 20 years £m	≥ 20 years £m	Total £m
Interest Rate Contracts						
Interest Rate Swaps	3,875.0	8,682.0	3,295.0	541.8	586.5	16,980.3
Currency Interest Rate Swaps	622.6	325.8	-	-	-	948.4
Collars	-	-	-	-	-	-
Caps	50.8	13.5	5.1	10.6	-	80.0
Total Interest Rate Contracts	4,548.4	9,021.3	3,300.1	552.4	586.5	18,008.7
Foreign Exchange Contracts						
Foreign Exchange Swaps	9.9	-	-	-	-	9.9
Spot Foreign Exchange	2.2	-	-	-	-	2.2
Forward Foreign Exchange	55.4	-	-	-	-	55.4
Total Foreign Exchange Contracts	67.5	-	-	-	-	67.5
Other Derivative Contracts						
Equity Swaps	51.1	9.4	-	-	-	60.5
Credit Default Swaps	-	-	-	-	-	-
Total Other Derivative Contracts	51.1	9.4	-	-	-	60.5
Total Derivative Notional Amounts	4,667.0	9,030.7	3,300.1	552.4	586.5	18,136.7

Table 28 Counterparty Credit risk by sector

	2016		Restated 2015	
	Credit risk post application of CRM £m	**% of portfolio**	Credit risk post application of CRM £m	% of portfolio
Sector				
Credit Institutions	**185.7**	**51.3**	178.5	51.8
Other Financial Corporations	**-**	**-**	-	**-**
Sovereigns	**-**	**-**	-	**-**
Corporates	**159.9**	**44.2**	129.9	37.7
Central Counterparties	**16.2**	**4.5**	36.1	10.5
Total	**361.8**	**100.0**	344.5	100.0

The counterparty credit risk to Central counterparties is exposure to the London Clearing House (£14.5m) and London Futures Exchange (£1.7m).

Table 29 Counterparty Credit risk by rating

	2016		Restated 2015	
	Credit risk post application of CRM £m	**% of portfolio**	Credit risk post application of CRM £m	% of portfolio
Credit Rating				
AAA	**-**	**-**	-	-
AA+	**-**	**-**	-	-
AA	**-**	**-**	-	-
AA-	**180.6**	**49.9**	158.5	46.0
A+	**1.4**	**0.4**	4.1	1.2
A	**3.5**	**1.0**	12.8	3.7
A-	**-**	**-**	0.2	0.1
BBB+	**0.2**	**0.1**	2.9	0.8
Unrated	**176.1**	**48.6**	166.0	48.2
Total	**361.8**	**100.0**	344.5	100.0

The unrated exposure in the table above relates to the exposure to Central Counterparties and Corporates as per Table 28. For the remaining derivatives the vast majority are rated AA-.

Table 30 Counterparty Credit risk by country

	2016		Restated 2015	
	Credit risk post application of CRM £m	**% of portfolio**	Credit risk post application of CRM £m	% of portfolio
Country of Incorporation				
Australia	**-**	**-**	0.5	0.1
Canada	**0.3**	**0.1**	0.4	0.1
Denmark	**0.1**	**0.1**	0.1	0.1
France	**2.7**	**0.7**	4.9	1.4
Germany	**0.2**	**0.1**	0.2	0.1
United Kingdom	**226.9**	**62.7**	212.6	61.7
USA	**131.6**	**36.3**	125.8	36.5
Total	**361.8**	**100.0**	344.5	100.0

Net counterparty credit risk exposure associated with OTC derivative transactions are concentrated primarily with counterparties incorporated in the UK and USA at 62.7% and 36.3% of total exposure respectively.

Table 31 Encumbered and non-encumbered assets by balance sheet category

2016

	Carrying amount of encumbered assets £m	**Fair value encumbered assets £m**	**Carrying amount of unencumbered assets £m**	**Fair value unencumbered assets £m**
Equity instruments	**-**	**-**	**45.8**	**45.8**
Debt securities	**1,505.1**	**1,505.1**	**2,147.4**	**2,147.4**
Other assets	**3,473.0**		**20,779.4**	
Assets of the reporting institution	**4,978.1**		**22,972.6**	

	Matching liabilities, contingent liabilities or securities lent	**Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered**
Carrying amount of selected financial liabilities	**2,821.4**	**4,222.9**

2015

	Carrying amount of encumbered assets £m	Fair value encumbered assets £m	Carrying amount of unencumbered assets £m	Fair value unencumbered assets £m
Equity instruments	-	-	2.7	2.7
Debt securities	1,791.5	1,791.5	3,046.6	3,046.6
Other assets	5,334.0		22,497.5	
Assets of the reporting institution	7,125.5		25,546.8	

	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
Carrying amount of selected financial liabilities	3,299.7	7,125.5

An asset is defined as encumbered if it has been pledged as collateral against an existing liability or to collateralise an exposure that the Bank may have, restricting access to that asset in the event of resolution or bankruptcy. An encumbered asset would be no longer available to the Bank for use in secured funding, to satisfy collateral needs or to be sold to reduce the funding requirement.

In 2015 the encumbered assets captured above relate to median values over the last 12 months. The median based encumbrance ratio for 2016 is 17.8% (24.5% 2015).

On a median value basis 75% of the encumbered assets are mortgage pools; 25% are debt securities.

5.5.13 Impairment

Allowance for impairments relating to loans and advances to customers

The policy on impairment is described in the Accounting Policy section of the 2016 Annual Report and Accounts. The provisions tie back to Note 16a within the Annual Report and Accounts.

The provisions within the Corporate portfolio are across the Corporate exposure classes for Foundation IRB and Standardised approach. The provisions for Retail exposures relate to Retail secured by immovable property and the unsecured exposures within the Qualifying revolving retail exposures and Retail other non-SME exposure classes. With the exception of a small portfolio of personal career development loans, all retail exposures are treated under the Retail IRB approach. Reductions in the specific corporate impairments are a result of asset deleveraging in the Non-core portfolio and collateral revaluations.

The EBA Credit Risk Adjustments Regulatory Technical Standard (RTS) specifies the criteria that need to be met for a provision to be treated as a ‘general provision’. In particular, provisions need to cover ‘credit risk losses that have not yet materialised’ and for which there is ‘currently no evidence that a loss event has occurred’. However, under IAS 39 banks are not permitted to book (individually assessed or collective) loss provisions unless there is ‘objective evidence that a loss event has occurred’. Therefore, following on from the implementation of CRDIV, all of the Bank’s provisions are classified as specific.

Table 32 Allowance for impairment

2016

	Specific Retail £m	**Specific Corporate £m**	**Total £m**
At the beginning of the year	**117.5**	**127.7**	**245.2**
Charge against profits	**2.8**	**14.0**	**16.8**
Amounts written off	**(46.5)**	**(92.0)**	**(138.5)**
Unwind of discount allowance	**-**	**(1.2)**	**(1.2)**
At the end of the year	**73.8**	**48.5**	**122.3**

2015

	Specific Retail £m	Specific Corporate £m	Total £m
At the beginning of the year	130.2	409.7	539.9
Disposal of UTB	-	(2.6)	(2.6)
Charge/(Release) against profits	(39.8)	2.1	(37.7)
Amounts written off	29.4	(280.0)	(250.6)
Unwind of discount allowance	(2.3)	(1.5)	(3.8)
At the end of the year	117.5	127.7	245.2

There has been a reduction in the overall level of impairment provisions from £245.2m to £122.3m. This reflects the on-going deleverage of the corporate book and its associated write off plus the impact of a debt sale of £45.0m of unsecured impaired loans.

Allowance for impairment relating to debt securities

There are nil provisions within the Treasury portfolio as shown in the table below:

Table 33 Allowance for impairment relating to debt securities

	2016 £m	2015 £m
At the beginning of the year	**-**	-
Release against profits	**-**	-
Utilised	**-**	-
Other	**-**	-
At the end of the year	**-**	-

In 2016, the result of the impairment review for debt securities showed no sign of impairment, as was the position in 2015.

Comparison of expected losses to accounting impairment losses

The following table compares expected losses on non-defaulted assets as at 31 December 2015 to the actual impairment charge/releases incurred during the subsequent year ending 31 December 2016.

Expected losses for exposures on the IRB approach are derived from underlying IRB models and are a function of PD, LGD and EAD estimates. Expected losses for specialised lending are determined using pre-defined expected loss rates for each of the five PRA supervisory categories. Expected loss is not calculated for exposures on the standardised approach.

IRB models were further developed following Basel III requirements and are not directly comparable with accounting impairment losses. In particular expected loss calculations are based on long run estimates of PD and use economic downturn estimates of LGD. In addition, LGD represents the loss expectation until finalisation of the workout period while account impairment losses correspond to a single year.

Table 34 Comparison of expected losses to impairment losses

2016

	Expected losses on non-defaulted assets as at 31 December 2016 £m	**Impairment losses/(releases) for 2016 £m**
Exposure class		
IRB	**-**	**-**
Institutions	**-**	**-**
Corporates	**2.1**	**(3.3)**
Retail secured by immovable property	**20.0**	**1.6**
Qualifying revolving retail exposures	**15.2**	**6.2**
Retail other non-SME	**6.4**	**(5.4)**
Equity exposures		
Total IRB	**43.7**	**(0.9)**
Specialised lending	**14.9**	**4.6**
Total	**58.6**	**3.7**
Impairment losses on standardised portfolios		**13.1**
Net charge to the income statements (for all portfolios)		**16.8**

2015

	Expected losses on non-defaulted assets as at 31 December 2015 £m	Impairment losses/(releases) for 2015 £m
Exposure class		
IRB	-	-
Institutions	-	-
Corporates	3.9	(3.7)
Retail secured by immovable property	55.8	(45.6)
Qualifying revolving retail exposures	17.6	9.0
Retail other non-SME	12.9	(3.2)
Equity exposures	-	-
Total IRB	90.2	(43.5)
Specialised lending	27.9	17.3
Total	118.1	(26.2)
Impairment losses on standardised portfolios		(11.5)
Net charge (credit) to the income statements (for all portfolios)		(37.7)

Key provision movements are:

- The impairment charge of £1.6m reported in 2016 for Retail secured by immovable property was driven by Non core write-offs net of recoveries (£2.8m) offset by provision releases.
- Qualifying revolving retail exposures charge of £6.2m in 2016 was primarily driven by write-offs net of recoveries (£3.9m) and increase in provision relating to Credit Cards and Overdrafts (£1.9m).
- A release of £5.4m is reported for Retail other non-SME exposures. This is driven by a provision release (£45.6m) and recoveries including debt sale proceeds (£7.5m), offset by write offs (£47.7m).
- An impairment charge of £13.1m reported for Standardised portfolios driven by provisions raised in regards to a single borrower in the Corporate portfolio.

5.5.14 Securitisations

Securitisations can take the form of traditional or synthetic. Traditional Securitisation is the process by which a group of assets, usually mortgage loans, are aggregated into a pool and the beneficial ownership is sold to bankruptcy remote Special Purpose Entities (SPEs). The pool of mortgage loans is used to back the issuance of new securities, allowing the credit rating of the securities to be separated from the credit rating of the sponsor company. In a Synthetic securitisation the Bank retains beneficial ownership of the underlying assets and transfers some or all of the credit risk to a SPE through a credit derivative. The underlying referenced asset portfolio will be divided into different credit tranches and the Bank may only transfer the credit risk of some tranches and may retain the credit risk of others.

The Bank acts as an investor, originator, sponsor, cash manager, servicer/administrator, subordinated loan provider and the liquidity facility provider in Securitisation Transactions.

Investments in securitisations

All of the Bank's Securitisation exposures are to UK residential mortgages and primarily reflects the retained elements of securitisations of mortgages either originated or acquired by the Bank. Out of the current total exposure of £2.6bn (£3.0bn in 2015), £1.3bn reflects the synthetic securitisation exposure from the Calico Finance Number One Limited (Calico) transaction referred to below. The remaining relates to retained holdings of Residential Mortgage Backed Securities (RMBS) issued by the Warwick Finance One & Two SPEs detailed below.

The Bank does not run an active trading book in RMBS. However these assets may be sold or used as collateral for short term borrowing (repos) in response to needs for liquidity or changes in interest rates. Given that the Bank does not seek to actively transact in this type of asset each purchase is individually agreed by ALCO and a maximum notional limit set.

RMBS positions held by the Bank may give rise to Credit risk and Market risk. Credit risk is the risk that the SPE's will fail to meet interest and principal payment obligations as and when they fall due. SPEs will service the securities using the cash flows generated by underlying mortgages. Given the majority of the Bank's securitisation investments are in senior, highly rated securitisation positions, this risk is largely mitigated. Market risk is the risk of losses the Bank may suffer due to fluctuations in credit spreads, interest rates, foreign currency rates and any other market implied volatility.

The Treasury Risk function acts as a second line of defence in monitoring changes in the credit and market risk profile of the Bank's RMBS exposure, with external market analysis being supplemented by discussions with the portfolio manager (Treasury – 1st line of defence). Monthly updates are provided to senior management detailing both changes in the valuations of the bonds and the performance of the underlying assets including delinquency rates, cumulative losses, Constant Prepayment Rates (CPR) and Loan to Value (LTVs). RMBSs are assessed using the ratings based method, under foundation IRB, where risk weight percentages are applied to each deal depending on the external rating, seniority and granularity of the instrument. Notwithstanding the risk banding allocation, all transactions where no value adjustment is held continue to meet their payment obligations. There were no securitised revolving exposures held during the reporting period.

Capital requirements for all of the Bank's exposures to securitisations are calculated using the external ratings based method. The following table shows the exposure at default and capital requirement broken down by external ratings grade. Capital requirement is shown net of provisions.

The Bank does not have any exposures to re-securitisations and does not hedge any securitisation position.

Table 35 Securitisation exposure by rating grade

2016

		Senior and granular		Non senior and granular		Non senior and non granular	
	Credit quality step	Exposure at Default £m	Capital requirement £m	Exposure at Default £m	Capital requirement £m	Exposure at Default £m	Capital requirement £m
AAA or A1/P1	1	2,181.0	21.0	17.9	0.3	-	-
AA	2	-	-	156.6	3.3	-	-
A+	3	-	-	6.8	0.1	-	-
A or A2/P2	4	-	-	134.2	3.3	-	-
A-	5	-	-	-	-	-	-
BBB+	6	-	-	-	-	-	-
BBB	7	-	-	71.6	4.5	-	-
BBB-	8	-	-	22.4	1.8	-	-
BB+	9	-	-	-	-	-	-
BB	10	-	-	-	-	-	-
BB-	11	-	-	-	-	-	-
Rated below BB- or A3/P3	12	-	-	32.2	24.8	-	-
Total		2,181.0	21.0	441.7	38.1	-	-

2015

	Credit quality step	Senior and granular Exposure at Default £m	Senior and granular Capital requirement £m	Non senior and granular Exposure at Default £m	Non senior and granular Capital requirement £m	Non senior and non granular Exposure at Default £m	Non senior and non granular Capital requirement £m
AAA or A1/P1	1	2,587.2	15.4	17.9	0.2	-	-
AA	2	7.0	-	156.5	2.0	-	-
A+	3	-	-	-	-	-	-
A or A2/P2	4	-	-	142.2	2.4	-	-
A-	5	-	-	-	-	-	-
BBB+	6	-	-	-	-	-	-
BBB	7	-	-	71.6	4.6	-	-
BBB-	8	-	-	22.4	1.9	-	-
BB+	9	-	-	-	-	-	-
BB	10	-	-	-	-	-	-
BB-	11	-	-	-	-	-	-
Rated below BB- or A3/P3	12	-	-	33.2	26.2	-	-
Total		2,594.2	15.4	443.8	37.3	-	-

Ratings are based upon the lower of Fitch and Moody's assigned counterparty credit ratings and mapped on an equivalency basis

The Bank risk weights securitisation positions within credit quality step 12 at 1,250% rather than deducting from capital. CRD IV allows either treatment. Currently the Bank has no outstanding assets awaiting securitisation.

Originated securitisations

The Bank has established traditional securitisation structures as part of its funding and Optimum (Non-core residential mortgages) deleveraging activities, using residential mortgage loans as the underlying asset pools.

Securitisation funding transactions (Leek Finance and Silk Road RMBS programmes) has provided funding diversity for the Bank. However, the majority of the risks and rewards in respect of the underlying mortgage loan pools are retained by the Bank in its funding securitisation structures. For such structures where risks and rewards of the underlying mortgages are retained by the Bank, the corresponding SPEs are included as subsidiaries in the consolidated financial statements, with the Bank continuing to recognise securitised assets as loans and advances to customers on the balance sheet, and income from the securitised assets being recognised as income.

The Bank has only acted as mortgage originator, sponsor, servicing and administration agent, cash manager, subordinated loan provider and liquidity facility provider in respect of its own traditional, funding securitisations. The Bank does not provide bridging loans nor does it act as underwriter or dealer in its securitisations. All transactions are approved at Board level and benefit from relevant accounting and legal advice to ensure compliance with regulatory and statutory requirements.

Furthermore, the Bank does not provide implicit support for its securitisations, including Calico Finance Number One ("Calico").

The table overleaf shows the initial funded amount and value, at the balance sheet date, of the first loss pieces and liquidity facilities in respect of funding securitisations sold to third party investors, subject to the qualifications documented in the following paragraphs.

This table discloses 'first loss pieces' (general reserve fund) which represent subordinated loans advanced by the Bank in respect of Leek Finance Number Nineteen.

Table 36 Originated on balance sheet securitisation exposures

	Retained notes initial percentage	Initial funded amount £m	2016 Value £m	2015 Value £m
First Loss Piece				
Leek Finance Number Seventeen plc	-	23.0	**-**	27.6
Leek Finance Number Eighteen plc	-	23.0	**-**	26.9
Leek Finance Number Nineteen plc	-	17.9	**17.9**	17.9
Silk Road Finance Number Three plc	-	19.0	**-**	19.0
Liquidity Facilities				
Leek Finance Number Eighteen plc	-	-	**-**	13.5
Leek Finance Number Nineteen plc	-	-	**11.9**	13.1
Total	-	82.9	**29.8**	118.0

The table below shows the value of securitised notes and Credit Linked Notes (CLN) sold to third party investors issued and outstanding:

Table 37 Securitised notes sold to third party investors

	Total notes issued £m	Date of issuance	2016 Notes outstanding £m	2015 Notes outstanding £m
SPE Company				
Leek Finance Number Seventeen plc	1,168.4	01 April 2006	**-**	370.2
Leek Finance Number Eighteen plc	1,048.2	01 October 2006	**-**	448.6
Leek Finance Number Nineteen plc	833.2	01 April 2007	**397.7**	435.6
Silk Road Finance Number Three plc	650.0	01 August 2012	**-**	277.5
Calico Finance Number One Limited	116.5	01 January 2013	**116.5**	116.5
Total	**3,816.3**		**514.2**	**1,648.4**

Where relevant, the 2016 and 2015 notes outstanding figures are based on multiplying outstanding foreign currency note balances outstanding by the foreign exchange rates specified under corresponding cross currency swap agreements.

The Bank redeemed Leek Finance Number Seventeen plc in June 2016, Silk Road Finance Number Three plc in September 2016 and Leek Finance Number Eighteen plc in December 2016. Detailed disclosures around the remaining active funding securitisation listed in the above tables are published monthly on the Bank's website www.co-operativebank.co.uk/investorrelations. The reduction in values in the tables above over the year represents the full redemptions aforementioned together with Leek Finance Number Nineteen principal amortisation.

In January 2013, the Bank transferred a portion of the risk in its portfolio of Platform originated (predominantly Optimum) mortgages to third party investors via the issuance of £116.5m of Credit Linked funded notes issued by Calico. The Bank received credit protection from third party investors of £116.5m on a residential mortgage portfolio of approximately £1.8bn at inception. The structure conforms to all relevant provisions of CRR for significant risk transfer. A capital benefit is generated from a reduction in the total calculated RWAs as a result of the mezzanine securitisation tranche risk transfer via Calico Credit Linked Notes and the rated senior Credit Default Swaps (CDS) retained. The only outstanding funding securitisation of Leek Finance Number Nineteen plc does not provide the Bank with regulatory capital relief.

During 2015, the Bank completed two whole structure securitisation transactions (Warwick Finance One & Two). Given that the SPEs are not consolidated within Bank's financial statements and the underlying mortgages de-recognised, Warwick Finance One & Two have been excluded from Tables 36 and 37 and investment in Class A notes are listed under Table 35.

5.6 Liquidity and funding risk

5.6.1 Overview

The Board determines the level of liquid resources required to support the Bank's business objectives through the risk appetite and undertaking an Internal Liquidity Adequacy Assessment Process (ILAAP). This process reviews the liquidity risk management framework, assesses the qualitative and quantitative liquidity and funding risks to which the Bank is exposed including under stressed conditions evaluates the liquidity and funding requirements of the Bank's financial projections and concludes on the adequacy of its liquid resources.

The ILAAP and compliance with the Overall Liquidity Adequacy Rule (OLAR) is reviewed and approved by the Board and is reviewed by the PRA as part of the Liquidity Supervisory Review and Evaluation Process (L-SREP). Following the L-SREP, the PRA issues provide Individual Liquidity Guidance (ILG) which determines the amount of liquidity which is required to be held in Pillar 2. On 1 October 2015 the liquidity coverage ratio (LCR) became the primary regulatory standard for liquidity and ILG is set with reference to LCR. LCR is being introduced on a phased basis and UK banks are initially required to maintain a minimum of 80% of LCR, rising to 90% on 1 January 2017 and 100% in 2018.

To manage its liquidity and funding risk the Bank monitors the following:
- funding and cashflow profile,
- maturity concentrations,
- total liquid asset portfolio,
- asset encumbrance,
- stress testing,
- assessing market conditions for stress and contingency planning.

The Bank has an established funding base, predominantly comprising retail and commercial deposits. The Bank closely monitors and manages its liquidity position, maintaining a regulatory liquidity buffer appropriate for the Bank's funding profile in order to ensure the Bank meets its financial obligations as and when they fall due. In a more severe stress, the Bank would in the first instance invoke its own Contingency Funding Plan (CFP). The Bank can then invoke its Recovery Plan, maintained under UK regulatory rules implementing the European Bank Recovery and Resolution Directive (BRRD), which documents a number of potential management actions.

5.6.2 Liquidity Risk Management Framework and risk policies

Liquidity management information is provided on a regular basis to the Liquidity & Market Risk Forum (LMRF), ALCO and the Board which details the Bank's compliance with its primary liquidity risk metrics, which include:

- liquidity coverage ratio (LCR), 213.5% (2015: 245.8%) which represents a surplus to regulatory requirements. The strong liquidity position aligns to the Bank's risk strategy to maintain a prudent liquidity position, although the surplus to regulatory requirements may vary due to cash flow mismatches and fluctuations in the Bank's funding profile over time;

- internal liquidity stress tests - the survival period of the Bank under an applicable stress scenario. The Bank held a buffer in excess of the requirements from the applicable stress scenario at 31 December 2016.

- customer loan/deposit ratio, 86.7% (2015: 86.3%) - the ratio of customer loans (excluding credit commitments) to customer deposits;

- encumbrance ratio, 17.8% (2015: 21.8%) - per the EBA definition, asset encumbrance ratio = (carrying amount of encumbered assets and collateral)/(total assets and collateral), where an asset is considered as encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or credit enhance any transaction from which it cannot be freely withdrawn.

Liquid asset portfolios

Total liquidity resources as at 31 December 2016 were £8,240.3m (2015: £10,247.1m). The Bank is focused on maintaining a high percentage of liquid assets which are high-quality and the table below analyses the Bank's liquidity portfolio by product and unencumbered liquidity value. The Bank categorises its liquidity portfolio into primary and secondary (other liquid assets and contingent liquidity).

Primary liquid assets include cash and balances at central banks, gilts and other high quality government bonds.

Secondary liquidity comprises of unencumbered liquid investment securities not included as part of primary liquidity as well as other forms of contingent liquidity sources. In the 2015 Annual Report and Accounts contingent liquidity included all other non-primary liquid assets. The Bank has now narrowed the contingent liquidity definition in the statutory accounts to only include unencumbered assets (excluding liquid investments securities) available for use at the Central Bank and therefore the 2015 comparatives have been restated to align with this change. The reduction in secondary liquidity in 2016 reflects a combination of amortisation of assets, sale and management of secured funding collateral requirements to support the Bank's funding profile and collateralisation of the Britannia pension scheme.

Table 38 Bank's Liquidity portfolio

	2016 £m	2015 £m
Operational balances with central banks	**2,571.4**	2,329.3
Gilts	**676.2**	1,450.2
Central government and multilateral development bank bonds	**568.5**	760.2
Total primary liquid assets	**3,816.1**	4,539.7
Other liquid assets	**727.2**	1,386.6
Contingent liquidity	**3,697.0**	4,320.8
Total liquidity	**8,240.3**	10,247.1
Average Balance	**9,061.2**	11,107.5

The Bank uses a combination of these asset pools to manage liquidity, with primary liquidity used predominantly for short term cash flow movements, while other liquidity is used for creating longer term liquidity. Regular realisation through repo transactions and outright sales provide assurance that these asset pools remain sufficiently liquid. Liquid assets have reduced in the period in line with a reduction in the liquidity risk profile since the year end.

Included within the primary liquid asset balance above is £178.0m (2015: Nil) of UK government gilts obtained through a collateral upgrade transaction. In accordance within the recognition criteria for financial assets under IAS 39, these gilts are not recognised on the Bank's balance sheet.

Wholesale funding is used to supplement retail and commercial deposits to diversify the source of funds to support the business plan of the Bank. The Bank has a variety of long term wholesale funding sources outstanding, including securitisations, covered bond and medium term notes, as shown in the table below:

Table 39 Long term wholesale funding sources

	2016 £m	2015 £m
Preference shares and subordinated debt	**456.0**	457.0
Secured funding	**1,197.6**	2,091.0
Repos	**990.6**	671.3
Market borrowing	**4.1**	10.9
MTNs	**405.4**	404.9
Total wholesale funding	**3,053.7**	3,635.1

The reduction in wholesale funding primarily reflects the repayment of secured funding in the period. Gilt repos make up £833.2m of total repo funding.

The following table sets out the Bank's contractual wholesale funding by maturity, with the maturity of securitisations based on call dates:

Table 40 Contractual wholesale funding by maturity

	2016 £m	2015 £m
Repayable in less than 1 month	**837.4**	522.5
Repayable between 1 and 3 months	**-**	159.7
Repayable between 3 and 6 months	**528.9**	352.4
Repayable between 6 and 9 months	**405.4**	243.3
Repayable between 9 and 12 months	**67.9**	433.0
Repayable between 1 and 2 years	**-**	746.9
Repayable between 2 and 5 years	**1,008.1**	259.0
Repayable in more than 5 years	**206.0**	918.3
Total external funding	**3,053.7**	3,635.1

Liquidity gap (contractual maturity)
Details of contractual maturities for assets and liabilities underpin the management of liquidity risk, however, management recognises that customer behaviour differs to contractual maturity, therefore as part of the planning process, behavioural run-off of customer assets and liabilities over time are estimated. The assumptions used to create these estimates and the estimates themselves are recommended for approval by ALCO as part of its responsibility to manage the Bank's financial plans.

Gross cash flows include interest and other revenue cash flows. Other assets and liabilities include non-financial items and these are excluded from the maturity analysis. The following table is an analysis of gross undiscounted contractual cash flows of financial assets and liabilities held at the balance sheet date:

Table 41 Contractual cash flows

2016

	Carrying value £m	Gross nominal flow £m	Less than 1 month £m	1-3 months £m	3-6 months £m	6-9 months £m	9-12 months £m	1-2 years £m	2-5 years £m	Over 5 years £m
Assets										
Cash and balances at central banks	2,848.2	2,848.2	2,848.2	-	-	-	-	-	-	-
Loans and advances to banks	836.9	837.2	461.8	196.7	178.7	-	-	-	-	-
Loans and advances to customers (incl. FVAHR)	19,584.3	27,809.0	690.4	237.4	381.6	390.9	387.9	1,497.5	4,116.9	20,106.4
Investment securities:										
Loans and receivables	13.8	16.1	-	-	-	-	-	0.1	0.3	15.7
Available for sale	3,538.1	3,691.1	7.1	65.1	17.9	42.7	18.7	406.3	2,067.1	1,066.2
Fair value through profit or loss	-	-	-	-	-	-	-	-	-	-
Derivative financial instruments	425.5	641.3	6.6	12.3	142.0	19.1	16.6	61.0	154.5	229.2
Other assets	341.5	-	-	-	-	-	-	-	-	
Total recognised assets	**27,588.3**	**35,842.9**	**4,014.1**	**511.5**	**720.2**	**452.7**	**423.2**	**1,964.9**	**6,338.8**	**21,417.5**
Liabilities										
Deposits by banks	1,198.6	1,175.6	837.8	0.8	268.7	0.2	68.1	-	-	-
Customer accounts	22,425.1	22,524.5	16,430.7	302.2	1,119.4	1,318.0	1,053.2	1,482.5	818.5	-
Customer accounts - capital bonds	11.8	9.3	-	2.4	3.2	2.7	1.0	-	-	-
Debt securities in issue	1,625.4	1,847.7	45.7	16.9	479.0	415.6	14.8	43.6	832.1	-
Derivative financial instruments	444.5	716.8	10.4	19.6	29.7	26.4	26.4	87.4	181.1	335.8
Other borrowed funds	472.6	699.7	3.6	7.8	10.9	21.8	10.9	44.0	350.0	250.7
Other liabilities	451.8									
Total recognised liabilities	**26,629.8**	**26,973.6**	**17,328.2**	**349.7**	**1,910.9**	**1,784.7**	**1,174.4**	**1,657.5**	**2,181.7**	**586.5**
Unrecognised loan commitments	2,441.7	2,441.7	2,106.9	334.8	-	-	-	-	-	-
Total liabilities	**29,071.5**	**29,415.3**	**19,435.1**	**684.5**	**1,910.9**	**1,784.7**	**1,174.4**	**1,657.5**	**2,181.7**	**586.5**
Total recognised liabilities, of which:										
Secured borrowings:	1,197.6									
Unsecured borrowings:	24,976.2									
Subordinated borrowings:	456.0									

2015

	Carrying value £m	Gross nominal flow £m	Less than 1 month £m	1-3 months £m	3-6 months £m	6-9 months £m	9-12 months £m	1-2 years £m	2-5 years £m	Over 5 years £m
Assets										
Cash and balances at central banks	2,678.5	2,678.5	2,678.5	-	-	-	-	-	-	-
Loans and advances to banks	871.0	871.0	520.0	351.0	-	-	-	-	-	-
Loans and advances to customers	19,784.4	31,203.9	602.2	311.5	398.6	395.3	442.7	1,636.7	4,854.8	22,562.1
Investment securities:										
Loans and receivables	15.0	18.4	-	-	-	-	-	0.2	0.5	17.7
Available for sale	4,296.8	5,515.2	9.1	233.0	24.7	159.7	21.8	253.0	1,140.1	3,673.8
Fair value through profit or loss	582.4	590.0	3.3	1.3	1.9	2.0	30.7	11.2	515.6	24.0
Derivative financial instruments	370.1	666.7	8.1	11.0	40.3	14.7	79.1	123.3	137.1	253.1
Other assets	430.1	-	-	-	-	-	-	-	-	-
Total recognised assets	29,028.3	41,543.7	3,821.2	907.8	465.5	571.7	574.3	2,024.4	6,648.1	26,530.7
Liabilities										
Deposits by banks	725.9	725.9	566.2	159.7	-	-	-	-	-	-
Customer accounts	22,732.0	22,836.6	15,938.3	1,473.6	975.4	1,644.4	870.2	1,322.4	448.0	164.3
Customer accounts - capital bonds	77.4	59.1	-	13.2	17.0	9.5	10.1	9.3	-	-
Debt securities in issue	2,554.3	2,866.3	10.4	18.6	385.1	262.2	473.1	827.6	129.4	759.9
Derivative financial instruments	346.9	766.1	9.8	19.1	29.1	29.0	26.9	94.9	192.1	365.2
Other borrowed funds	459.9	743.9	3.6	7.8	10.9	21.8	10.9	44.0	371.3	273.6
Other liabilities	768.6	-	-	-	-	-	-	-	-	-
Total recognised liabilities	27,665.0	27,997.9	16,528.3	1,692.0	1,417.5	1,966.9	1,391.2	2,298.2	1,140.8	1,563.0
Unrecognised loan commitments	2,710.2	2,710.2	2,375.4	334.8	-	-	-	-	-	-
Total liabilities	30,375.2	30,708.1	18,903.7	2,026.8	1,417.5	1,966.9	1,391.2	2,298.2	1,140.8	1,563.0
Total recognised liabilities, of which:										
Secured borrowings:	2,091.0									
Unsecured borrowings:	25,117.0									
Subordinated borrowings:	457.0									

5.7 Market risk

5.7.1 Overview

Market risk is the risk of loss as a result of the value of financial assets or liabilities (including off-balance sheet instruments) being adversely affected by movements in market rates or prices. This loss can be reflected in the near term earnings by changing net interest income, or in the longer term because of changes in the economic value of future cash flows.

The main source of market risk within the Bank is driven by mismatches between the re-pricing profiles of asset and liability customer products and certain characteristics embedded within these products and basis risk. Whilst the Bank does not have a trading book, the Treasury function does create both market risk and currency risk through its various portfolio management activities and employs risk management strategies to reduce earnings volatility.

The Bank does not operate a trading book and its net currency positions are below the required threshold and so it does not have any Pillar 1 market risk requirement. All market risk exposures are addressed under the Prudential Regulatory Authority (PRA) Pillar 2 framework, which is captured as part of its ICG requirement.

The main measure utilised in Market Risk is Present Value of 01 (PV01). The PV01 is the daily calculation of the effect on the Net Present Value (NPV) of Treasury portfolios to both parallel and specific point of yield curve stress testing (i.e. non-linear yield curve shifts) by one basis point. Analysis includes daily parallel shifts in yield curve rates of +/- 100bps with the resultant change in NPVs representing the potential change in portfolio values.

Market risk exposures have been maintained well within the Bank’s risk appetite which has remained unchanged from the end of 2015, as do the primary drivers of market risk. Interest rate risk when expressed in terms of PV01 averaged £62k during the year of 2016 with a low of (£5k) and a high of £178k. A reduction in both the holding and duration of sovereign bond exposures has contributed to a reduction in swap spread risk which has fallen to a PV01 of £(892k) (31 December 2015: £(1,043k)). There has also been a similar reduction in the Bank's other credit spread exposures which primarily reflect holdings in Warwick Finance One and Warwick Finance Two securitisations. A combination of repayments and an outright sale has seen the notional holding of mortgage backed securities (MBS) fall from £1,614m at 31 December 2015 to £1,318m at 31 December 2016.

5.7.2 Primary risk metrics and sources of market risk

The key drivers of market risk that the Bank faces and the metrics used to manage those risks are:

Interest rate risk

The primary risk metric employed by the Bank to manage directional interest rate risk and yield curve risk is the sensitivity of the Bank's net interest rate exposure to a one basis point parallel shift in interest rates (PV01). Limits are set at an overall level for directional interest rate risk and against individual time buckets for yield curve risk.

To supplement the gapped and overall PV01 limits noted above, stress testing of exposures against historical yield curve shifts is undertaken on a monthly basis. This assesses the sensitivity to the most extreme curve steepening and curve flattening movements, to a 99% confidence, seen over a one month period during the previous five years.

A key aspect in the management and measurement of interest rate risk is the behaviouralisation of certain elements of the Bank's balance sheet. Behavioural assumptions are limited to the treatment of non-interest bearing balances and expectations with regard to customer prepayments within the Bank's residential mortgage and unsecured loan portfolios. The Bank periodically analyses its current account portfolio in order to identify a stable, non-interest bearing 'core' element compared to the more volatile, rate sensitive and transitory balances. A behavioural duration is applied to the former while the latter are assumed to reprice within one month. Other non-maturity deposits are not subject to a behavioural adjustment and are assumed to reprice within one month.

Similar assumptions are made for other non-interest bearing balance sheet items such as non-dated capital all of which are reviewed and approved by the Bank's ALCO on a semi-annual basis.

In addition to the balance sheet items noted above interest rate risk is primarily driven by the Bank's holding of fixed rate assets within its using the derivative instruments.

Risk exposures are formally calculated at least monthly. Interest rate risk and effectiveness of hedging is monitored at a minimum weekly using gap positions, incorporating new business requirements. Draw down risk, in particular for fixed rate mortgages, is managed through weekly tranche meetings. Treasury undertakes hedges for interest rate risk using derivative instruments and investment securities to external wholesale markets.

Basis risk

The definition of basis risk is the risk of loss as a result of the balance sheet being adversely affected by the movement between different index rates.

Basis risk in the Bank balance sheet is mainly driven by a mix of exposures to LIBOR, base rate and administered rate. LIBOR exposures are created through the Bank's holdings of LIBOR linked assets such as MBS and as a result of hedging fixed rate retail products and fixed rate sovereign debt. Reserve balances at the Bank of England and tracker mortgages generate a base rate asset with administered rate exposures generated by mortgages and savings products.

Basis risk is managed using an earnings at risk based metric, focusing in detail on the sensitivity of changes in interest rates on net interest income over a one year period. The assumed potential loss of earnings reflects the downside risk comparing the prevailing relevant spreads against their historical extremes. The estimated earnings at risk is then expressed as a percentage of the forecasted net interest income over the next twelve months.

Basis risk is monitored by LMRF and ALC0 monthly with action taken as required.

Sovereign Swap spread risk

Swap spread risk is defined as the risk between the fixed rate element of the swap agreement and the benchmarked treasury instrument that an organisation is exposed to. These assets are used for liquidity purposes within the Treasury portfolio.

The Bank manages swap spread risk by calculating on a daily basis the sensitivity of its hedged fixed rate bond portfolio to a one basis point divergence in yields between the fixed rate bond and its hedge (PV01).

Foreign exchange risk

The Bank's exposure to foreign exchange risk is primarily limited to customer hedging transactions and incidental customer transactions. Therefore, to manage this risk an overall maximum notional net sterling position limit is set for both intra-day and overnight exposures. This is supported by applying sub-limits to currencies by tier to reflect their liquidity.

Where the Bank has originated non-sterling debt securities or short term borrowings both currency and interest rate risk is mitigated using off setting assets or derivative instruments such as cross currency swaps.

The table below is an analysis of the Bank's assets and liabilities by currency in sterling equivalent terms.

Table 42 - Balance sheet by currency

	31 December 2016					31 December 2015				
	£	$	€	Other	Total	£	$	€	Other	Total
Assets										
Cash and balances at central bank	2,848.2	-	-	-	2,848.2	2,678.5	-	-	-	2,678.5
Loans and advances to banks	799.3	20.5	15.9	1.2	836.9	805.8	34.4	29.6	1.2	871.0
Loans and advances to customers	19,404.8	30.5	17.3	0.1	19,452.7	19,643.7	27.1	19.5	0.1	19,690.4
Fair Value adjustments for hedged risk	131.6	-	-	-	131.6	94.0	-	-	-	94.0
Investment securities										
Loans and receivables	11.0	1.8	1.0	-	13.8	15.0	-	-	-	15.0
Available for sale	3,538.1	-	-	-	3,538.1	4,296.8	-	-	-	4,296.8
Fair value through profit or loss	-	-	-	-	-	582.4	-	-	-	582.4
Derivative financial instruments	425.6	-	(0.1)	-	425.5	370.1	-	-	-	370.1
Other assets	341.5	-	-	-	341.5	430.1	-	-	-	430.1
Total assets	27,500.1	52.8	34.1	1.3	27,588.3	28,916.4	61.5	49.1	1.3	29,028.3
Liabilities										
Deposits by banks	1,198.6	-	-	-	1,198.6	715.4	-	10.5	-	725.9
Customer accounts	22,374.4	20.4	30.3	-	22,425.1	22,684.0	17.6	28.8	1.6	22,732.0
Customer accounts - capital bonds	11.8	-	-	-	11.8	77.4	-	-	-	77.4
Debt securities in issue[1]	1,209.1	232.1	184.2	-	1,625.4	1,466.4	549.6	538.3	-	2,554.3
Derivative financial instruments	444.5	-	-	-	444.5	346.9	-	-	-	346.9
Other borrowed funds	472.6	-	-	-	472.6	459.9	-	-	-	459.9
Other liabilities	448.1	2.3	1.3	0.1	451.8	770.3	0.4	(2.1)	-	768.6
Total liabilities	26,159.1	254.8	215.8	0.1	26,629.8	26,520.3	567.6	575.5	1.6	27,665.0
Net assets	1,341.0	(202.0)	(181.7)	1.2	958.5	2,396.1	(506.1)	(526.4)	(0.3)	1,363.3

1. The debt securities are shown gross of the Fair Value Adjustment for the Dollar and Euro values.

At 31 December 2016, the Bank's open currency position was £1.4m (2015: £(0.7)m). The Bank manages its currency positions against both an overall limit and individual currency limits.

Credit spread risk

Credit spread risk is defined as the risk of loss from changes in the credit spread on wholesale assets.

The Bank's non-sovereign term exposures are primarily to holdings of mortgage backed securities issued by Warwick Finance One and Warwick Finance Two plc which reflect the retained elements from the deleveraging of the Bank's Non-core assets. The potential risk from these holdings is assessed against historical spread movements of similar securitisation transactions. Given that the Bank does not seek to actively transact in this type of asset, each purchase is individually agreed by ALCO and a maximum notional limit set.

Other sources of market risk

Other sources of market risk include:

- Prepayment risk - the risk that an asset or liability repays more quickly or slowly than anticipated, resulting in a mismatch between the asset, liability and associated hedge;
- Pipeline risk - the risk that the sales profile for new fixed rate products do not match hedging assumptions, resulting in a mismatch between amount of product sold and that hedged, which can result in a hedge rebalancing cost;
- Equity price risk - the risk that the fair value of equities decreases as a result of changes in the level of equity indices and individual stocks. The Bank's non-trading equity price risk exposure arises from equity securities classified as available-for-sale. A 10 percent increase in the value of the Bank's available for sale equities at 31 December 2016 would have increased equity by £4.7m (2015: £5.6m). An equivalent decrease would reduce equity by the same degree;
- Explicit option risk - the sensitivity to overall direction of interest rates, speed of change of interest rates and market prices for positions which contain explicit options e.g. caps, floors, swaptions;

- Repricing and implicit optionality in products - the risk that options embedded or implied within retail or commercial products have an impact on market value or earnings with changing interest rates;
- Illiquidity risk - the Bank's risk appetite for market risk considers an illiquidity risk which is reflected in the assumed holding period it uses to assess its capital requirements for market risk.

Table 43 - PV01, Basis risk, Swaps spreads and FX risk metrics on the Bank's balances

	31 December 2016	31 December 2015
Total PV01 (£k)	**(5.0)**	76.0
Average PV01 for the year (£k)	**61.9**	(94.2)
Largest Positive PV01 for the period (£k)	**178.0**	128.0
Largest Negative PV01 for the period (£k)	**(5.0)**	(348.2)
Average basis risk (% of annual NII)	**0.5%**	3.4%
Swap spread PV01 (£k)	**(892.0)**	(1,043.0)
Average swap spread PV01 (£k)	**(921.5)**	(1,014.1)
MBS Holding (£m)	**1,318.0**	1,614.0
Average MBS Holding (£m)	**1,457.3**	857.2
FX notional (£m)	**1.4**	(0.7)
Average FX notional (£m)	**0.3**	(0.7)

The table illustrates the PV01, Basis risk, Swap spread and FX risk metrics on the Bank's balances. The PV01 is primarily driven by the non-sensitive balances offset by corresponding asset or derivative positions. During 2016 the largest absolute PV01 exposure of £178k reflected the short term impact following a reassessment of the level of stable non-interest bearing current accounts. This exposure was subsequently reducing as appropriate hedging activity was undertaken.

The Bank's basis risk exposure in terms of potential earnings at risk and notional has remained relatively stable through 2016 and primarily reflects a net LIBOR asset funded by administered rate liability. Swap spread risk has reduced through 2016 due to a reduction in both notional and duration of the fixed rate sovereign bonds held within its liquid asset portfolio. MBS holdings have reduced by approximately £300m reflecting an outright sale of a portion of the Bank's Warwick Finance holdings and the impact of the quarterly pay down of these notes.

5.8 Operational risk

5.8.1 Overview

Operational Risk is the risk of loss resulting from inadequate and failed processes, people or systems within the Bank or from external events.

The Bank assesses various sub categories of Operational Risk which cover legal and regulatory, conduct, information and data, financial crime, technology, model, product, physical security and people risks. Further details of regulatory, conduct and people risks are provided above.

5.8.2 Operational Risk Framework

The management of Operational Risk is designed to assist the Bank in understanding its operations in the context of a Board approved risk appetite, particularly with regard to reducing capital requirements, meeting regulatory expectations and reducing operational losses. The approved Operational Risk Framework has been in place since early 2013 and continues to be embedded in line with good practice and regulatory guidance. This Framework is designed to provide assurance over the system of risk management and internal control. Methods and approaches continue to be embedded within the business and there is significant focus on this activity. This is supported by the implementation of a revised Operational Risk Management System (ORMS) which was implemented in 2016 and is being further developed to store and report on the Bank's Operational loss data.

Operational Risks are identified, managed and mitigated through ongoing risk management practices including material Bank level risk assessments, risk event reporting, operational loss data analysis, a detailed Risk and Control Self Assessment (RCSA) process, a consistently applied Risk Acceptance process, monitoring of key metrics, scenario analysis and continuous training. Material Operational Risks are reported through an appropriate governance structure with regular meetings to monitor the development and effectiveness of the Operational Risk processes and material risks within the Bank.

During 2016 Operational Risk processes have continued to be strengthened within the Bank, however Operational Risk levels remain elevated due to the manual processes, legacy systems and processes for which remediation continues. Focus through 2017 will be to ensure robust operational risk and control activities remain an integral part of the Bank's business as usual (BAU) activities. Further information can be found in the Risk Management and Principal Risks and Uncertainties Sections of the Annual Report and Accounts.

Table 44 - Operational net losses

Risk events: net losses (as a % of total)		
	2016	2015
Business disruption and system failures	**<1%**	<1%
External fraud	**74.3%**	38.5%
Execution, delivery and process management	**21.6%**	41.7%
Internal fraud	**3.6%**	<1%
Damage to physical assets and injury	**<1%**	<1%
Clients, products and business practices	**<1%**	19.7%
Employment practices and workplace safety	**<1%**	<1%

Number of risk events (as a % of total)		
	2016	2015
Business disruption and system failures	**<1%**	<1%
External fraud	**67.4%**	64.9%
Execution, delivery and process management	**32.4%**	34.7%
Internal fraud	**<1%**	<1%
Damage to physical assets and injury	**<1%**	<1%
Clients, products and business practices	**<1%**	<1%
Employment practices and workplace safety	**<1%**	<1%

The above analysis presents the Bank's operational risk events by Basel Level 1 risk event category as this aligns with industry best practice.

In 2016, External Fraud accounts for 74.3% of the total net losses and 67.4% of the number of individual events. These events are driven by financial crime and include credit and debit card fraud, malware attacks, phishing, cheque frauds and mortgage frauds. Internal Fraud accounts for 3.6% of the total net losses and less than 1% of the number of events.

In 2016, Execution, Delivery and Process Management accounts for 21.6% of total net losses and 32.4% of the number of individual events.

The fall in clients, products and business practices from 2015 to 2016 reflects a number of conduct risk related cases in 2015 but with nil cases in 2016.

As part of the process a review and analysis of risk events is performed to ensure that any required improvements to processes and/or controls and any learnings are implemented in order to help prevent reoccurrence. Other activities driven by risk events and losses include a strengthening of the 1st line process to carry out root cause analysis and continuous improvement to the control environment through management of the Risk Control Self Assessments. Root Cause Analysis must be performed on all Risk Events with those categorised as 'Major' and above in severity discussed at Bank Governance committees.

5.8.3 Corporate Insurance programme

The Bank has a structured programme designed to transfer the impact of specific operational risks in line with the appetite of the organisation and industry best practice. For example:

- Insurance of the Bank's buildings and assets;
- Protection and revenue in the event of business interruption following damage to the Bank's buildings or assets;
- Protection against impacts of financial crime;
- Professional indemnity and directors and officers liability cover;
- Motor, employer, product and public liability insurance;
- Pension Trustee Liability Insurance; and
- Travel and Personal Accident Insurance.

5.9 Pension risk

5.9.1 Overview

Pension risk occurs in defined benefit schemes when the market value of the scheme's assets is considered to be insufficient to meet its liabilities, resulting in a deficit which the employer is legally obliged to fund. The scheme's liabilities are calculated using a discount rate referenced to UK Government bond yields and are an estimate of its long term obligations. Uncertainty in the estimated size of the liabilities and volatility in future investment returns from the assets may cause adverse movements in the pension fund deficit. The key risk factors that can have a positive or negative impact on the deficit are:

- Long term interest rates - a decrease in long term interest rates will cause the value of the scheme's liabilities to increase.

- Inflation - where a scheme's benefits have an inflation link an increase in inflation will cause the scheme's liabilities to increase. This may be offset where the scheme's assets are also linked to inflation (e.g. index-linked gilts and inflation swaps).

- Longevity risk (life expectancy) - the valuation of pension scheme liabilities is reliant on scheme member longevity and liabilities may substantially increase should longevity increase more than expected.

- Asset volatility - changes in the value of the scheme's assets compared to that of its liabilities can create significant volatility in the estimated deficit. This is particularly prevalent in schemes with significant equity holdings where equity returns underperform the bond yields used to discount scheme liabilities.

In 2015 the Bank closed its defined benefit scheme and removed the link to final pensionable salary for both Pace and Britannia Pension Scheme members. Colleagues are provided with defined contribution pension options for all future service. During 2016 consideration was given to strategies for separation of the Bank's share of the Pace scheme from that of The Co-operative Group.

Controls are applied to mitigate these risks and a monthly pension risk report is made to the Bank Asset and Liability Committee to monitor pension risk and decide if further action is necessary. These reports take account of the risk reporting delivered to pension scheme Trustees. The Bank is able to engage directly with the Trustees of the Britannia Pension Scheme and can engage the Trustees of Pace through its relationship with the sponsor, The Co-operative Group.

The Risk Director chairs a monthly pension steering group and pension risk is discussed at a number of Executive and Board Committees on a regular basis. For further information see note 33 of the Annual Report and Accounts (Bank financial statements).

5.10 Regulatory risk

5.10.1 Overview

The Bank’s operations, including its subsidiaries and associates, are subject to a significant body of rules and regulations that are a condition for authorisation to conduct banking and financial services business. These apply to business operations, affect financial returns including prudential and conduct of business regulations. The requirements often reflect global standards developed by, among others, the Basel Committee on Banking Supervision and the International Organisation of Securities Commissions. Requirements are increasingly derived from, or applied directly by, EU legislation in addition to the requirements mandated by the principal regulatory authorities that supervise the Bank in the jurisdictions in which it operates.

5.10.2 Changes to regulations

As the Bank must comply with wide ranging legal and regulatory (including liquidity and capital) requirements and supervision, changes to the legal and regulatory environment may result in additional compliance costs (including the raising of further capital and/or liquidity) and diversion of management time and resources. These changes may negatively affect the Bank’s business. In addition, failure to comply with these requirements may result in investigations, disciplinary action, fines, reputational damage and the revocation of the Bank’s licences, permissions or authorisations, which could have a material negative effect on the Bank’s business. The Regulatory Risk team is responsible for identifying and communicating changes to regulations. Adoption of these changes is owned and managed by the 1st line.

5.10.3 Regulatory Risk management

The Regulatory Risk function is responsible for monitoring and reporting on regulatory risk across the Bank and facilitates production of regulatory, conduct, anti-money laundering and financial crime risk reporting to CRROC, EROC and the Risk committee of the Bank.

5.11 Conduct risk

5.11.1 Overview

The Bank manages Conduct Risk in a way that is consistent with its overall risk appetite and aligns with its strategy. Conduct risk encompasses the principle of treating customers fairly and putting customers at the centre of what we do - it is outcome driven. Conduct Risk may arise from any aspect of the way the Bank’s business is conducted, a key criteria for the Bank being whether the outcome is fair for its customers, e.g., products and services not meeting the needs of its customers, sales processes resulting in poor advice or incorrect information, or failing to deal with a complaint appropriately. When assessing conduct risk there will often be a closely linked regulatory requirement arising from the Financial Conduct Authority (FCA) rules and guidance that are concerned with the conduct of business regulation.

Appendix 1 - Capital Resources

The following table sets out full details of the Banks Capital resources, regulatory adjustments, Capital Ratios and buffers:

	2016 £m	2015 £m
Common Equity Tier 1 (CET1) Capital: instruments and reserves		
Capital instruments and the related share premium accounts	**1,759.5**	1,759.5
of which: Instrument type 1	**-**	-
of which: Instrument type 2	**-**	-
of which: Instrument type 3	**-**	-
Retained earnings	**(896.4)**	(273.1)
Accumulated other comprehensive income (and other reserves)	**514.1**	500.2
Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1	**-**	-
Minority interests (amount allowed in consolidated CET1)	**-**	-
Independently reviewed interim profits net of any foreseeable charge or dividend	**-**	-
Common Equity Tier 1 (CET1) capital before regulatory adjustments	**1,377.2**	1,986.6
Common Equity Tier 1 (CET1) capital: regulatory adjustments		
Additional value adjustments (negative amount)	**(5.4)**	(0.8)
Intangible assets (net of related tax liability) (negative amount)	**(100.1)**	(142.8)
Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-	(4.0)
Fair value reserves related to gains or losses on cash flow hedges	**(56.4)**	(34.6)
Negative amounts resulting from the calculation of expected loss amounts	**(44.4)**	(30.0)
Any increase in equity that results from securitised assets (negative amount)	**-**	-
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	**-**	-
Defined-benefit pension fund assets (negative amount)	**(15.3)**	-
Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	**-**	-
Direct, indirect and synthetic holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	**-**	-
Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	**-**	-
Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	**-**	-
Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	**-**	-
of which: qualifying holdings outside the financial sector (negative amount)	**-**	-
of which: securitisation positions (negative amount)	**-**	-
of which: free deliveries (negative amount)	**-**	-
Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	**-**	-
Amount exceeding the 15% threshold (negative amount)	**-**	-
of which: direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	**-**	-
of which: deferred tax assets arising from temporary differences	**-**	-
Losses for the current financial year (negative amount)	**(418.7)**	(623.3)
Foreseeable tax charges relating to CET1 items (negative amount)	**-**	-
Regulatory adjustments applied to CET1 in respect of amounts subject to pre-CRR treatment	**-**	-
Regulatory adjustments relating to unrealised gains and losses pursuant to Articles 467 and 468	**-**	-
of which: filter for unrealised loss 1	**-**	-
of which: filter for unrealised loss 2	**-**	-
of which: filter for unrealised gain 1	**-**	-
of which: filter for unrealised gain 2	**-**	-
Amount to be deducted from or added to Common Equity Tier 1 capital with regard to additional filters and deductions required pre CRR	**-**	-
Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)	**-**	-
Total regulatory adjustments to Common Equity Tier 1 (CET1)	**(640.3)**	(835.5)
Common Equity Tier 1 (CET1) capital	**736.9**	1,151.1

	2016 £m	2015 £m
Additional Tier 1 (AT1) capital: instruments		
Capital instruments and the related share premium accounts	**-**	-
of which: classified as equity under applicable accounting standards	**-**	-
of which: classified as liabilities under applicable accounting standards	**-**	-
Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1	**-**	-
Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	**-**	-
of which: instruments issued by subsidiaries subject to phase out	**-**	-
Additional Tier 1 (AT1) capital before regulatory adjustments	**-**	-
Additional Tier 1 (AT1) capital: regulatory adjustments		
Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	**-**	-
Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	**-**	-
Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above10% threshold and net of eligible short positions) (negative amount)	**-**	-
Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	**-**	-
Regulatory adjustments applied to additional tier 1 in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts) eligible short positions) (negative amount).	**-**	-
Residual amounts deducted from AT1 with regard to deduction from CET1 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	**-**	-
of which: items to be detailed line by line e.g. material net interim losses, intangible, shortfall of provisions to expected losses etc.	**-**	-
Residual amounts deducted from AT1 with regard to deduction from T2 capital during the transitional period pursuant to article 472 of Regulation (EU) No 575/2013	**-**	-
of which: items to be detailed line by line e.g. reciprocal cross holdings in Tier 2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities etc.	**-**	-
Amount to be deducted from or added to AT1 capital with regard to additional filters and deductions required pre-CRR	**-**	-
of which: possible filter for unrealised losses	**-**	-
of which: possible filter for unrealised gains	**-**	-
Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	**-**	-
Total regulatory adjustments to Additional Tier 1 (AT1) capital	**-**	-
Additional Tier 1 (AT1) capital	**-**	-
Tier 1 capital (T1 = CET1 + AT1)	**736.9**	1,151.1
Tier 2 (T2) capital: instruments and provisions		
Capital instruments and the related share premium accounts	**447.0**	448.8
Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2	**-**	-
Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	**-**	-
of which: instruments issued by subsidiaries subject to phase out		
Credit risk adjustments	**-**	-
Tier 2 (T2) capital before regulatory adjustments	**447.0**	448.4

	2016 £m	2015 £m
Tier 2 (T2) capital: regulatory adjustments	**-**	-
Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	**-**	-
Holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	**-**	-
Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	**-**	-
Direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	**-**	-
Total regulatory adjustments to Tier 2 (T2) capital	**-**	-
Tier 2 (T2) capital	**447.0**	448.4
Total capital (TC = T1 + T2)	**1,183.9**	1,599.5
Risk weighted assets in respect of amounts subject to pre-CRR treatment and transitional treatments subject to phase out as prescribed in Regulation (EU) No 575/2013 (i.e. CRR residual amounts)	**36.4**	71.0
of which: items not deducted from CET1 (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line = e.g. Deferred tax assets that rely on future profitability net of related tax liability, indirect holdings of own CET1, etc.)	**-**	5.7
of which: items not deducted from AT1 (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line = e.g. Reciprocal cross holdings in T2 instruments, direct holdings of non-significant investments in the capital of other financial sector entities etc.)	**15.0**	12.2
Items not deducted from T2 items (Regulation (EU) No 575/2013 residual amounts) (items to be detailed line by line e.g. Indirect holdings of own T2 instruments of non-significant investments in the capital of other financial sector entities, indirect holdings of significant investments in the capital of other financial sector entities etc.)	**-**	-
Total risk weighted assets	**6,676.1**	7,422.9
Capital ratios and buffers		
Common Equity Tier 1 (as a percentage of total risk exposure amount)	**11.0%**	15.5%
Tier 1 (as a percentage of total risk exposure amount)	**11.0%**	15.5%
Total capital (as a percentage of total risk exposure amount)	**17.7%**	21.6%
Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer expressed as a percentage of risk exposure amount)	**7.0%**	7.0%
of which: capital conservation buffer requirement	**2.5%**	2.5%
of which: countercyclical buffer requirement	**-**	-
of which: systemic risk buffer requirement	**-**	-
of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	**-**	-
Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	**6.5%**	9.2%
Amounts below the thresholds for deduction (before risk weighting)		
Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	**21.5**	53.0
Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	**6.0**	4.9
Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	**(6.7)**	-
Applicable caps on the inclusion of provisions in Tier 2		
Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	**-**	-
Cap on inclusion of credit risk adjustments in T2 under standardised approach	**10.3**	11.5
Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	**-**	-
Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	**25.7**	29.1
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)		
Current cap on CET1 instruments subject to phase out arrangements	**-**	-
Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	**-**	-
Current cap on AT1 instruments subject to phase out arrangements	**-**	-
Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	**-**	-
Current cap on T2 instruments subject to phase out arrangements	**-**	-
Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	**-**	-

Appendix 2 - Capital Instruments

The following table sets out full details of the Banks qualifying Capital instruments in issue.

		Tier 1	Tier 2	
			11% Subordinated notes	8.5% Subordinated notes
1	Issuer	The Co-operative Bank plc	The Co-operative Bank plc	The Co-operative Bank plc
2	Unique identifier	N/A	GB00BFXW0853	XS1249403541
3	Governing laws of the instrument	English	English	English
	Regulatory treatment			
4	Transitional CRR rules	Common Equity Tier 1	Tier 2	Tier 2
5	Post-transitional CRR rules	Common Equity Tier 1	Tier 2	Tier 2
6	Eligible at solo/(sub-) consolidated/ solo & (sub-) consolidated	Solo and Consolidated	Solo and Consolidated	Solo and Consolidated
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares	Subordinated Debt	Subordinated Debt
8	Amount recognised in regulatory capital (£m)	1,759.5	197.0	250.0
9	Nominal amount of instrument (£m)	22.6	206.0	250.0
9a	Issue price	5p nominal value	100	100
9b	Redemption price	N/A	100	100
10	Accounting classification	Shareholder's equity	Liability - amortised cost	Liability - amortised cost
11	Original date of issue	20/12/2013	20/12/2013	01/07/2015
12	Subsequent issue date	09/05/2014	N/A	N/A
13	Perpetual or dated	perpetual	dated	dated
14	Original maturity date	N/A	20/12/2023	01/07/2025
15	Issuer call	N/A	No	Yes
16	Optional call date, contingent call dates and redemption amount[1]	N/A	101 tax call, 101 regulatory call	01/07/2020, 101 tax call, 101 regulatory call
17	Subsequent call dates, if applicable	N/A	N/A	N/A
	Coupons/dividends			
18	Fixed or floating dividend/coupon	Floating Dividend	Fixed	Fixed
19	Coupon rate and any related index	N/A	0.11	0.085
20	Existence of a dividend stopper	N/A	No	No
21	Fully discretionary, partially or mandatory (in terms of timing)	Fully Discretionary	Mandatory	Mandatory
22	Fully discretionary, partially or mandatory (in terms of amount)	Fully Discretionary	Mandatory	Mandatory
23	Existence of step up or other incentive to redeem	N/A	No	No
24	Noncumulative or cumulative	N/A	N/A	N/A
25	Convertible or non-convertible	N/A	Non-convertible	Non-convertible
26	If convertible, conversion trigger(s)	N/A	N/A	N/A
27	If convertible, fully or partially	N/A	N/A	N/A
28	If convertible, conversion rate	N/A	N/A	N/A
29	If convertible, mandatory or optional conversion	N/A	N/A	N/A
30	If convertible, specify instrument type convertible into	N/A	N/A	N/A
31	If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A
32	Write-down features	N/A	None contractual Statutory bail-in	None contractual Statutory bail-in
33	If write-down, write-down trigger(s)	N/A	N/A	N/A
34	If write-down, full or partial	N/A	N/A	N/A
35	If write-down, permanent or temporary	N/A	N/A	N/A
36	If write-down, description of write-up mechanism	N/A	N/A	N/A
37	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Subordinate to Tier 2	Senior Unsecured	Senior Unsecured
38	Non-compliant transitioned features	No	No	No
39	If yes, specify non-compliant features	No	N/A	N/A
40	Voting Rights	Yes	N/A	N/A

1. 101 tax call and 101 regulatory relates to par plus accrued call price.

Appendix 3 - Tables Index