

**RBC EUROPE LIMITED**  
**PILLAR 3 DISCLOSURE**  
**FOR THE YEAR ENDED 31 OCTOBER 2016**

# Table of Contents

<b>1.0</b>	<b>Overview</b>	<b>1</b>
1.1	Business Profile	1
1.2	Basis and Frequency of Disclosures	1
1.3	Location and Verification	2
1.4	Risk Governance	2
1.5	Regulatory Developments	2
1.6	Regulatory Capital Management	3
<b>2.0</b>	<b>Risk Governance</b>	<b>4</b>
2.1	Accountability Structure	4
2.1.1	Board of Directors	4
2.1.2	Chief Risk Officer, Europe	6
2.1.3	Risk Committee	6
2.1.4	Audit Committee	6
2.1.5	UK Human Resources Committee	6
2.1.6	Nomination Committee	7
2.1.7	Asset and Liability Committee	7
2.1.8	European Operating Committee	7
2.1.9	UK Counterparty Credit Risk Management Committee	8
2.1.10	UK Market Risk Management Committee	8
2.1.11	UK Lending Risk Management Committee	8
2.1.12	Operational Risk Committee	8
2.1.13	Attestation Committee	9
2.1.14	Valuations Committee	9
2.1.15	New Business Committee	9
2.1.16	Reputation and Compliance Committee	10
2.1.17	Regulatory Policy Interpretation Committee	10
2.1.18	Common Reporting Data Attestation Committee	10
2.2	Risk Management and Control Framework	11
2.2.1	Risk Principles	12
2.2.2	Three Lines of Defence Model	13
2.2.3	Risk Appetite	14
2.2.4	Risk Policy Management	14
2.2.5	Capital Planning	15
<b>3.0</b>	<b>Own Funds</b>	<b>16</b>
3.1	Overview of Own Funds	16
3.2	Countercyclical Capital Buffer	22
3.3	Unencumbered Assets	22
3.4	Leverage Ratio	23
<b>4.0</b>	<b>Capital Requirements</b>	<b>26</b>
<b>5.0</b>	<b>Credit Risk</b>	<b>28</b>
5.1	Definition of Credit Risk	28
5.2	Governance and Framework	28
5.3	Credit Risk Profile	29
5.3.1	Banking Book Credit Risk	30
5.3.2	Credit Risk Adjustments	39
5.3.3	Counterparty Credit Risk	42
5.3.4	Wrong-Way Risk Exposures	47
5.3.5	Counterparty Credit Risk Arising from Derivative Transactions	47
5.3.6	Use of Credit Risk Mitigation Techniques	48
5.3.7	Use of External Credit Assessment Institutions	49
<b>6.0</b>	<b>Market Risk</b>	<b>51</b>
6.1	Definition of Market Risk	51
6.2	Governance and Framework	51
6.3	Risk Profile	52
6.4	Securitisations	52
6.4.1	Definitions	52
6.4.2	Objectives of Securitisation Activities	53
6.4.3	Summary of Relevant Accounting Policies	53
6.4.4	Risk Profile	55
<b>7.0</b>	<b>Operational Risk</b>	<b>56</b>
<b>8.0</b>	<b>Non-trading Book Equity Exposures</b>	<b>57</b>
<b>9.0</b>	<b>Interest Rate Risk in the Banking Book</b>	<b>58</b>
<b>10.0</b>	<b>Remuneration</b>	<b>59</b>
10.1	Constitution and Activities of the EHRC	59
10.2	Criteria for the Identification of Material Risk Takers	59
10.3	Design and Structure of Compensation for Material Risk Takers	60
10.4	The Link between Pay and Performance for Material Risk Takers	61
10.5	Disclosures on Remuneration	62
<b>11.0</b>	<b>Appendices</b>	<b>63</b>
11.1	Appendix 1: Board Membership	63
11.2	Appendix 2: Governance Committees	69
11.3	Appendix 3: Regulatory Capital Calculation Methods	70
11.4	Appendix 4: Countercyclical Buffer Disclosure	71

## List of Tables

Table 1: Distribution of Risk-weighted amount .....	3
Table 2: Risk Management Principles.....	12
Table 3: Full reconciliation of own funds items to audited financial statements .....	16
Table 4: Transitional own funds disclosure.....	18
Table 5: Capital instruments main features table.....	20
Table 6: Encumbered and unencumbered assets .....	23
Table 7: Leverage ratio disclosure .....	24
Table 8: Risk exposure amount by risk type and calculation approach adopted.....	26
Table 9: Risk exposure amounts by banking and trading activities .....	29
Table 10: Gross credit exposures within the banking book .....	31
Table 11: Average gross credit exposures within the banking book .....	32
Table 12: Gross credit exposure by residual maturity .....	33
Table 13: Final credit exposure by residual maturity.....	34
Table 14: Credit conversion factor for off balance sheet credit exposures.....	35
Table 15: Gross credit exposure by geographic distribution.....	36
Table 16: Final credit exposure by geographic distribution.....	37
Table 17: Gross credit exposure by geographic distribution within the EEA.....	38
Table 18: Final credit exposure by geographic distribution within the EEA.....	39
Table 19: Reconciliation of provision for credit losses .....	41
Table 20: Trading credit risk .....	42
Table 21: Counterparty credit risk by exposure class .....	43
Table 22: Average counterparty credit risk exposure .....	44
Table 23: Gross counterparty credit exposure by residual maturity .....	44
Table 24: Final counterparty credit exposure by residual maturity.....	45
Table 25: Gross counterparty credit exposure by geographic distribution .....	45
Table 26: Final counterparty credit exposure by geographic distribution .....	45
Table 27: Gross credit exposure by geographic distribution within the EEA and North America.....	46
Table 28: Final credit exposure by geographic distribution within the EEA and North America .....	46
Table 29: Counterparty credit risk for derivative transactions.....	47
Table 30: Notional of CDS .....	48
Table 31: Exposures amounts subjected to the use of the ECAIs .....	50
Table 32: Exposures amounts by CQS.....	50
Table 33: Market risk by risk type .....	52
Table 34: Exposures by underlying exposure type .....	55
Table 35: Securitisation exposures by seniority .....	55
Table 36: Securitisation exposures by risk weighting.....	56
Table 37: Non-trading book equity exposures.....	57
Table 38: Aggregate remuneration expenditure .....	62
Table 39: Analysis of remuneration between fixed and variable amounts .....	62

## 1.0 Overview

### 1.1 Business Profile

RBC Europe Limited (the Company) is a wholly owned subsidiary of Royal Bank of Canada (RBC), a leading provider of financial services globally. Operating since 1869, RBC is Canada's largest bank and is amongst the top 20 largest banks globally based on market capitalisation. RBC has amongst the highest credit ratings for financial institutions (Moody's Aa3 and Standard & Poor's AA-) and continues to be well capitalised with Common Equity Tier 1 Capital Ratio 10.8% as at 31 October 2016 (2015: 10.6%).

The Company is a UK authorised bank and provides investment banking, capital markets and wealth management services to a wide range of clients including financial institutions, corporations, governments and High-Net-Worth clients around the world. The Company works with its clients to help raise capital, access markets, mitigate risk and acquire or divest assets. The vast majority of business is focused on Fixed Income and other securities-related businesses.

The Company obtained the Standard & Poor's rating since October 2014. The Company's long- and short-term counterparty credit rating assigned by Standard & Poor's are AA-/A-1+ as at 31 October 2016 (2015: AA-/A-1+).

As at 31 October 2016, the Company does not have any subsidiaries or any investment in associates (2015: nil).

### 1.2 Basis and Frequency of Disclosures

Basel III is a global regulatory standard on bank capital adequacy, stress testing and market liquidity risk. It intended to strengthen global capital and liquidity rules with the goal of improving the banking sector's ability to absorb shocks arising from the financial and economic stress, thus reducing the risk of spillover from the financial sector to the real economy.

The EU implemented the Basel III framework through the new Capital Requirements Directive and Regulation (CRD IV package). Further UK implementation is by way of the PRA's Policy Statement PS7/13, effective from 1 January 2014.

Basel III capital adequacy framework comprises three complementary pillars:

- Pillar 1 establishes rules for the calculation of minimum capital for Credit, Market, Operational Risk and Leverage (capital adequacy requirements).
- Pillar 2 is an internal discipline to evaluate the adequacy of the regulatory capital requirement under Pillar 1 and other non-Pillar 1 risks. This pillar requires the PRA to undertake a supervisory review to assess the robustness of the regulated entity's internal assessment (risk management and supervision).
- Pillar 3 complements the other pillars and affects market discipline through public disclosure. Expanded disclosure about capital and risk enables interested parties to better understand the risk profile of individual banks and companies and to make comparisons (market discipline).

The aim of Pillar 3 is to publish a set of disclosures which allow market participants to assess key information on the capital condition, risk exposures and risk assessment process.

The information disclosed is prepared in accordance with the disclosure requirements set out in Part Eight of the Capital Requirement Regulation (CRR). The disclosures may differ from similar information in the Company's financial statements for the year ended 31 October 2016, which are prepared in accordance with International Financial Reporting Standards (IFRS). Therefore, the information in these disclosures may not be directly comparable with that information.

The Company updates these disclosures on an annually basis as at its financial year end of 31 October. The Company will assess the need to publish some or all disclosures more frequently than annually in the light of the criteria specified in Article 433 of the CRR and in accordance with European Banking Authority's Guidelines on materiality, proprietary and confidentiality and on disclosure frequency.

In preparing these disclosures, management has adjusted certain prior year amounts to conform to current year presentation. These adjustments do not have any impact on the Company's capital condition and risk exposures, unless stated otherwise.

### **1.3 Location and Verification**

These disclosures have been reviewed and approved by the Company's Audit Committee and Board. A copy of these disclosures is also available on RBC Group's corporate website at <http://www.rbc.com/aboutus/rbcel-index.html>.

### **1.4 Risk Governance**

The Company has a clear and robust corporate and risk governance framework in order to manage, control and provide assurance on risk on behalf of both internal and external stakeholders. The governance structure determines the relationships between the Company's Board of Directors (the Board), Management, RBC Group and other stakeholders. It also defines the framework in which values are established and the context in which corporate strategies and objectives are set.

The Company considers its risk and control framework to be appropriate for the effective management of its risks and is committed to ensuring that these remain relevant and effective in a changing business environment. The Company has a well-embedded Risk Appetite Framework articulating its appetite for the type and quantum of risk through clearly defined metrics. As at 31 October 2016, all measures were within the Company's Board limits and tolerances.

### **1.5 Regulatory Developments**

The Company monitors regulatory development on an on-going basis to enable it to prepare for forthcoming prudential developments. With the Capital Requirements Directive (CRD) IV package having essentially been implemented; focus is now shifting onto the recent proposal for amending Capital Requirements Regulations (CRR 2 package). The Company is participating in industry discussions to influence the proposals passage through the legislative process and ensure the organisation is prepared for the amended requirements. The Company expects the proposals to be approved by mid-2018, with implementation dates being discussed below. Given the recent release of the proposals the Company is still working on firming up its approach to these changes.

The first part of CRR 2 amendments relates to the prudential implication of the expected loss approach taken in IFRS9. The IFRS9 requirements imposed by CRR 2 will apply from the 20th day after publication of the agreed legislation in the Official Journal. Given the significant impact that expected loss provisioning could have on many institutions the proposals contain a five year transition period during which the requirements will gradually increase until being fully implemented in 2024. The Company's IFRS 9 project is integrated with the wider RBC Group project.

Other requirements stemming from the proposals include the introduction of the Fundamental Review of the Trading Book (FRTB), the Standardised Approach for Counterparty Credit Risk (SA-CRR) and confirmation of a leverage ratio of 3% as a Pillar 1 requirement. The Company does not expect their implementation before mid-2020.

The FRTB will represent a substantial change in market risk capital calculation with standardised calculations using risk sensitivities as inputs. The implementation project is integrated with the wider RBC Group project. The same approach will be taken for SA-CRR implementation. SA-CRR is a much more in-depth calculation than the current Standardised Approach for Counterparty Credit Risk

and in particular much better reflects the effects of margining derivative trades. SA-CRR will also change the inputs into the Company's large exposure calculation.

A new feature included in the CRR2 package includes a requirement to set up an independent holding company (IHC) to cover all EU activities undertaken by non-EU banks. Given the uncertainty surrounding Brexit, it is currently too early for the Company to develop contingencies for the various outcomes. The IHC requirement is expected to become a requirement by mid-2019.

The TLAC requirements are due to apply from 1 January 2019 under the proposals. However as the RBC Group was not designated as a global systemically important bank (G-SIB), these requirements will not apply to the Company.

The CRR 2 package will also implement the Basel standard on management of Interest Rate Risk in the Banking Book (IRRBB). These standards strengthen management requirements, but will remain an institution specific requirement.

## 1.6 Regulatory Capital Management

As at 31 October 2016, the Company continued to be well capitalised with a Common Equity Tier 1 and Tier 1 capital ratio of 17.0% (2015: 20.6% %). The total capital surplus was £788 million over the minimum capital requirement before buffers (2015: £792 million). This is in line with the risk tolerance set by the Company's Board. The table below illustrates the distribution of the Company's risk profile.

**Table 1: Distribution of Risk-weighted amount**

<i>£'000</i>	<b>2016</b>	<b>2015</b>
<b>Risk-weighted exposure amounts for credit and counterparty credit</b>		
Banking book credit risk	2,346,499	1,584,068
Counterparty credit risk	1,116,527	1,114,641
Risk exposure amount for contributions to the default fund of a CCP	<u>52,616</u>	<u>6,801</u>
	<b>3,515,642</b>	<b>2,705,510</b>
<b>Risk-weighted exposure amount settlement/delivery risk in the Trading book</b>	<b>136</b>	<b>900</b>
<b>Risk-weighted exposure amount for position, foreign exchange and commodities risks</b>		
Interest rate	1,336,751	1,064,063
Equity	1,387	1,423
Foreign exchange risk	32,133	24,850
Commodities	<u>121,100</u>	<u>55,395</u>
	<b>1,491,371</b>	<b>1,145,731</b>
<b>Risk-weighted exposure amount for operational risk</b>	<b>587,427</b>	<b>495,952</b>
<b>Risk-weighted exposure amount for credit valuation adjustment</b>	<b>15,171</b>	<b>26,088</b>
<b>Total</b>	<b><u>5,609,747</u></b>	<b><u>4,374,181</u></b>

## 2.0 Risk Governance

### 2.1 Accountability Structure

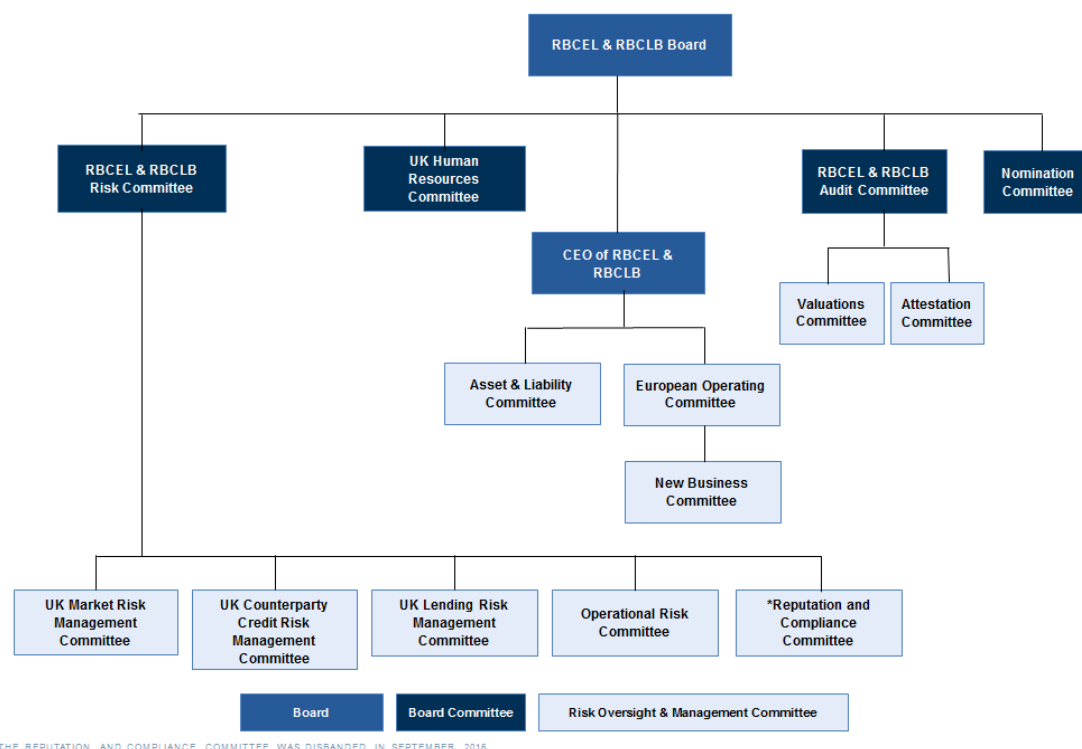
The Company has a clear and robust corporate and risk management framework and its governance structure determines the relationships between the Board of Directors, management, RBC and other stakeholders.

The strength of the Company's governance starts at the top with an independent Chairman and experienced Executive and Non-Executive Directors, who give priority to strategic planning and risk oversight, ensure that standards exist to promote appropriate behaviour throughout the organisation and drive continuous improvement in governance practices.

The Board is ultimately responsible for the running of the firm but has delegated day-to-day decision making to the Chief Executive Officer. A number of Board and management committees have been established to ensure that appropriate controls and procedures are embedded to support the Company's operations. Each has formal Terms of Reference (ToR) establishing the membership, responsibilities, as well as how each committee sits within the Company's governance structure.

The mandate and membership of all committees are reviewed on a regular basis to ensure that these committees are effective and continue to be relevant to meet business and risk management needs. This allows the Board to be confident that the governance structure remains appropriate and fit for purpose. Cross-membership of various management committees also ensures that senior management have a clear picture of issues impacting the Company.

The figure below depicts the current the Company's management committee structure:



\*THE REPUTATION AND COMPLIANCE COMMITTEE WAS DISBANDED IN SEPTEMBER 2016

#### 2.1.1 Board of Directors

Ultimate responsibility for managing risk within the business resides with the Board. It is tasked with ensuring that an effective systems and controls framework is in place for business, risk and capital

management. Through its governance structures and controls, the Board has a line-of-sight on key risks and operational controls across the firm. The Board also monitors and assesses effectiveness of controls against changing regulatory expectations.

The Board is responsible for setting the strategic risk direction and risk appetite for the Company. This includes:

- Clearly articulating the risk appetite for the firm and establishing mechanisms to ensure that the level of risk within the firm remains within the specified risk appetite;
- Maintaining a direct line-of-sight over key current and emerging risks across the firm;
- Ensuring that an effective systems and controls framework is in place for business, risk and capital management;
- Reviewing and approving the recovery strategies outlined in the RBC UK Recovery Plan applicable to the Company;
- Ensuring that the financial objectives are aligned with risk appetite and objectives; and
- Monitoring and assessing the effectiveness of controls against changing regulatory expectations.

As at 31 October 2016, the Board consists of three Independent Non-Executive Directors (INEDs), including the Chairman, two Non-Executive Director (NEDs) representing the shareholder (RBC), and four Executive Directors.

#### Recruitment Policy for Board Members

Appointments to the Board follow a formal procedure. As the Company is a wholly owned subsidiary within RBC Group, the nomination and selection of board members is undertaken in accordance with internal corporate governance practices, stated within RBC's Policy on the Legal Governance of Subsidiaries (SGO Policy). The Board has two types of directors, (i) Executive Directors (ED), and (ii) Non-Executive Directors (NED), with three directors meeting the UK Corporate Governance Code's definition of 'independent' (INED).

In 2015, the Company established a Nomination Committee as part of its enhanced Corporate Governance Framework. The Nomination Committee is responsible for:

- The identification, nomination and recommendation of INED candidates to the Board, for its consideration and approval. The nomination process follows a formal and rigorous approach, with candidates selected and assessed against established selection criteria. The Nomination Committee is governed by its Terms of Reference, under the umbrella of the SGO Policy, subject to local rules and regulations.
- The Recruitment Criteria/Process. Director selection is based on local applicable laws, regulations and rules, taking into consideration the skills, diversity, geographies and areas of expertise already represented on the Board. In addition to this, successful candidates undergo a robust background check, including inter alia, criminal, financial, regulatory checks and competency validation.

In relation to EDs, candidates are identified in accordance with the SGO Policy. Following consultation with the Board Chair by the Company Secretary, and positive advice and counsel from the RBC Subsidiary Governance Office, the ED candidate is proposed to the Board for its consideration, and if deemed appropriate, approval.

All Board appointments reflect RBC's core values, in particular, "Diversity & Inclusion", which is an important factor in the assessment and nomination of all proposed director appointments.

The relevant background and professional experience of the Directors of the Board are provided in Appendix 1.



### **2.1.2 Chief Risk Officer, Europe**

Decision-making relating to management of risk is delegated by the Board to the Chief Risk Officer (CRO), supported by the Chief Executive Officer (CEO). The CRO then delegates risk decision-making to specific individuals, such as the Risk Management functions, in consultation with supporting committees as appropriate.

The CRO, supported by the Heads of Risk, is responsible for:

- Developing and embedding a company-wide Risk Framework for approval by the Risk Committee (RC);
- Recommending the Company's Risk Appetite Framework to the RC for subsequent approval by the Board;
- Ensuring that risks falling outside of the approved Risk Appetite are identified and escalated to Business Heads, Senior Management, RC, and the Board; and
- Ensuring that the risks generated by the businesses are measured, monitored, controlled and reported on an on-going basis.

### **2.1.3 Risk Committee**

The RC is a Board committee, chaired by an INED to ensure independence and robustness of review and challenge. The RC reviews risk issues, gives advice and makes recommendations to the Board or other parties as appropriate as well as making decisions on risk issues within its sphere of responsibility.

RC holds the following primary responsibilities:

- Develop a risk appetite for the Company and recommend it to the Board;
- Implement an effective risk management framework, including directing and approving risk policies;
- Monitor all material risk exposures, review and approve any risk exceptions and ensure that any breaches of risk appetite are remediated and/or escalated;
- Review and challenge the findings from the annual Company Internal Capital Adequacy Assessment Process and Internal Liquidity Adequacy Assessment Process and recommend these to the Board for approval;
- Review, challenge and recommend for approval to the Board the recovery strategies outlined in the RBC UK Recovery Plan; and
- Review emerging risks and changes in legal, regulatory and accounting requirements and their implications on risk management within the Company.

### **2.1.4 Audit Committee**

The Audit Committee (AC) is a Board committee, chaired by an INED and includes three additional NED and INEDs. It is responsible for providing independent assurance to management and the Board of Directors on the effectiveness of risk management practices. AC is responsible for:

- Monitoring the integrity of the Company's financial statements and reviewing and, where appropriate, making recommendations to the Board on business risks, internal controls and compliance; and
- The performance of the internal audit function and making recommendations to the Board on the appointment and performance of external auditors.

### **2.1.5 UK Human Resources Committee**

The UK Human Resources Committee (HRC) is a Board committee, chaired by an INED and includes three additional NEDs and INEDs. It is responsible for ensuring that the Company's compensation programs align with prudent risk management principles, regulatory guidance and sound compensation

practices. The Company has an established process in place to assist the HRC in the determination of whether any performance adjustments to compensation are required.

### **2.1.6 Nomination Committee**

The RBCEL Nomination Committee is a Board committee, chaired by an INED and includes three additional NEDs and INEDs and the CEO. It is a key board governance committee established to lead the process for Independent Non-Executive Director succession planning and appointments to the RBCEL Board and to its associated Board Committees. Main responsibilities include:

- Review regularly the structure, size, and composition of the Board and make recommendations with regard to changes in legislative and/or regulatory requirements;
- Give full consideration to succession planning for INEDs, taking into account the challenges and opportunities facing the Boards;
- Review annually the time required from INEDs; and
- Review and approve the Terms of Reference of the Committee to ensure they remain appropriate and fit for purpose and to recommend to the Board any changes considered necessary or desirable.

### **2.1.7 Asset and Liability Committee**

The Assets and Liabilities Committee (ALCO) is a management committee, comprised of senior management from the business, Risk, Finance, and Corporate Treasury. ALCO is responsible for all matters relating to the Company's financial resources including the management of balance sheet, capital position, funding and liquidity, and structural banking book interest rate risk. Specifically, ALCO's responsibilities in relation to these matters include:

- Approval of limits, controls and policies;
- Review of the current and projected positions relative to agreed limits and any regulatory constraints;
- Oversight of the preparation and production of the annual Internal Capital Adequacy Assessment Process and Internal Liquidity Adequacy Assessment documents for the Company; and
- Ensuring business and operational strategies are consistent with appetite, in the context of balance sheet and funding.

### **2.1.8 European Operating Committee**

The European Operating Committee (EOC) is chaired by the CEO. It is a management committee established to enable oversight of business strategies and performance, as well as the determination of new business initiatives and local human resourcing policies. It also facilitates cross-business and cross-functional discussion around key decisions and material developments in the Company. Main responsibilities include:

- Review the Monthly RBC Europe financial performance report;
- Review updates from the local business heads;
- Review updates from the local control functions including key risk issues;
- Review and considering PRA regulatory developments;
- Review and considering monthly Human Resources reports;
- Review Personal Account Dealing and Corporate Gifts & Entertainment reports; and
- Escalate issues to the Board, AC, RBC Capital Markets Operating Committee and the appropriate RBC governance forums.

### **2.1.9 UK Counterparty Credit Risk Management Committee**

The UK Counterparty Credit Risk Management Committee (UKCCRMC) is a management committee responsible for actively managing the counterparty credit risk of RBC Capital Markets UK. Responsibilities include:

- Review the status of the counterparty credit risk portfolio, which comprises trading inventory, debt- and equity underwritings, counterparty credit risk, mainly arising from securities financing and OTC derivatives, and exposure to clearing houses;
- Consider credit risk exposures booked in the Company and RBC London Branch;
- Review the limit policy and the relevant limit exceptions;
- Consider all trading credit risk situations with significant risk impact;
- Serve as a forum for communication of compliance issues and initiatives related to trading credit risk activities;
- Maintain and review a Watch List of trading credit risk exposures it deems to represent high risk; and
- Review the relevant credit risk policies (with positive advice and counsel from RBC Group as appropriate).

### **2.1.10 UK Market Risk Management Committee**

The UK Market Risk Management Committee (UKMRMC) is a management committee established to review market risk and trading credit risks. Responsibilities include:

- Review all trading business situations with significant risk impact as well as the impact of the evolving risk environment on trading strategies and exposures;
- Review business performance, Value-at-Risk, Stress Risk and other key risk metrics; and
- Review all operational limits and excesses to operational, tactical and trading credit limits.

### **2.1.11 UK Lending Risk Management Committee**

The UK Lending Risk Management Committee (UKLRMC) is a management committee established to review all new and increased loan transactions, taking into account the advice and counsel of Group Risk Management. Main responsibilities include:

- Reviewing all lending situations with a significant risk impact as well as the impact of the evolving risk environment on lending strategies and exposures;
- Review emerging credit risk issues and activities, assess operational risk events arising from financing activities and make recommendations to avoid future similar operational risk events.
- Review the Watch list of loan facilities, consider the recoverability of exposure and review and recommend the level of general and specific provisions.
- Act as a forum for compliance issues related to lending activities and ensure that all outstanding or pending legal, regulatory and audit issues are addressed properly and in a timely fashion; and
- Annual review of all credits over £25m.

### **2.1.12 Operational Risk Committee**

The Operational Risk Committee (ORC) is responsible for actively managing the operational risk of the Company and RBC London Branch (together “RBC UK”), in the Capital Markets and Investor & Treasury Services and Wealth Management International businesses undertaken in the UK. ORC is also responsible for regulatory operational risk requirements from both the FCA and PRA. The ORC holds meetings with all key desks and relevant functions to capture and review detailed operational issues and risks, business line operational risk appetite and associated actions. Key responsibilities include:

- Ensure that operational risks arising from RBC UK business activities are effectively identified and managed consistent with the Operational Risk Framework;
- Review and challenge business led presentations on their perceived operational risk profile based on appropriate data and key risk indicators;
- Review and challenge business and function led presentations on future initiatives impacting their perceived operational risk profile versus the operational risk appetite;
- Review adequacy of supervisory arrangements and demonstration thereof;
- Review operational risk relevant compliance data;
- Consider relevant operational risk regulations and changes thereto;
- Approve and recommend operational Risk policies and procedures;
- Consider impact of PRA expectations and operational risk developments on RBC UK; and
- Review future risks and issues that require managing now and escalate where appropriate.

### **2.1.13 Attestation Committee**

The Attestation Committee is a management committee established to review the monthly general ledger attestation process. Key responsibilities include:

- Review the results of the monthly attestation process and issues arising;
- Review the results of the monthly standards of documentation process;
- Approve local policies and procedures in relation to the general ledger attestation process;
- Present monthly reports and escalate unresolved issues to the AC for review and direction; and
- Review all Operational Risk Events and assess potential impacts to the Global Attestation process.

### **2.1.14 Valuations Committee**

The Valuation Committee (VC) is responsible for review and approval of all valuation methodologies, valuation adjustments, independent price verification methodologies and valuation controls applicable to RBC Europe. Responsibilities include:

- Acting in conjunction with internal and external auditors as well as regulators to ensure consistency of application, comprehensiveness of cover and adherence to market best practice; and
- Regularly review material movements in all valuation adjustments and report highlights and other valuation risks and issues to UKMRMC and the RC.

### **2.1.15 New Business Committee**

The New Business Committee (NBC) is responsible for reviewing and evaluating and making recommendations on all new business. Main responsibilities include:

- Assessing the level of materiality for new business initiatives;
- Ensuring that risk issues are identified prior to business commencing;
- Ensuring that all requisite approvals are obtained prior to the commencement of a new initiative; and
- Ensuring timely documentation of policy, including Standing Orders, in accordance with bank standards; and
- Reviewing specific transactions that are outside of bank policy and ensuring that risks are identified and requisite approvals obtained.

Decision making authority within the NBC rests solely with the Committee Chairman (the Company's CFO). The remainder of the Committee serves in an advisory capacity.

### **2.1.16 Reputation and Compliance Committee<sup>1</sup>**

The Reputation and Compliance Committee (RACC) is responsible for managing conflicts of interest and key compliance and reputational issues across RBC Capital Markets Europe (RBCCM) and Wealth Management UK (RBCWM) activities in the European region, to the extent that RBCWM activities are conducted through the Company. Main responsibilities of the Committee include:

- Provide strategic advice on the management information it will require to evaluate the level of reputational conflict of interest risk;
- Review the matters addressed by the RBCCM and RBCWM RACC sub-Committees;
- Receive information and consider matters raised in relation to the key compliance matters including those referred to above;
- Consider specific alerts/themes arising from the trade surveillance and desk monitoring performed by Compliance;
- Review reports on the adherence to the local gifts and entertainment policies, outside business interests and personal account dealing policy;
- Provide guidelines to the business, through formally adopting policies in relation to conflicts of interest and other key compliance matters;
- Evaluate and manage issues in current and future business initiatives and arrangements to minimise the risks presented by conflicts of interest, and other key compliance issues;
- Seek advice/counsel from RROC in relation to issues that potentially expose the firm to significant reputational, legal and regulatory risk;
- Instigate reviews where required, either by internal or external personnel, to monitor that the systems and controls in place to identify and manage conflicts of interest and other key compliance issues remain appropriate, continue to be adhered to and are working effectively; and
- Take measures to ensure that the culture of the firm, in itself, acts as a key mitigating tool for the proper management of conflicts of interest and other compliance issues, including, where relevant, the provision of appropriate training to all levels of staff.

### **2.1.17 Regulatory Policy Interpretation Committee**

The Regulatory Policy Interpretation Committee (RPIC) is a management committee established under the specific authority of the CFO, set up during the year, to provide governance on prudential capital and liquidity reporting policies and interpretation applicable to the Company. Main responsibilities of the Committee include:

- Review and approve relevant regulatory policies;
- Review and approve material interpretation options; and
- Receive regular updates on significant proposed regulatory changes impacting on reporting requirements.

### **2.1.18 Common Reporting Data Attestation Committee**

The Common Reporting Attestation Data Committee (CRDAC) is a management committee established under the specific authority of the CFO, and a key forum to review the quarterly Common Reporting (COREP) data process at the senior management level. Main responsibilities of the Committee include:

- Review at the senior management level the quarterly COREP data attestation process;

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<sup>1</sup> The RACC was disbanded in September 2016.

- Assist the regional CFO in ensuring that local regulatory responsibilities are met; and
- Provide assurance to regional senior management and the AC that the data used for regulatory returns is properly stated.

Information on frequency of committee meetings is included in Appendix 2.

## **2.2 Risk Management and Control Framework**

The Company defines risk as the potential for loss or an undesirable outcome or reduction in value of the Company's business with respect to volatility of actual earnings in relation to expected earnings, capital adequacy, and liquidity. This definition includes both risks that have a direct and immediate impact (e.g., credit risk due to a loan default), and risks that have an indirect or longer term impact (e.g., regulatory and reputation risks due to failure to comply with regulatory guidelines or the failure to live up to clients' expectations).

The risk of financial loss through business activities is inherent in all of the businesses conducted by the Company. For this reason, risk management is considered to be an intrinsic part of the strategy and capital planning processes. The level of risk corresponding to each risk type continues to remain within pre-approved risk specific limits and tolerances which are reviewed at least quarterly by RC in light of changes to market conditions and business strategies.

The Enterprise Risk Management Framework (ERMF) sets out the overarching arrangements for risk management, control and assurance within the Company. The ERMF is designed to provide a consistent and structured approach to identify, assess, measure, control, monitor and report on significant risks. Risk identification and assessment processes are established and maintained by Group Risk Management (GRM).

The Framework helps to ensure that risk is managed and controlled on behalf of internal and external stakeholders, including shareholders, customers, employees and regulators. Effective and efficient risk governance and oversight provide management with assurance that the Company's business activities will not be excessively impacted by risks that could have been reasonably foreseen. This, in turn, reduces the uncertainty of achieving its strategic objectives.

The Company's definition of its key material risks is consistent with its peers' and general market classifications. The material risks that the Company is exposed to include market risk, credit risk, operational risk, liquidity risk, regulatory compliance risk, and reputation risk.

The Company has robust governance arrangements in place which include a clear organisational structure, lines of responsibility, and effective processes to identify, manage, monitor and report on material risks. Within the Company, the Compliance department manages regulatory compliance risk whilst other risks and components of Regulatory risk are managed by the Finance, Market risk, Credit risk, Operational risk, Human Resources, Legal and Tax departments.

Legal and Regulatory Environment Risk is an overarching risk that exists in all aspects of the businesses and, therefore, its management is undertaken as part of risk management and business practices across the Company. It is defined as the risk that unexpected or frequent changes to laws or regulations could negatively impact the Company's business model, activities, earnings capacity, liquidity or capital adequacy.

The Company operates in multiple jurisdictions and, in certain cases, a change in the law or regulatory requirements could have a detrimental impact on the operations and/or profitability within certain businesses. Therefore, the management of legal and regulatory environment risk is managed by:

- The Compliance department which identifies emerging regulatory changes and updates key Senior Management committees on the practical impact of such changes;

- The Company’s Law Group which monitors the legal landscape for changes and provides advice and guidance;
- Regulatory Policy team in Financial Control which reviews and monitors regulatory changes pertaining to Prudential Capital and provides advice and guidance, as appropriate; and
- Corporate Treasury Liquidity Risk team which reviews liquidity regulations and provides advice and guidance, as appropriate

## 2.2.1 Risk Principles

The Company applies the following general principles for its management of risk:

**Table 2: Risk Management Principles**

Principle	Description
Effectively balancing risk and reward is essential for success	<p>The Company is in the business of managing risk. Avoiding it entirely is neither possible nor profitable. Instead of avoiding risk, the Company finds ways to balance it with potential rewards through:</p> <ul style="list-style-type: none"> <li>▪ Aligning business strategy with risk appetite;</li> <li>▪ Diversifying the risks in relationships and portfolio management;</li> <li>▪ Pricing appropriately for the risk;</li> <li>▪ Mitigating the risk through preventive and detective controls; and</li> <li>▪ Transferring risk to third parties through insurance, hedging, etc.</li> </ul>
Responsibility for risk management is shared	<p>Employees at all levels are responsible for managing the day-to-day risks that arise in the context of their roles. The Company follows the “Three Lines of Defence” risk governance model, which is detailed in the following section.</p>
Business decisions must be based on an understanding of risk	<p>Employees are expected to:</p> <ul style="list-style-type: none"> <li>▪ Be rigorous in assessing the risks of relationships, products, transactions and other business activities;</li> <li>▪ Be transparent when discussing the risk dimensions with GRM and senior management decision-makers;</li> <li>▪ Continuously seek to improve the Company’s risk management processes and tools in response to best risk management practices in order to enable effective decision-making; and</li> <li>▪ Generate ideas that will reduce process without increasing risk.</li> </ul>
Avoid activities that are not consistent with the Company’s Values, Code of Conduct or policies	<p>Employees are expected to:</p> <ul style="list-style-type: none"> <li>▪ Be guided by the Company’s Values</li> <li>▪ Follow the Code of Conduct at all times;</li> <li>▪ Never compromise quality for growth;</li> <li>▪ Avoid unethical clients;</li> <li>▪ Comply with all regulatory requirements; and</li> <li>▪ Support transactions and relationships with proper and complete documentation to avoid litigation.</li> </ul>



Principle	Description
Proper focus on the client reduces the Company's risks	<p>'Knowing Your Client' at the start of, and throughout, the relationship is a key risk management principle in the financial industry. Employees are expected to:</p> <ul style="list-style-type: none"> <li>▪ Make sure all products and transactions are suitable for, and understood by, the client;</li> <li>▪ Maintain focus on the client even in difficult situations;</li> <li>▪ Expedient and appropriate problem resolution also helps minimize risk;</li> <li>▪ Use "Know Your Client" assessments to determine the client's financial situation, capacity for loss, risk tolerance, and financial objectives;</li> <li>▪ Develop and maintain a sound understanding of the Company's product offerings to ensure that proposed plans, strategies and product selection and design products that meet the clients' needs; and</li> <li>▪ Build relationship with its clients on a clear understanding of the terms of the working relationship, with mutual commitments for full and accurate disclosure of relevant financial information.</li> </ul>
Use judgment and common sense	<p>Since policy and procedure cannot cover all circumstances, the Company's employees are expected to:</p> <ul style="list-style-type: none"> <li>▪ Apply judgement and common sense and, when in doubt, escalate; and</li> <li>▪ Hire the right people for the right jobs and provide proper training and support.</li> </ul>
Be operationally prepared for a potential crisis	<p>The Company employees are required to maintain effective protocols and escalation strategies, and to respond to all risks that the entity faces, including regulatory, macroeconomic, market and other stakeholder developments.</p> <p>This includes maintaining operational readiness to effectively operate in, through and following a financial crisis. It is also critical to maintain agility and readiness to respond to potential disruptors to the financial industry.</p>

## 2.2.2 Three Lines of Defence Model

The Company has implemented a robust system of monitoring, reporting and control based on the Three Lines of Defence model. This details responsibility for risk management, control and assurance, and clarifies the segregation of duties between those who take on risk, those who control risk and those who provide assurance.

**First Line of Defence** - This is provided by the business and support functions embedded in the business. The First Line of Defence has the ownership and accountability for:

- Risk identification, assessment, mitigation, monitoring and reporting in accordance with established the Company's risk policies; and
- Alignment of business and operational strategies with risk conduct and culture and risk appetite.

**Second Line of Defence** - This comprises the areas to which the Board has delegated day-to-day oversight functions, in particular the CEO and CRO for Europe. The latter is supported by the RC and Heads of Risk. The Second Line of Defence is accountable for:



- Establishing the Company-level risk management frameworks, and provides risk guidance;
- Providing oversight for the effectiveness of First Line risk management practices; and
- Monitoring and independently reporting on the level of risk against the established appetite.

**Third Line of Defence** - This is provided through Internal Audit Services and the Audit Committee. The Third Line provides independent objective assurance on the effectiveness of risk management policies, processes and practices in all areas of the Company. Further assurance is provided by the firm's external auditor, Deloitte LLP, in the form of a quarterly report to the Audit Committee.

### 2.2.3 Risk Appetite

Risk Appetite is defined as the amount and type of risk that the Company is willing to accept in the pursuit of its business objectives.

The overall objective of the Company's Risk Appetite Framework is to protect the Company from unacceptable levels of risk while supporting and enabling the firm's overall business strategy and goals. The Framework is defined in the context of the RBC Enterprise Risk Appetite Framework and has been customised to cater for local requirements. It provides details on the Company's risk appetite principles, constraints and metrics and is approved annually by the Board.

### 2.2.4 Risk Policy Management

The Company has implemented RBC policies and processes in the context of the Company's Risk Policy Management Requirements to support the assessment and management of risks. The Company regularly reviews policies and controls to ensure continued effectiveness and alignment with relevant laws and regulations. To ensure it is operating with integrity, the Company adheres to a number of other principles, codes and policies including the RBC Code of Conduct, which governs the behaviour of its employees and informs how the Company conducts its business operations.

Where necessary, the Company adapts the RBC Enterprise wide policies to ensure compliance with local legal and regulatory requirements and expectations. The CRO, Europe has the responsibility of ensuring these policies are consistent with:

- Regulatory requirements;
- Relevant RBC policies; and
- Higher and lower level policy documents within the risk policy architecture.

The Company's Risk Policy Management Requirements document adopts the following three-tier hierarchy for approving frameworks, policies, standing orders, standards and procedures (collectively referred to as policy documents):

- **Level 1** policy documents include overarching frameworks and policies that outline the Company's regulatory requirements and risk governance. These are approved by RC or ALCO, both Board Committees.
- **Level 2** policy documents include risk-specific frameworks and policies that lay the foundations for how each risk (and any sub-risk) is managed. These are approved by Management Committees.
- **Level 3** policy documents include those that are put in place to support Level 2 policy documents. These are approved by either Management Committees or Heads of Risk.

The Board delegates responsibility to the RC to ensure that all the Company's risk and capital policies meet the minimum governance standards defined within the Risk Policy Management Requirements.

Capital adequacy and capital ratios measures are monitored daily against internal thresholds by the Regulatory Reporting team in the Finance department. Economic capital requirements are monitored by Group Risk Management. ALCO receives monthly reports detailing current regulatory and

economic capital requirement and adequacy, while the Board and the RC are updated on a quarterly basis.

Analysis, monitoring and reporting of risk profiles and performance against risk appetite limits and tolerances are conducted by the relevant risk functions. Results are reported to the RC at least quarterly, with management committees updated on a more regular basis.

Stress testing and reverse stress testing are conducted on at least an annual basis. The analysis is undertaken more frequently if deemed necessary as a result of changing business strategy, results or market conditions.

## **2.2.5 Capital Planning**

The Company undertakes an annual Internal Capital Adequacy Assessment Process (ICAAP) to ensure that the business strategy and planning translate into adequate capital levels over internal and external capital minima, and identifies period where capital buffers become tight so corrective action can be undertaken in advance. This also includes reviewing the capital levels against risk appetite to ensure that the business strategy and planned capital levels remain in line with the Company's risk appetite.

The capital plan is derived from the Company's base case business plan and takes into account changes to business forecasts, market conditions and other developments, such as accounting or regulatory changes that may impact capital requirements.

The base case capital plan also forms the basis for stress testing analysis, which allows the Company to derive a Capital Planning Buffer (CPB). Stressing the capital plans, through use of a range of severe but plausible down-turn scenarios, enables the Company to test the strength of its capital base and also to consider mitigating actions in advance in order to maintain overall financial adequacy in periods of stress.

The capital plan is updated on a periodic basis to reflect actual operating results, updated Profit and Loss forecasts and any changes in business strategies. Additionally, the Finance function evaluates the capital impact of new (large) transactions and products and advises senior management accordingly.

The ICAAP is an annual process managed by the Enterprise Risk Management (ERM), Europe function reporting into the European Chief Risk Officer.

The ICAAP Steering Committee, which consists of senior management representatives from ERM, Finance, GRM and Corporate Treasury, oversees all aspects involved in the development of the ICAAP, including accurate documentation of key findings from the assessment. Following the ICAAP Steering Committee review, the ICAAP report is submitted to ALCO and RC for review, challenge and approval. The ICAAP is approved by the ALCO and RC under delegated authority from the Board.

## 3.0 Own Funds

### 3.1 Overview of Own Funds

As at 31 October 2016, the Company had total own funds of £1,236 million (2015: £1,142 million), which comprises of Tier 1 Capital of £954 million (2015: £903 million) and Tier 2 Capital of £283 million (2015: £239 million) under the transitional provisions. A full reconciliation of own funds items to audited financial statements are shown in the table below.

**Table 3: Full reconciliation of own funds items to audited financial statements**

<b>Per Audited Statement of changes in equity</b>	<b>31 October 2016</b>
<b>£'000</b>	
Common shares	497,996
Other components of equity:	
<i>Capital reserves</i>	36,619
<i>Share premium</i>	803
<i>Remeasurement of pension assets and liabilities</i>	(6,614)
<i>Available-for-sale reserve</i>	20,485
Total other components of equity	51,293
Retained earnings	
<i>Opening</i>	361,089
<i>Net profit</i>	52,551
Audited retained earnings at 31 October	<u>413,640</u>
<b>Total equity</b>	<b><u>962,929</u></b>
Adjustments to CET1 due to prudential filters	
<i>Value adjustments due to the requirements for prudent valuation</i>	(6,467)
Deductions of CET1 Capital	
<i>Other intangible assets</i>	(242)
<i>Deferred tax liabilities associated to other intangible assets</i>	58
<i>Deduction of holdings Common Equity Tier 1 instruments where an institution does not have a significant investment in a financial sector entity</i>	(2,715)
Total CET1 deductions	<u>(2,899)</u>
<b>Total Fully Loaded Tier 1 Capital</b>	<b><u>953,563</u></b>
<b>Tier 2 Capital</b>	
Subordinated loans	285,927
Collective provision gross of tax	3,814
<i>Deduction of holdings Tier 2 instruments where an institution does not have a significant investment in a financial sector entity</i>	(7,016)
Total Tier 2 deductions	<u>(7,016)</u>
<b>Total Fully Loaded Tier 2 Capital</b>	<b><u>282,725</u></b>
<b>Fully Loaded Own Funds</b>	<b><u>1,236,288</u></b>

<b>Per Audited Statement of changes in equity</b>	<b>31 October 2015</b>
<b>£'000</b>	
Common shares	497,996
Other components of equity:	
<i>Capital reserves</i>	36,619
<i>Share premium</i>	803
<i>Remeasurement of pension assets and liabilities</i>	4,907
<i>Available-for-sale reserve</i>	16,764
Total other components of equity	59,093
Retained earnings	
<i>Opening</i>	354,075
<i>Net profit</i>	7,014
Audited retained earnings at 31 October	361,089
<b>Total equity</b>	<b>918,178</b>
Adjustments to CET1 due to prudential filters	
<i>Value adjustments due to the requirements for prudent valuation</i>	(3,196)
Deductions of CET1 Capital	
<i>Other intangible assets</i>	(407)
<i>Deferred tax liabilities associated to other intangible assets</i>	81
<i>Deferred tax assets that rely on future profitability and do not arise from temporary differences net of associated tax liabilities</i>	(1,997)
<i>Defined benefit pension assets</i>	(12,100)
<i>Deferred tax liabilities associated to defined benefit pension assets</i>	2,421
Total CET1 deductions	(12,002)
<b>Total Fully Loaded Tier 1 Capital</b>	<b>902,980</b>
<b>Tier 2 Capital</b>	
Subordinated loans	239,028
<b>Total Fully Loaded Tier 2 Capital</b>	<b>239,028</b>
<b>Fully Loaded Own Funds</b>	<b>1,142,008</b>

**Table 4: Transitional own funds disclosure**

Common Equity Tier 1 capital: instruments and reserves	31 October 2016 £'000	Prescribed residual amount	Final CRD IV
<b>Capital instruments and the related share premium accounts</b>	<b>498,799</b>	-	<b>498,799</b>
of which: Common shares	497,996	-	497,996
Retained earnings	413,640	-	413,640
Accumulated other comprehensive income (and any other reserves)	50,490	-	50,490
<b>Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	<b>962,929</b>	-	<b>962,929</b>
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>			
Additional value adjustments	(6,467)	-	(6,467)
Goodwill and Other intangible assets (net of related tax liability)	(184)	-	(184)
Direct, indirect and synthetic holdings 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)	(2,715)	-	(2,715)
<b>Total regulatory adjustments to Common Equity Tier 1 (CET1)</b>	<b>(9,366)</b>	-	<b>(9,366)</b>
<b>Common Equity Tier 1 (CET1) capital</b>	<b>953,563</b>	-	<b>953,563</b>
<b>Additional Tier 1 (AT1) capital</b>	-	-	-
<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>953,563</b>	-	<b>953,563</b>
<b>Tier 2 (T2) capital: instruments and provisions</b>			
Subordinated loans	285,927	-	285,927
Credit risk adjustments	3,814	-	3,814
<b>Tier 2 (T2) capital before regulatory adjustment</b>	<b>289,741</b>	-	<b>289,741</b>
<b>Tier 2 (T2) capital: regulatory adjustments</b>			
Direct, indirect and synthetic 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)	(7,016)	-	(7,016)
Of which new holdings not subject to transitional arrangements	(7,016)	-	(7,016)
<b>Total regulatory adjustments to Tier 2 (T2) capital</b>	<b>(7,016)</b>	-	<b>(7,016)</b>
<b>Tier 2 (T2) capital</b>	<b>282,725</b>	-	<b>282,725</b>
<b>Total capital (TC = T1 + T2)</b>	<b>1,236,288</b>	-	<b>1,236,288</b>
<b>Total risk-weighted exposures</b>	<b>5,609,747</b>		
<b>Capital ratios and buffers</b>			
Common Equity Tier 1 ratio	17.0%		
Tier 1 ratio	17.0%		
Total capital ratio	22.0%		
Institution specific buffer requirement	35,313		
of which: capital conservation buffer requirement	35,061		
of which: countercyclical buffer requirement	252		
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)	11.0%		
<b>Amounts below the thresholds for deduction (before risk-weighting)</b>			
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)	-		
Direct and indirect holdings 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)	-		
Deferred tax assets arising from temporary difference	15,306		
<b>Applicable caps on the inclusion of provisions in Tier 2</b>			
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	-		
Credit risk adjustments included in T2 in respect of exposures subject to internal rating-based approach (prior to the application of the cap)	-		
Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	-		
<b>Capital instruments subject to phase-out arrangements (applicable between 1 Jan 2014 and 1 Jan 2022)</b>			
- 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)	-		

Common Equity Tier 1 capital: instruments and reserves	31 October 2015 £'000	Prescribed residual amount	Final CRD IV
<b>Capital instruments and the related share premium accounts</b>	<b>498,799</b>	-	<b>498,799</b>
of which: Common shares	497,996	-	497,996
Retained earnings	361,089	-	361,089
Accumulated other comprehensive income (and any other reserves)	58,290	-	58,290
<b>Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	<b>918,178</b>	-	<b>918,178</b>
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>			
Additional value adjustments	(3,196)	-	(3,196)
Goodwill and Other intangible assets (net of related tax liability)	(326)	-	(326)
Deferred tax assets that rely on future profitability excluding those arising from temporary difference	(1,997)	-	(1,997)
Defined-benefit pension fund assets (net of related tax liability)	(9,679)	-	(9,679)
<i>Regulatory adjustments applied to Common Equity Tier 1 in respect of amounts subject to pre-CRR treatment</i>	-	-	-
Regulatory adjustments relating to unrealised gains and losses	-	-	-
Of which: Filter for unrealised gains on available-for-sale equities	-	-	-
<b>Total regulatory adjustments to Common Equity Tier 1 (CET1)</b>	<b>(15,198)</b>	-	<b>(15,198)</b>
<b>Common Equity Tier 1 (CET1) capital</b>	<b>902,980</b>	-	<b>902,980</b>
<b>Additional Tier 1 (ATI) capital</b>	-	-	-
<b>Tier 1 capital (T1 = CET1 + ATI)</b>	<b>902,980</b>	-	<b>902,980</b>
<b>Tier 2 (T2) capital: instruments and provisions</b>			
Subordinated loans	239,028	-	239,028
<b>Tier 2 (T2) capital</b>	<b>239,028</b>	-	<b>239,028</b>
<b>Total capital (TC = T1 + T2)</b>	<b>1,142,008</b>	-	<b>1,142,008</b>
<b>Total risk-weighted exposures</b>	<b>4,374,181</b>		
<b>Capital ratios and buffers</b>			
Common Equity Tier 1 ratio	20.6%		
Tier 1 ratio	20.6%		
Total capital ratio	26.1%		
Institution specific buffer requirement	-		
of which: capital conservation buffer requirement	-		
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)	14.6%		
<b>Amounts below the thresholds for deduction (before risk-weighting)</b>			
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)	-		
Direct and indirect holdings 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)	-		
Deferred tax assets arising from temporary difference	17,614		
<b>Applicable caps on the inclusion of provisions in Tier 2</b>			
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	-		
Credit risk adjustments included in T2 in respect of exposures subject to internal rating-based approach (prior to the application of the cap)	-		
Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	-		
<b>Capital instruments subject to phase-out arrangements (applicable between 1 Jan 2014 and 1 Jan 2022)</b>			
- 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 ATI instruments subject to phase-out arrangements	-		
- Amount excluded from ATI 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)	-		

**Table 5: Capital instruments main features table**

As at 31 October 2016

Capital instruments' main features template <sup>(1)</sup>	Common shares	Common shares	Subordinated loan due 2019	Subordinated loan due 2024	Subordinated loan due 2026
Issuer	RBC Europe Limited	RBC Europe Limited	RBC Europe Limited	RBC Europe Limited	RBC Europe Limited
Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	N/A	N/A	N/A	N/A	N/A
Governing law(s) of the instrument	English	English	English	English	English
Regulatory treatment					
Transitional CRR rules	Common Equity Tier 1	Common Equity Tier 1	Tier 2	Tier 2	Tier 2
Post-transitional CRR rules	Common Equity Tier 1	Common Equity Tier 1	Tier 2	Tier 2	Tier 2
Eligible at solo/(sub-)consolidated/solo & (sub-)consolidated	Solo	Solo	Solo	Solo	Solo
Instrument type (types to be specified by each jurisdiction)	Common Equity Tier 1 as published in Regulation (EU) No 575/2013 Article 28	Common Equity Tier 1 as published in Regulation (EU) No 575/2013 Article 28	Tier 2 as published in Regulation (EU) No 575/2013 Article 63	Tier 2 as published in Regulation (EU) No 575/2013 Article 63	Tier 2 as published in Regulation (EU) No 575/2013 Article 63
Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	GBP 21m	GBP 477m	GBP 40m	GBP 164m	GBP 82m
Nominal amount of instrument	GBP 25m	GBP 477m	USD 100m	USD 200m	USD 100m
Issue price	84 per cent	100 per cent	100 per cent	100 per cent	100 per cent
Redemption price	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount
Accounting classification	Equity	Equity	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost
Original date of issuance	20 December 1970	20 December 1970	18 April 2012	28 May 2014	28 May 2014
Perpetual or dated	Perpetual	Perpetual	Dated	Dated	Dated
Original maturity date	No maturity	No maturity	18 April 2019	28 May 2024	28 May 2026
Issuer call subject to prior supervisory approval	No	No	Yes	Yes	Yes
Optional call date, contingent call dates, and redemption amount	N/A	N/A	Redemption at the Option of the Issuer 100 per cent of Nominal amount First call date: 18/Apr/2017 In addition Tax/Regulatory call	Redemption at the Option of the Issuer 100 per cent of Nominal amount First call date: 28/May/2019 In addition Tax/Regulatory call	Redemption at the Option of the Issuer 100 per cent of Nominal amount First call date: 28/May/2021 In addition Tax/Regulatory call
Subsequent call dates, if applicable	N/A	N/A	N/A	N/A	N/A
Coupons / dividends					
Fixed or floating dividend/coupon	N/A	N/A	Floating	Floating	Floating
Coupon rate and any related index	N/A	N/A	Reuters page LIBOR01 +2.40 per cent per annum	Reuters page LIBOR01 +1.82 per cent per annum	Reuters page LIBOR01 +1.92 per cent per annum
Existence of a dividend stopper	N/A	N/A	No	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully discretionary	Fully discretionary	Mandatory	Mandatory	Mandatory
Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Fully discretionary	Mandatory	Mandatory	Mandatory
Existence of step up or other incentive to redeem	No	No	No	No	No
Noncumulative or cumulative	Non cumulative	Non cumulative	Non cumulative	Non cumulative	Non cumulative
Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible
If convertible, conversion trigger (s)	N/A	N/A	N/A	N/A	N/A
If convertible, fully or partially	N/A	N/A	N/A	N/A	N/A
If convertible, conversion rate	N/A	N/A	N/A	N/A	N/A
If convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A	N/A
If convertible, specify instrument type convertible into	N/A	N/A	N/A	N/A	N/A
If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A	N/A	N/A
Write-down features	No	No	Yes	Yes	Yes
If write-down, write-down trigger (s)	N/A	N/A	N/A	N/A	N/A
If write-down, full or partial	N/A	N/A	N/A	N/A	N/A
If write-down, permanent or temporary	N/A	N/A	N/A	N/A	N/A
If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A	N/A
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	N/A	N/A	N/A	N/A	N/A
Non-compliant transitioned features	No	No	No	No	No
If yes, specify non-compliant features	N/A	N/A	N/A	N/A	N/A

(1) N/A inserted if the question is not applicable

## As at 31 October 2015

Capital instruments' main features template <sup>(1)</sup>	Common shares	Common shares	Subordinated loan due 2019	Subordinated loan due 2024	Subordinated loan due 2026
Issuer	RBC Europe Limited	RBC Europe Limited	RBC Europe Limited	RBC Europe Limited	RBC Europe Limited
Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	N/A	N/A	N/A	N/A	N/A
Governing law(s) of the instrument	English	English	English	English	English
<i>Regulatory treatment</i>					
Transitional CRR rules	Common Equity Tier 1	Common Equity Tier 1	Tier 2	Tier 2	Tier 2
Post-transitional CRR rules	Common Equity Tier 1	Common Equity Tier 1	Tier 2	Tier 2	Tier 2
Eligible at solo/(sub-)consolidated/solo & (sub-)consolidated	Solo	Solo	Tier 2	Solo	Solo
Instrument type (types to be specified by each jurisdiction)	Common Equity Tier 1 as published in Regulation (EU) No 575/2013 Article 28	Common Equity Tier 1 as published in Regulation (EU) No 575/2013 Article 28	Tier 2 as published in Regulation (EU) No 575/2013 Article 63	Tier 2 as published in Regulation (EU) No 575/2013 Article 63	Tier 2 as published in Regulation (EU) No 575/2013 Article 63
Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	GBP 21m	GBP 477m	GBP 45m	GBP 129m	GBP 65m
Nominal amount of instrument	GBP 25m	GBP 477m	USD 100m	USD 200m	USD 100m
Issue price	84 per cent	100 per cent	100 per cent	100 per cent	100 per cent
Redemption price	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount	100 per cent of Nominal amount
Accounting classification	Equity	Equity	Liability - amortised cost	Liability - amortised cost	Liability - amortised cost
Original date of issuance	20 December 1970	20 December 1970	18 April 2012	28 May 2014	28 May 2014
Perpetual or dated	Perpetual	Perpetual	Dated	Dated	Dated
Original maturity date	No maturity	No maturity	18 April 2019	28 May 2024	28 May 2026
Issuer call subject to prior supervisory approval	No	No	Yes	Yes	Yes
Optional call date, contingent call dates, and redemption amount	N/A	N/A	Redemption at the Option of the Issuer 100 per cent of Nominal amount First call date: 18/Apr/2017 In addition Tax/Regulatory call	Redemption at the Option of the Issuer 100 per cent of Nominal amount First call date: 28/May/2019 In addition Tax/Regulatory call	Redemption at the Option of the Issuer 100 per cent of Nominal amount First call date: 28/May/2021 In addition Tax/Regulatory call
Subsequent call dates, if applicable	N/A	N/A	N/A	N/A	N/A
<i>Coupons/ dividends</i>					
Fixed or floating dividend/coupon	N/A	N/A	Floating	Floating	Floating
Coupon rate and any related index	N/A	N/A	Reuters page LIBOR01 +2.40 per cent per annum	Reuters page LIBOR01 +1.82 per cent per annum	Reuters page LIBOR01 +1.92 per cent per annum
Existence of a dividend stopper	N/A	N/A	No	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully discretionary	Fully discretionary	Mandatory	Mandatory	Mandatory
Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Fully discretionary	Mandatory	Mandatory	Mandatory
Existence of step up or other incentive to redeem	No	No	No	No	No
Noncumulative or cumulative	Non cumulative	Non cumulative	Non cumulative	Non cumulative	Non cumulative
Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible
If convertible, conversion trigger (s)	N/A	N/A	N/A	N/A	N/A
If convertible, fully or partially	N/A	N/A	N/A	N/A	N/A
If convertible, conversion rate	N/A	N/A	N/A	N/A	N/A
If convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A	N/A
If convertible, specify instrument type convertible into	N/A	N/A	N/A	N/A	N/A
If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A	N/A	N/A
Write-down features	No	No	Yes	Yes	Yes
If write-down, write-down trigger (s)	N/A	N/A	N/A	N/A	N/A
If write-down, full or partial	N/A	N/A	N/A	N/A	N/A
If write-down, permanent or temporary	N/A	N/A	N/A	N/A	N/A
If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A	N/A
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	N/A	N/A	N/A	N/A	N/A
Non-compliant transitioned features	No	No	No	No	No
If yes, specify non-compliant features	N/A	N/A	N/A	N/A	N/A

(1) 'N/A' inserted if the question is not applicable.



## 3.2 Countercyclical Capital Buffer

The UK implementation of CRR requires institutions to maintain an institution-specific countercyclical capital buffer based on regulatory determined buffer rates. This requirement follows closely the international approach of Basel III which introduced the countercyclical capital buffer to be implemented by national jurisdictions when excess aggregate credit growth is judged to be associated with a build-up of system-wide risk in each country the Company is exposed to.

As at 31 October 2016, the Company's specific countercyclical capital buffer rate is 0.0045% (2015: nil) and the capital requirement is £0.3 million (2015: nil).

Detailed disclosure on the geographical distribution of credit exposure and the Company's specific countercyclical buffer requirements is included in Appendix 4.

## 3.3 Unencumbered Assets

The Company defines the following assets as encumbered assets:

- Assets which have been pledged as collateral; or
- Assets which the Company believes it was restricted from using to secure funding, for legal or other reasons.

Unencumbered assets are the difference between total and encumbered assets from both on- and off-balance sheet sources.

The European Banking Authority (EBA) and PRA have finalised 'Guidelines on disclosure of encumbered and unencumbered assets' on 27 June 2014. The Company is required to disclose information on encumbered and unencumbered assets from 2015 onwards on an annual basis.

Asset encumbrance is an integral part of the Company's liquidity, funding and collateral management processes. The majority of the Company's encumbrance is driven by secured financing activities, which include transactions in collateral swaps and repo, including shorts facilitation as part of its trading activities. These activities are carried out under industry standard contractual agreements (mostly Global Master Repurchase Agreements (GMRAs)). Where securities are borrowed or lent between the Company and RBC Group companies, this is done with arm's length terms.

The level of over-collateralisation is dependent on specific trade details. The Company's ratio of encumbered assets is relatively low with a high turnover of assets available for encumbrance.

A significant proportion (over 85%) of the assets included in other unencumbered assets of £20.9bn (2015: £19.2bn) relates to reverse repurchase transactions and the Company has rehypothecation rights over these securities.

Encumbrance will vary depending on the composition of the balance sheet, and there are no notable trends during the disclosure period.

**Table 6: Encumbered and unencumbered assets****For the year ended at 31 October 2016**

<i>£'000</i>	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
<b>Assets of the reporting institution</b>	1,838,184		28,558,369	
Equity instruments	-	-	137,843	137,843
Debt securities	1,593,851	1,593,851	1,444,903	1,444,903
Other assets	254,608		20,922,257	
		<b>Matching liabilities, contingent liabilities or securities lent</b>		<b>Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered</b>
<b>Carrying amount of selected financial liabilities</b>	12,771,206	12,771,206		

**For the year ended at 31 October 2015**

<i>£'000</i>	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
<b>Assets of the reporting institution</b>	2,879,175		29,704,624	
Equity instruments	14,001	14,001	37,538	37,538
Debt securities	2,759,025	2,759,025	2,717,951	2,717,951
Other assets	123,931		19,248,652	
		<b>Matching liabilities, contingent liabilities or securities lent</b>		<b>Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered</b>
<b>Carrying amount of selected financial liabilities</b>	12,245,330	12,245,330		

The above information is prepared using median values of monthly data on a rolling basis over the previous twelve months as expected by PRA.

### 3.4 Leverage Ratio

The leverage ratio was introduced into the Basel III framework as a simple, transparent, non-risk based supplementary measure to the risk-based capital requirements. The primary objectives are to restrict the build-up of excessive leverage in the banking sector and to reinforce the risk-based requirements with a simple, non-risk “backstop” measure.

Basel III provides for a transitional period for the introduction of the leverage ratio, comprising a supervisory monitoring period that started in 2011 and a parallel run period from 1 January 2013 to 1 January 2017. The Basel Committee will continue to test a minimum requirement of 3 % for the leverage during the parallel run period. The final calibration, and any further adjustments to the definition will be completed by 2017, with a view to migrating to a Pillar 1 (minimum capital requirement) treatment on 1 January 2018. In January 2014, the Basel Committee published its finalised leverage ratio framework, along with the disclosure requirements, effective from 1 January 2015.

The EU implementation of the Basel III leverage ratio calculation is provided in Article 429 of the CRR, which mirrors the Basel III framework from December 2010. In October 2014, the European Commission issued a Delegated Act to align the definition of the CRR leverage exposure with the final Basel III leverage ratio framework published in January 2014.

Leverage ratio is reported to and monitored by ALCO on a monthly basis since July 2013 as one of its risk appetite metrics. GRM has established internal threshold for each business line in accordance with the Company’s risk appetite as approved by the Company’s Board. Regulatory Reporting team

monitors the leverage usage against the internal threshold on a weekly basis. As at 31 October 2016, the Company's leverage ratio is 2.48% (2015: 2.97%).

**Table 7: Leverage ratio disclosure**

As at 31 October 2016		£'000
<b>Summary reconciliation of accounting assets and leverage ratio exposures</b>		
	<b>Applicable Amounts</b>	
Total assets as per published financial statements	34,426,634	
Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-	
(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")	-	
Adjustments for derivative financial instruments	(373,260)	
Adjustments for securities financing transactions "SFTs"	815,882	
Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	2,609,783	
(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	-	
(Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013)	-	
Other adjustments	1,023,634	
<b>Total leverage ratio exposure</b>	<b>38,502,673</b>	
<b>Leverage ratio common disclosure</b>		
	<b>CRR leverage ratio exposures</b>	
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>		
On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	13,970,331	
(Asset amounts deducted in determining Tier 1 capital)	(7,580)	
<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)</b>	<b>13,962,751</b>	
<b>Derivative exposures</b>		
Replacement cost associated with <i>all</i> derivatives transactions (ie net of eligible cash variation margin)	347,046	
Add-on amounts for PFE associated with <i>all</i> derivatives transactions (mark-to-market method)	869,974	
Exposure determined under Original Exposure Method	-	
Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	
(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-	
(Exempted CCP leg of client-cleared trade exposures)	-	
Adjusted effective notional amount of written credit derivatives	68,203	
(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(39,596)	
<b>Total derivative exposures</b>	<b>1,245,627</b>	
<b>Securities financing transaction exposures</b>		
Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	20,342,595	
(Netted amounts of cash payables and cash receivables of gross SFT assets)	(410,166)	
Counterparty credit risk exposure for SFT assets	646,129	
Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	-	
Agent transaction exposures	-	
(Exempted CCP leg of client-cleared SFT exposure)	-	
<b>Total securities financing transaction exposures</b>	<b>20,578,558</b>	
<b>Other off-balance sheet exposures</b>		
Off-balance sheet exposures at gross notional amount	5,386,124	
(Adjustments for conversion to credit equivalent amounts)	(2,670,387)	
<b>Other off-balance sheet exposures</b>	<b>2,715,737</b>	
<b>Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)</b>		
(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	-	
(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	-	
<b>Capital and total exposures</b>		
<b>Tier 1 capital</b>	<b>953,563</b>	
<b>Total leverage ratio exposures</b>	<b>38,502,673</b>	
<b>Leverage ratio</b>	<b>2.48%</b>	
<b>Choice on transitional arrangements and amount of derecognised fiduciary items</b>		
Choice on transitional arrangements for the definition of the capital measure	-	
Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) NO 575/2013	-	
Description of the processes used to manage the risk of excessive leverage	Leverage ratio is reported to and monitored by ALCO on a monthly basis. Internal limits have been set up for each business line in accordance with the Company's risk appetite. GRM monitors the leverage usage against the limits on a weekly basis.	
Description of the factors that had an impact on the leverage Ratio during the period to which the disclosed Leverage Ratio refers	As at 31 October 2016, the leverage exposure is mainly driven by securities financing transactions (53%), loans and advances (9%), settlement balances (9%), cash (8%) and trading securities (6%).	

As at 31 October 2015

£'000

**Summary reconciliation of accounting assets and leverage ratio exposures**

	Applicable Amounts
Total assets as per published financial statements	28,820,831
Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-
(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")	-
Adjustments for derivative financial instruments	(214,591)
Adjustments for securities financing transactions "SFTs"	582,106
Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	637,530
(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	-
(Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013)	-
Other adjustments	586,481
<b>Total leverage ratio exposure</b>	<b>30,412,357</b>

**Leverage ratio common disclosure**

	CRR leverage ratio exposures
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>	
On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	12,439,871
(Asset amounts deducted in determining Tier 1 capital)	(12,002)
<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)</b>	<b>12,427,869</b>
<b>Derivative exposures</b>	
Replacement cost associated with <i>all</i> derivatives transactions (ie net of eligible cash variation margin)	210,408
Add-on amounts for PFE associated with <i>all</i> derivatives transactions (mark-to-market method)	993,272
Exposure determined under Original Exposure Method	-
Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-
(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-
(Exempted CCP leg of client-cleared trade exposures)	-
Adjusted effective notional amount of written credit derivatives	141,603
(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(117,805)
<b>Total derivative exposures</b>	<b>1,227,478</b>
<b>Securities financing transaction exposures</b>	
Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	16,457,224
(Netted amounts of cash payables and cash receivables of gross SFT assets)	(919,850)
Counterparty credit risk exposure for SFT assets	582,106
Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	-
Agent transaction exposures	-
(Exempted CCP leg of client-cleared SFT exposure)	-
<b>Total securities financing transaction exposures</b>	<b>16,119,480</b>
<b>Other off-balance sheet exposures</b>	
Off-balance sheet exposures at gross notional amount	3,187,648
(Adjustments for conversion to credit equivalent amounts)	(2,550,118)
<b>Other off-balance sheet exposures</b>	<b>637,530</b>
<b>Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)</b>	
(Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet))	-
(Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet))	-
<b>Capital and total exposures</b>	<b>902,980</b>
<b>Tier 1 capital</b>	<b>902,980</b>
<b>Total leverage ratio exposures</b>	<b>30,412,357</b>
<b>Leverage ratio</b>	<b>2.97%</b>
<b>Choice on transitional arrangements and amount of derecognised fiduciary items</b>	
Choice on transitional arrangements for the definition of the capital measure	-
Amount of derecognised fiduciary items in accordance with Article 429(11) of Regulation (EU) NO 575/2013	-

Description of the processes used to manage the risk of excessive leverage	Leverage ratio is reported to and monitored by ALCO on a monthly basis. Internal limits have been set up for each main business line in accordance with the Company's risk appetite. GRM monitors the leverage usage against the limits on a weekly basis.
Description of the factors that had an impact on the leverage Ratio during the period to which the disclosed leverage Ratio refers	As at 31 October 2015, the leverage exposure is mainly driven by securities financing transaction (53%), trading securities (11%), loans and advances (10%), settlement balances (9%) and cash (7%).

## 4.0 Capital Requirements

Capital adequacy and capital ratios measured are monitored daily against internal thresholds by the Regulatory Reporting team in the Finance department. Any breaches would be escalated immediately. In addition ALCO receives monthly reports detailing capital requirements, while the Board and the RC are updated on a quarterly basis.

Analysis, monitoring and reporting of risk profiles and performance against risk appetite limits and tolerances are conducted by the relevant risk functions. Results are reported to the RC at least quarterly, with management committees updated on a more regular basis.

As at 31 October 2016, the Company's minimum capital requirements are illustrated below, expressed in terms of risk-weighted exposure, as calculated by the approaches adopted by the Company to calculate the minimum capital resources requirements. Exposure classes not mentioned below were immaterial and are not shown separately.

**Table 8: Risk exposure amount by risk type and calculation approach adopted**

As at 31 October 2016	Risk-weighted Exposure	CET1 Capital requirement @ 4.5%	Tier 1 Capital requirement @ 6%	Total Capital requirement @8%
<i>£'000</i>				
<b>Risk-weighted exposure amounts for credit and counterparty credit</b>				
<i>Calculated under the Standardised Approach</i>				
Central governments or central banks	44,097	1,984	2,646	3,528
Public sector entities	245	11	15	20
Institutions	390,852	17,588	23,451	31,268
Corporates	2,657,386	119,582	159,443	212,591
Secured by mortgages on immovable property	339,380	15,272	20,363	27,150
Equity	25,316	1,139	1,519	2,025
Other items	5,751	259	345	460
	<u>3,463,026</u>	<u>155,836</u>	<u>207,782</u>	<u>277,042</u>
Risk exposure amount for contributions to the default fund of a CCP	52,616	2,368	3,157	4,209
	<u>3,515,642</u>	<u>158,204</u>	<u>210,939</u>	<u>281,251</u>
<b>Risk-weighted exposure amount settlement/delivery risk in the Trading book</b>	<b>136</b>	<b>6</b>	<b>8</b>	<b>11</b>
<b>Risk-weighted exposure amount for position, foreign exchange and commodities risks</b>				
<i>Calculated under the Standardised Approach</i>				
Interest Rate	1,336,751	60,154	80,205	106,940
Equity	1,387	62	83	111
Foreign Exchange	32,133	1,446	1,928	2,571
Commodities	121,100	5,450	7,266	9,688
	<u>1,491,371</u>	<u>67,112</u>	<u>89,482</u>	<u>119,310</u>
<b>Risk-weighted exposure amount for operational risk</b>				
<i>Calculated under the Basic Indicator Approach</i>				
	<b>587,427</b>	26,434	35,246	<b>46,994</b>
<b>Risk-weighted exposure amount for credit valuation adjustment</b>				
<i>Calculated under the Standardised Method</i>				
	<b>15,171</b>	683	31	<b>1,214</b>
<b>Total</b>	<b>5,609,747</b>	<b>252,439</b>	<b>335,705</b>	<b>448,780</b>
<b>Surplus CET1 Capital over the minimum requirement</b>		<b>701,124</b>		
<b>Surplus Tier1 Capital over the minimum requirement</b>			<b>617,858</b>	
<b>Surplus Total Capital over the minimum requirement</b>				<b>787,508</b>

As at 31 October 2015

£'000	Risk-weighted Exposure	CET1 Capital requirement @ 4.5%	Tier 1 Capital Requirement @ 6%	Total Capital requirement @8%
<b>Risk-weighted exposure amounts for credit and counterparty credit</b>				
<i>Calculated under the Standardised Approach</i>				
Central governments or central banks	23,272	1,047	1,396	1,862
Public sector entities	18	1	1	1
Institutions	490,549	22,075	29,433	39,244
Corporates	1,817,684	81,796	109,061	145,415
Secured by mortgages on immovable property	345,232	15,535	20,714	27,619
Equity	21,880	985	1,313	1,750
Other items	74	3	4	6
	<u>2,698,709</u>	<u>121,442</u>	<u>161,923</u>	<u>215,897</u>
Risk exposure amount for contributions to the default fund of a CCP	6,801	306	408	544
	<u>2,705,510</u>	<u>121,748</u>	<u>162,331</u>	<u>216,441</u>
<b>Risk-weighted exposure amount settlement/delivery risk in the Trading book</b>	<b>900</b>	<b>41</b>	<b>54</b>	<b>72</b>
<b>Risk-weighted exposure amount for position, foreign exchange and commodities risks</b>				
<i>Calculated under the Standardised Approach</i>				
Interest Rate	1,064,063	47,883	63,844	85,125
Equity	1,423	64	85	114
Foreign Exchange	24,850	1,118	1,491	1,988
Commodities	55,395	2,493	3,324	4,432
	<u>1,145,731</u>	<u>51,558</u>	<u>68,744</u>	<u>91,658</u>
<b>Risk-weighted exposure amount for operational risk</b>				
<i>Calculated under the Basic Indicator Approach</i>				
	<b>495,952</b>	22,318	29,757	<b>39,676</b>
<b>Risk-weighted exposure amount for credit valuation adjustment</b>				
<i>Calculated under the Standardised Method</i>				
	<b>26,088</b>	1,174	53	<b>2,087</b>
<b>Total</b>	<b>4,374,181</b>	<b>196,838</b>	<b>260,938</b>	<b>349,934</b>
<b>Surplus CET1 Capital over the minimum requirement</b>		<b>706,142</b>		
<b>Surplus Tier1 Capital over the minimum requirement</b>			<b>642,042</b>	
<b>Surplus Total Capital over the minimum requirement</b>				<b>792,074</b>

Calculation methods for the capital requirements above are listed in Appendix 3.

## 5.0 Credit Risk

### 5.1 Definition of Credit Risk

The Company defines credit risk as the risk of loss associated with counterparty's potential inability or unwillingness to fulfil its on- and off-balance sheet payment obligations. Credit risk may arise directly from the risk of default of a primary obligor (e.g., issuer, debtor, borrower or policyholder), or indirectly from a secondary obligor (e.g., guarantor, reinsurance) and/or through off-balance sheet exposures, contingent credit risk and/or transactional risk. Credit risk includes counterparty credit risk from both trading and non-trading activities. Exposure to credit risk occurs any time funds are extended, committed or invested through actual or implied contractual agreement.

### 5.2 Governance and Framework

Credit risk exposures across all lending and trading activities are aggregated and reported to the RC on a quarterly basis.

Individually, credit risk is controlled and reported as follows:

#### *Banking Book Credit Risk*

The loan credit risk profile is managed through the RC and more specifically the UKLMC and Wealth Management International Risk and Compliance Committee (WMI-RACC). The monitoring of Credit risk is a continual process. All borrowers are subject to a risk assessment and an exposure/limit review at least annually, with risk managed proactively on an ongoing basis. Borrowers that experience a material deterioration in credit quality and/or that may breach their covenant are added to a watch list which is monitored by the UKLMC, the WMI-RACC and senior management.

Risk appetite is managed and controlled through exposure limits defined across single names, country, industry sector and ratings. Single Name exposures across the Banking Book are limited to the lower of any RBC group limits and the Company's Single Name Framework.

Ongoing monitoring and review processes undertaken by Group Risk Management Credit include:

- Borrower Risk Rating (BRR) Regular Reviews – BRRs (measures probability of borrower default) are reviewed quarterly;
- Continuous Risk Assessment – The impact of new information on borrowers is assessed on an ongoing basis to adjust BRR if appropriate;
- Borrower Classification Code (BCC) – Considers the probability of recovery of all monies due to the Company, and is based on an assessment of the borrower's current repayment capacity, including structure and collateral; and
- Limit monitoring – Exposures are monitored against single name limits.

Lending credit risk is mitigated through guarantees, collateral and/or the use of credit default swaps (CDS) where commercially feasible. As at 31 October 2016, none of the loans within the Company's loan portfolio carried any CDS as the credit worthiness of the borrowers remains within the Company's risk appetite (2015: nil).

Risk appetite is managed and controlled through exposure limits across single names, country, industry sector and ratings. Loan transactions are signed off by the Regulatory Reporting team for compliance with Regulatory Large Exposure Limits.

### ***Trading Credit Risk***

Each trading credit risk type is managed both separately as part of the RBC Group framework, and as part of a combined exposure metric specific to the Company, with exposure and limit usage reported daily to front office and senior management by GRM Trading Credit Risk.

The Company's Single Name Limit Framework is the primary constraint on the Trading Credit Exposure. The limits defined as part of this framework are directly related to the Company's Risk Appetite Framework (RAF). This Framework is approved by the Board annually. The Managing Director of Credit Risk has the authority to approve temporary excesses. All operational limit excesses are reported to the UKMPMC. Monthly exposure data is also reviewed by the UKCCPMC, UKMPMC, and RC.

The Regulatory Reporting team also reports the overall capital requirement, including capital requirement on the credit risk, to the Company's senior management on a daily basis.

### ***Assigning Internal Capital and Credit Limits***

The Company assigns credit risk ratings to its borrowers to reflect its assessment of the specific credit risk of each borrower over a 3-year horizon (or full credit cycle as appropriate) starting from the time of risk assessment or revision or confirmation. The 3-year time horizon is consistent with the term of the majority of the credit risk exposures. The Company extends the term of the rating horizon in the case of specific portfolios where the nature of the business predominantly exposes the bank to longer term exposures. On the other hand, the ratings of very weak borrowers are assigned to primarily reflect their riskiness based on current conditions and short-term expectations.

The rating is determined through an assessment of factors, specific to the industry and/or product, that differentiate the riskiness of the borrowers and reflects the probability of default of the borrower over the time horizon of the rating. The currency of the rating is maintained through a process of continuous monitoring and periodic review. This internal rating will be used to determine capital allocation.

## **5.3 Credit Risk Profile**

The Company's credit risk is derived from its banking and trading activities. The table below indicates the risk-weighted exposure amounts of credit and counterparty credit risk from these two activities.

**Table 9: Risk exposure amounts by banking and trading activities**

<b>As at 31 October 2016</b>			
<i>£'000</i>	<b>Banking</b>	<b>Trading</b>	<b>Total</b>
<b>Risk-weighted exposure amounts for credit and counterparty credit</b>			
<i>Calculated under the Standardised Approach</i>			
Central governments or central banks	20,477	23,620	44,097
Public sector entities	-	245	245
Institutions	14,557	376,295	390,852
Corporates	1,941,019	716,367	2,657,386
Secured by mortgages on immovable property	339,380	-	339,380
Equity	25,316	-	25,316
Other items	5,751	-	5,751
	<u>2,346,499</u>	<u>1,116,527</u>	<u>3,463,026</u>
Risk exposure amount for contributions to the default fund of a CCP	-	52,616	52,616
	<u>2,346,499</u>	<u>1,169,144</u>	<u>3,515,642</u>
<b>Risk-weighted exposure amount settlement/delivery risk in the Trading book</b>	<u>-</u>	<u>136</u>	<u>136</u>
<b>Total</b>	<u>2,346,499</u>	<u>1,169,279</u>	<u>3,515,778</u>



As at 31 October 2015

£'000	Banking	Trading	Total
<b>Risk-weighted exposure amounts for credit and counterparty credit</b>			
<i>Calculated under the Standardised Approach</i>			
Central governments or central banks	14,671	8,601	23,272
Public sector entities	-	18	18
Institutions	20,740	469,809	490,549
Corporates	1,181,471	636,213	1,817,684
Secured by mortgages on immovable property	345,232	-	345,232
Equity	21,880	-	21,880
Other items	74	-	74
	<u>1,584,068</u>	<u>1,114,641</u>	<u>2,698,709</u>
Risk exposure amount for contributions to the default fund of a CCP	-	6,801	6,801
	<b><u>1,584,068</u></b>	<b><u>1,121,442</u></b>	<b><u>2,705,510</u></b>
<b>Risk-weighted exposure amount settlement/delivery risk in the Trading book</b>	<b>-</b>	<b>900</b>	<b>900</b>
<b>Total</b>	<b><u>1,584,068</u></b>	<b><u>1,122,342</u></b>	<b><u>2,706,410</u></b>

### 5.3.1 Banking Book Credit Risk

The Capital Markets Banking Book credit profile is managed through monthly review of the UKLMC, with the Wealth Management lending portfolio monitored at the quarterly WMI-RACC. The combined banking book credit risk profile for the Company is reported to the RC on a quarterly basis. All borrowers are subject to a risk assessment at least annually, with risk managed proactively on an ongoing basis. Borrowers with material deterioration in credit quality which may breach their covenant are added to a watch list for monitoring, and action is taken as appropriate.

Credit risk is mitigated through guarantees and collateral where considered appropriate and commercially feasible.

As at 31 October 2016, the Company had total gross credit exposures<sup>2</sup> of £11.7 billion (2015: £7.8 billion), and the average gross credit exposure is £9.5 billion over the year (2015: £8.2 billion). Detailed exposures by exposure class, residual maturity and geographic distribution are shown in the tables below.

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<sup>2</sup> Gross credit risk exposure is after accounting offsets, but without taking into account the effects of the credit risk mitigation. Final exposure is after the accounting offsets and the credit risk mitigation.

**Table 10: Gross credit exposures within the banking book****As at 31 October 2016**

£'000

**Exposure amounts for credit risk in the banking book**

	<b>Gross Exposure</b>	<b>Final Exposure</b>	<b>Risk- weighted Exposure</b>
<u>On balance sheet exposures</u>			
Central governments or central banks	2,919,053	2,919,053	20,477
Institutions	35,487	35,487	7,107
Corporates	2,491,329	1,049,735	1,051,396
Secured by mortgages on immovable property	872,785	850,917	333,389
Equity	25,316	25,316	25,316
Other items	5,751	5,751	5,751
	<u>6,349,721</u>	<u>4,886,259</u>	<u>1,443,436</u>
<u>Off balance sheet exposures</u>			
Central governments or central banks	74,037	37,019	-
Institutions	59,065	37,246	7,449
Corporates	5,216,325	1,150,823	889,623
Secured by mortgages on immovable property	36,698	16,744	5,991
	<u>5,386,124</u>	<u>1,241,832</u>	<u>903,062</u>
<b>Total</b>	<b><u>11,735,846</u></b>	<b><u>6,128,091</u></b>	<b><u>2,346,499</u></b>
Small and medium enterprises included in Corporates	<i>91,648</i>	<i>69,908</i>	<i>60,852</i>

**As at 31 October 2015**

£'000

**Exposure amounts for credit risk in the banking book**

	<b>Gross Exposure</b>	<b>Final Exposure</b>	<b>Risk- weighted Exposure</b>
<u>On balance sheet exposures</u>			
Central governments or central banks	1,975,267	1,975,267	14,671
Institutions	77,288	77,288	16,052
Corporates	1,591,117	591,159	591,159
Secured by mortgages on immovable property	933,200	904,521	338,636
Equity	21,880	21,880	21,880
Other items	75	75	75
	<u>4,598,827</u>	<u>3,570,190</u>	<u>982,473</u>
<u>Off balance sheet exposures</u>			
Central governments or central banks	58,903	29,451	-
Institutions	46,888	23,444	4,689
Corporates	3,045,605	739,995	590,313
Secured by mortgages on immovable property	36,252	17,632	6,595
	<u>3,187,648</u>	<u>810,522</u>	<u>601,597</u>
<b>Total</b>	<b><u>7,786,475</u></b>	<b><u>4,380,712</u></b>	<b><u>1,584,070</u></b>
Small and medium enterprises, included in Corporates	<i>177,362</i>	<i>117,075</i>	<i>100,657</i>

**Table 11: Average gross credit exposures within the banking book****For the year ended 31 October 2016**

£'000

	Gross Exposure	Final Exposure	Risk-weighted Exposure
<u>On balance sheet exposures</u>			
Central governments or central banks	2,032,091	2,032,091	17,517
Institutions	66,029	75,678	15,136
Corporates	2,204,636	850,716	850,417
Secured by mortgages on immovable property	858,079	839,210	346,921
Equity	24,292	24,292	24,292
Other items	5,682	5,682	5,680
	<b>5,190,809</b>	<b>3,827,669</b>	<b>1,259,962</b>
<u>Off balance sheet exposures</u>			
Central governments or central banks	66,042	32,200	-
Institutions	177,428	127,063	50,072
Corporates	4,045,421	981,614	780,159
Secured by mortgages on immovable property	33,349	19,493	6,822
	<b>4,322,240</b>	<b>1,160,369</b>	<b>837,053</b>
<b>Total</b>	<b>9,513,049</b>	<b>4,988,038</b>	<b>2,097,015</b>
Small and medium enterprises, included in Corporates	<i>107,731</i>	<i>88,321</i>	<i>81,787</i>

**For the year ended 31 October 2015**

£'000

	Gross Exposure	Final Exposure	Risk-weighted Exposure
<u>On balance sheet exposures</u>			
Central governments or central banks	2,810,911	2,810,911	19,934
Institutions	74,747	51,993	10,459
Corporates	1,469,407	607,155	606,366
Secured by mortgages on immovable property	988,869	967,185	389,185
Equity	21,357	21,357	21,357
Other items	3,662	3,662	3,662
	5,368,953	4,462,263	1,050,963
<u>Off balance sheet exposures</u>			
Central governments or central banks	60,647	30,324	-
Institutions	24,956	13,241	2,648
Corporates	2,678,118	657,705	538,364
Secured by mortgages on immovable property	32,908	16,016	5,994
	2,796,629	717,286	547,006
<b>Total</b>	<b>8,165,582</b>	<b>5,179,549</b>	<b>1,597,969</b>
Small and medium enterprises, included in Corporates	<i>125,016</i>	<i>97,676</i>	<i>90,386</i>

**Table 12: Gross credit exposure by residual maturity**

As at 31 October 2016

£'000

Gross exposure amounts for credit risk in the banking book	Less than 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Greater than 5 years	Total
<u>On balance sheet exposures</u>						
Central governments or central banks	2,919,053	-	-	-	-	2,919,053
Institutions	35,487	-	-	-	-	35,487
Corporates	58,285	37,354	129,027	2,193,625	73,038	2,491,329
Secured by mortgages on immovable property	53,686	42,666	206,103	570,330	-	872,785
Equity	-	-	-	-	25,316	25,316
Other items	5,751	-	-	-	-	5,751
	<b>3,072,262</b>	<b>80,020</b>	<b>335,130</b>	<b>2,763,955</b>	<b>98,354</b>	<b>6,349,721</b>
<u>Off balance sheet exposures</u>						
Central governments or central banks	-	-	74,037	-	-	74,037
Institutions	9,568	-	5,859	43,637	-	59,065
Corporates	65,987	13,237	443,434	4,600,806	92,860	5,216,325
Secured by mortgages on immovable property	-	-	5,319	31,379	-	36,698
	<b>75,556</b>	<b>13,237</b>	<b>528,649</b>	<b>4,675,822</b>	<b>92,860</b>	<b>5,386,124</b>
<b>Total</b>	<b>3,147,817</b>	<b>93,258</b>	<b>863,779</b>	<b>7,439,778</b>	<b>191,214</b>	<b>11,735,846</b>

As at 31 October 2015

£'000

Gross exposure amounts for credit risk in the banking book	Less than 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Greater than 5 years	Total
<u>On balance sheet exposures</u>						
Central governments or central banks	1,975,267	-	-	-	-	1,975,267
Institutions	77,288	-	-	-	-	77,288
Corporates	32,797	52,454	141,901	1,222,088	141,877	1,591,116
Secured by mortgages on immovable property	29,442	42,402	186,562	674,795	-	933,200
Equity	-	-	-	-	21,880	21,880
Other items	75	-	-	-	-	75
	<b>2,114,869</b>	<b>94,855</b>	<b>328,463</b>	<b>1,896,882</b>	<b>163,757</b>	<b>4,598,826</b>
<u>Off balance sheet exposures</u>						
Central governments or central banks	-	-	-	58,903	-	58,903
Institutions	-	-	-	46,888	-	46,888
Corporates	25,182	4,064	408,857	2,565,405	42,098	3,045,605
Secured by mortgages on immovable property	-	1,625	1,842	32,785	-	36,252
Equity	-	-	-	-	-	-
Other items	-	-	-	-	-	-
	<b>25,182</b>	<b>5,689</b>	<b>410,699</b>	<b>2,703,980</b>	<b>42,098</b>	<b>3,187,648</b>
<b>Total</b>	<b>2,140,050</b>	<b>100,544</b>	<b>739,162</b>	<b>4,600,862</b>	<b>205,855</b>	<b>7,786,474</b>

**Table 13: Final credit exposure by residual maturity****As at 31 October 2016**

£'000

<b>Final exposure amounts for credit risk in the banking book</b>	<b>Less than 1 month</b>	<b>1 to 3 months</b>	<b>3 to 12 months</b>	<b>1 to 5 years</b>	<b>Greater than 5 years</b>	<b>Total</b>
<u>On balance sheet exposures</u>						
Central governments or central banks	2,919,053	-	-	-	-	2,919,053
Institutions	35,487	-	-	-	-	35,487
Corporates	58,098	26,860	99,401	792,338	73,038	1,049,735
Secured by mortgages on immovable property	52,228	42,305	193,464	562,921	-	850,917
Equity	-	-	-	-	25,316	25,316
Other items	5,751	-	-	-	-	5,751
	<b>3,070,617</b>	<b>69,165</b>	<b>292,865</b>	<b>1,355,259</b>	<b>98,354</b>	<b>4,886,259</b>
<u>Off balance sheet exposures</u>						
Central governments or central banks	-	-	37,019	-	-	37,019
Institutions	9,568	-	5,859	21,819	-	37,246
Corporates	42,288	2,564	62,386	1,028,262	15,323	1,150,823
Secured by mortgages on immovable property	-	-	1,834	14,910	-	16,744
	<b>51,857</b>	<b>2,564</b>	<b>107,098</b>	<b>1,064,991</b>	<b>15,323</b>	<b>1,241,832</b>
<b>Total</b>	<b>3,122,474</b>	<b>71,729</b>	<b>399,963</b>	<b>2,420,249</b>	<b>113,677</b>	<b>6,128,091</b>

**As at 31 October 2015**

£'000

<b>Final exposure amounts for credit risk in the banking book</b>	<b>Less than 1 month</b>	<b>1 to 3 months</b>	<b>3 to 12 months</b>	<b>1 to 5 years</b>	<b>Greater than 5 years</b>	<b>Total</b>
<u>On balance sheet exposures</u>						
Central governments or central banks	1,975,267	-	-	-	-	1,975,267
Institutions	77,288	-	-	-	-	77,288
Corporates	23,779	34,364	88,347	330,871	113,798	591,159
Secured by mortgages on immovable property	28,911	39,768	180,952	654,890	-	904,521
Equity	-	-	-	-	21,880	21,880
Other items	75	-	-	-	-	75
	<b>2,105,320</b>	<b>74,132</b>	<b>269,299</b>	<b>985,761</b>	<b>135,678</b>	<b>3,570,190</b>
<u>Off balance sheet exposures</u>						
Central governments or central banks	-	-	-	29,451	-	29,451
Institutions	-	-	-	23,444	-	23,444
Corporates	17,293	1,880	51,106	652,490	17,226	739,995
Secured by mortgages on immovable property	-	775	866	15,991	-	17,632
	<b>17,293</b>	<b>2,655</b>	<b>51,972</b>	<b>721,376</b>	<b>17,226</b>	<b>810,522</b>
<b>Total</b>	<b>2,122,613</b>	<b>76,787</b>	<b>321,271</b>	<b>1,707,137</b>	<b>152,904</b>	<b>4,380,712</b>

**Table 14: Credit conversion factor for off balance sheet credit exposures**

As at 31 October 2016

£'000

Exposure amounts for credit risk in the banking book

	Conversion Factors	Gross Exposure	Final Exposure	Risk-weighted Exposure
<u>Off balance sheet exposures</u>				
Central governments or central banks	50%	74,037	37,019	-
Institutions	50%	43,637	21,819	4,364
	100%	15,428	15,428	3,086
Corporates	0%	25	-	-
	20%	35,897	7,179	7,179
	50%	5,128,924	1,115,032	853,832
	100%	51,479	28,611	28,611
Secured by mortgages on immovable property	50%	36,698	16,744	5,991
<b>Total</b>		<b><u>5,386,124</u></b>	<b><u>1,241,832</u></b>	<b><u>903,062</u></b>

As at 31 October 2015

£'000

Exposure amounts for credit risk in the banking book

	Conversion Factors	Gross Exposure	Final Exposure	Risk-weighted Exposure
<u>Off balance sheet exposures</u>				
Central governments or central banks	50%	58,903	29,451	-
Institutions	50%	46,888	23,444	4,689
Corporates	0%	47	-	-
	50%	3,010,143	724,973	575,291
	100%	35,415	15,022	15,022
Secured by mortgages on immovable property	50%	36,252	17,632	6,595
<b>Total</b>		<b><u>3,187,648</u></b>	<b><u>810,522</u></b>	<b><u>601,597</u></b>

**Table 15: Gross credit exposure by geographic distribution<sup>3</sup>**

As at 31 October 2016

£'000

Gross exposure amounts for credit risk in the banking book	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
<u>On balance sheet exposures</u>								
Central governments or central banks	-	-	2,919,053	-	-	-	-	2,919,053
Institutions	47	-	14,802	926	2	19,687	22	35,487
Corporates	10,134	1,628	2,118,377	116,408	162,469	73,706	8,607	2,491,329
Secured by mortgages on immovable property	11,188	4,338	648,900	41,696	54,410	107,687	4,566	872,785
Equity	-	-	25,316	-	-	-	-	25,316
Other items	-	-	5,751	-	-	-	-	5,751
	21,369	5,966	5,732,199	159,029	216,881	201,080	13,196	6,349,721
<u>Off balance sheet exposures</u>								
Central governments or central banks	-	-	74,037	-	-	-	-	74,037
Institutions	-	-	59,065	-	-	-	-	59,065
Corporates	40,422	134,737	4,253,314	228,003	332,788	171,716	55,345	5,216,325
Secured by mortgages on immovable property	-	-	25,201	1,518	9,978	-	-	36,698
Equity	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-
	40,422	134,737	4,411,617	229,521	342,766	171,716	55,345	5,386,124
<b>Total</b>	<b>61,791</b>	<b>140,703</b>	<b>10,143,816</b>	<b>388,550</b>	<b>559,647</b>	<b>372,797</b>	<b>68,541</b>	<b>11,735,846</b>

As at 31 October 2015

£'000

Gross exposure amounts for credit risk in the banking book	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
<u>On balance sheet exposures</u>								
Central governments or central banks	-	-	1,975,267	-	-	-	-	1,975,267
Institutions	1,190	-	64,181	681	2	9,275	1,959	77,288
Corporates	27,226	5	1,232,027	79,619	126,689	124,224	1,326	1,591,116
Secured by mortgages on immovable property	14,679	9,510	757,938	57,334	59,510	29,661	4,568	933,200
Equity	-	-	21,880	-	-	-	-	21,880
Other items	-	-	75	-	-	-	-	75
	43,095	9,515	4,051,368	137,634	186,200	163,160	7,853	4,598,826
<u>Off balance sheet exposures</u>								
Central governments or central banks	-	-	58,903	-	-	-	-	58,903
Institutions	-	-	46,888	-	-	-	-	46,888
Corporates	42,071	203,971	2,401,127	100,800	263,056	18,403	16,178	3,045,605
Secured by mortgages on immovable property	-	-	27,258	-	8,994	-	-	36,252
Equity	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-
	42,071	203,971	2,534,175	100,800	272,050	18,403	16,178	3,187,648
<b>Total</b>	<b>85,166</b>	<b>213,486</b>	<b>6,585,544</b>	<b>238,434</b>	<b>458,250</b>	<b>181,563</b>	<b>24,031</b>	<b>7,786,474</b>

**Table 16: Final credit exposure by geographic distribution**

As at 31 October 2016

£'000

Final exposure amounts for credit risk in the banking book	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
<u>On balance sheet exposures</u>								
Central governments or central banks	-	-	2,919,053	-	-	-	-	2,919,053
Institutions	47	-	14,802	926	2	19,687	22	35,487
Corporates	10,134	1,628	923,941	52,258	11,560	41,606	8,607	1,049,735
Secured by mortgages on immovable property	11,053	4,290	638,477	33,390	53,133	106,224	4,350	850,917
Equity	-	-	25,316	-	-	-	-	25,316
Other items	-	-	5,751	-	-	-	-	5,751
	21,234	5,918	4,527,341	86,575	64,694	167,518	12,980	4,886,259
<u>Off balance sheet exposures</u>								
Central governments or central banks	-	-	37,019	-	-	-	-	37,019
Institutions	-	-	37,246	-	-	-	-	37,246
Corporates	20,422	76,526	832,576	91,652	77,088	41,252	11,308	1,150,823
Secured by mortgages on immovable property	-	-	11,483	272	4,989	-	-	16,744
Equity	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-
	20,422	76,526	918,324	91,924	82,077	41,252	11,308	1,241,832
<b>Total</b>	<b>41,656</b>	<b>82,444</b>	<b>5,445,665</b>	<b>178,499</b>	<b>146,771</b>	<b>208,769</b>	<b>24,287</b>	<b>6,128,091</b>

As at 31 October 2015

£'000

Final exposure amounts for credit risk in the banking book	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
<u>On balance sheet exposures</u>								
Central governments or central banks	-	-	1,975,267	-	-	-	-	1,975,267
Institutions	1,190	-	64,181	681	2	9,275	1,959	77,288
Corporates	27,226	-	457,146	42,936	7,381	55,143	1,326	591,159
Secured by mortgages on immovable property	14,555	9,281	734,067	56,850	56,871	28,528	4,369	904,521
Equity	-	-	21,880	-	-	-	-	21,880
Other items	-	-	75	-	-	-	-	75
	42,971	9,281	3,252,616	100,467	64,254	92,947	7,654	3,570,189
<u>Off balance sheet exposures</u>								
Central governments or central banks	-	-	29,451	-	-	-	-	29,451
Institutions	-	-	23,444	-	-	-	-	23,444
Corporates	21,035	63,291	531,488	48,625	60,935	6,531	8,089	739,995
Secured by mortgages on immovable property	-	-	13,135	-	4,497	-	-	17,632
Equity	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-
	21,035	63,291	597,518	48,625	65,432	6,531	8,089	810,522
<b>Total</b>	<b>64,007</b>	<b>72,571</b>	<b>3,850,135</b>	<b>149,092</b>	<b>129,685</b>	<b>99,478</b>	<b>15,743</b>	<b>4,380,712</b>



Further details on geographic distribution in relation to the EEA member states are shown below.

**Table 17: Gross credit exposure by geographic distribution within the EEA**

As at 31 October 2016  
£'000

Gross exposure in relation to the EEA member states	United Kingdom	France	Spain	Germany	Luxembourg	Ireland	Netherlands	Others	Total
<u>On balance sheet exposures</u>									
Central governments or central banks	535,498	2,383,555	-	-	-	-	-	-	2,919,053
Institutions	14,647	-	119	1	-	-	-	36	14,802
Corporates	731,229	42,851	103,071	218,735	435,213	255,358	89,639	242,281	2,118,377
Secured by mortgages on immovable property	636,004	9,837	-	1,557	-	-	-	1,502	648,900
Equity	25,316	-	-	-	-	-	-	-	25,316
Other items	5,751	-	-	-	-	-	-	-	5,751
	1,948,445	2,436,243	103,190	220,293	435,213	255,358	89,639	243,818	5,732,199
<u>Off balance sheet exposures</u>									
Central governments or central banks	-	74,037	-	-	-	-	-	-	74,037
Institutions	43,637	-	-	-	-	-	15,428	-	59,065
Corporates	405,076	3,076,296	326,293	110,987	107,948	-	103,394	123,318	4,253,314
Secured by mortgages on immovable property	25,201	-	-	-	-	-	-	-	25,201
Equity	-	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-	-
	473,915	3,150,334	326,293	110,987	107,948	-	118,822	123,318	4,411,617
<b>Total</b>	<b>2,422,360</b>	<b>5,586,577</b>	<b>429,483</b>	<b>331,280</b>	<b>543,161</b>	<b>255,358</b>	<b>208,461</b>	<b>367,137</b>	<b>10,143,816</b>

As at 31 October 2015  
£'000

Gross exposure in relation to the EEA member states	United Kingdom	France	Spain	Germany	Luxembourg	Ireland	Netherlands	Others	Total
<u>On balance sheet exposures</u>									
Central governments or central banks	1,681,518	293,749	-	-	-	-	-	-	1,975,267
Institutions	63,538	622	-	14	-	-	2	4	64,181
Corporates	513,302	15,890	38,665	213,839	180,613	228,153	23,515	18,050	1,232,027
Secured by mortgages on immovable property	736,945	5,689	-	5,758	-	-	-	9,546	757,938
Equity	21,880	-	-	-	-	-	-	-	21,880
Other items	75	-	-	-	-	-	-	-	75
	3,017,258	315,951	38,665	219,611	180,613	228,153	23,517	27,600	4,051,368
<u>Off balance sheet exposures</u>									
Central governments or central banks	-	58,903	-	-	-	-	-	-	58,903
Institutions	46,888	-	-	-	-	-	-	-	46,888
Corporates	208,529	1,746,840	255,115	64,422	19,082	-	47,486	59,652	2,401,127
Secured by mortgages on immovable property	27,258	-	-	-	-	-	-	-	27,258
Equity	-	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-	-
	282,675	1,805,742	255,115	64,422	19,082	-	47,486	59,652	2,534,175
<b>Total</b>	<b>3,299,933</b>	<b>2,121,693</b>	<b>293,780</b>	<b>284,034</b>	<b>199,695</b>	<b>228,153</b>	<b>71,003</b>	<b>87,253</b>	<b>6,585,544</b>

**Table 18: Final credit exposure by geographic distribution within the EEA**

As at 31 October 2016									
£'000									
Final exposure in relation to the EEA member states	United Kingdom	France	Spain	Germany	Luxembourg	Ireland	Netherlands	Others	Total
<u>On balance sheet exposures</u>									
Central governments or central banks	535,498	2,383,555	-	-	-	-	-	-	2,919,053
Institutions	14,647	-	119	1	-	-	-	36	14,802
Corporates	471,022	19,125	27,935	88,135	98,392	101,131	32,693	85,508	923,941
Secured by mortgages on immovable property	625,679	9,739	-	1,557	-	-	-	1,502	638,477
Equity	25,316	-	-	-	-	-	-	-	25,316
Other items	5,751	-	-	-	-	-	-	-	5,751
	1,677,913	2,412,419	28,054	89,693	98,392	101,131	32,693	87,045	4,527,341
<u>Off balance sheet exposures</u>									
Central governments or central banks	-	37,019	-	-	-	-	-	-	37,019
Institutions	21,819	-	-	-	-	-	15,428	-	37,246
Corporates	155,997	438,658	79,919	45,467	29,660	-	34,322	48,552	832,576
Secured by mortgages on immovable property	11,483	-	-	-	-	-	-	-	11,483
Equity	-	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-	-
	189,299	475,677	79,919	45,467	29,660	-	49,750	48,552	918,324
<b>Total</b>	<b>1,867,213</b>	<b>2,888,095</b>	<b>107,973</b>	<b>135,160</b>	<b>128,052</b>	<b>101,131</b>	<b>82,443</b>	<b>135,598</b>	<b>5,445,665</b>

As at 31 October 2015									
£'000									
Final exposure in relation to the EEA member states	United Kingdom	France	Spain	Germany	Luxembourg	Ireland	Netherlands	Others	Total
<u>On balance sheet exposures</u>									
Central governments or central banks	1,681,518	293,749	-	-	-	-	-	-	1,975,267
Institutions	63,538	622	-	14	-	-	2	4	64,181
Corporates	279,764	15,890	20,158	39,702	42,506	27,450	23,515	8,162	457,146
Secured by mortgages on immovable property	713,369	5,689	-	5,758	-	-	-	9,251	734,067
Equity	21,880	-	-	-	-	-	-	-	21,880
Other items	75	-	-	-	-	-	-	-	75
	2,760,144	315,951	20,158	45,474	42,506	27,450	23,517	17,417	3,252,616
<u>Off balance sheet exposures</u>									
Central governments or central banks	-	29,451	-	-	-	-	-	-	29,451
Institutions	23,444	-	-	-	-	-	-	-	23,444
Corporates	74,382	310,419	90,490	16,420	2,461	-	8,571	28,746	531,488
Secured by mortgages on immovable property	13,135	-	-	-	-	-	-	-	13,135
Equity	-	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-	-
	110,960	339,871	90,490	16,420	2,461	-	8,571	28,746	597,518
<b>Total</b>	<b>2,871,105</b>	<b>655,822</b>	<b>110,648</b>	<b>61,894</b>	<b>44,967</b>	<b>27,450</b>	<b>32,088</b>	<b>46,162</b>	<b>3,850,135</b>

### 5.3.2 Credit Risk Adjustments

The Company defines a credit risk adjustment as the amount of specific loan provision for credit losses that has been recognised in its financial statements in accordance with the International Financial Reporting Standards (IFRS).

Under IFRS a provision for credit losses is established if there is objective evidence that the Company will not be able to collect all amounts due on its loans portfolio according to the original contractual terms or the equivalent value. This portfolio includes on-balance sheet exposures, such as loans and acceptances, and off-balance sheet items such as letters of credit, guarantees and unfunded commitments.

The provision is increased by the impairment losses recognised and decreased by the amount of write-offs, net of recoveries. The provision for credit losses for on-balance sheet items is included as a reduction to assets, and the provision relating to off-balance sheet items is included in Other liabilities, disclosed in the Company's financial statements.

The Company assesses whether objective evidence of impairment exists individually for loans that are individually significant and collectively for loans that are not individually significant. If it is determined that no objective evidence of impairment exists for an individually assessed loan, whether significant or not, the loan is included in a group of loans with similar credit risk characteristics and collectively assessed for impairment. Loans that are individually assessed for impairment and for which an impairment loss is recognised are not included in a collective assessment of impairment.

Provision for credit losses represent management's best estimates of losses incurred in the Company's loan portfolio at the balance sheet date. Management's judgement is required in making assumptions and estimations when calculating loan impairment provisions on both individually and collectively assessed loans. Any changes in the underlying assumptions and estimates used for both individually

and collectively assessed loans can change from period to period and can significantly affect the results of operations.

#### *Individually assessed loans*

Loans which are individually significant are assessed individually for objective indicators of impairment. A loan is considered impaired when management determines that it will not be able to collect all amounts due according to the original contractual terms or the equivalent value.

Credit exposures of individually significant loans are evaluated based on factors including the borrower's overall financial condition, resources and payment record, and where applicable, the realisable value of any collateral. If there is evidence of impairment leading to an impairment loss, then the amount of the loss is recognised in income and is determined as the difference between the carrying amount of the loan, including accrued interest, and the estimated recoverable amount. The estimated recoverable amount is measured as the present value of expected future cash flows discounted at the loan's original effective interest rate, including cash flows that may result from the realisation of collateral less costs to sell. Individually-assessed impairment losses reduce the carrying amount of the loan through the use of a provision account and the amount of the loss is recognised in Provision for credit losses in the Statement of Income. Following impairment, interest income is recognised on the unwinding of the discount from the initial recognition of impairment.

Significant judgement is required in assessing evidence of impairment and estimation of the amount and timing of future cash flows when determining the impairment loss. When assessing objective evidence of impairment, the Company primarily considers specific factors such as the financial condition of the borrower, borrower's default or delinquency in interest or principal payments, local economic conditions and other observable data. In determining the estimated recoverable amount the Company considers discounted expected future cash flows at the effective interest rate inherent in the loan using a number of assumptions and inputs. Management judgement is involved when choosing these inputs and assumptions used such as the expected amount of the loan that will not be recovered and the cost of time delays in collecting principal and/or interest, and when estimating the value of any collateral held for which there may not be a readily accessible market. Changes in the amount expected to be recovered would have a direct impact on the Provision for credit losses.

#### *Collectively assessed loans*

Loans which are not individually significant, or which are individually assessed and not determined to be impaired, are collectively assessed for impairment. For the purposes of a collective evaluation of impairment, loans are grouped on the basis of similar risk characteristics, taking into account loan type, industry, geographic location, collateral type, past due status and other relevant factors.

The collective impairment allowance is determined by reviewing factors including: (i) historical loss experience, which takes into consideration historical probabilities of default, loss given default and exposure at default, in portfolios of similar credit risk characteristics, and (ii) management's judgment on the level of impairment losses based on historical experience relative to the actual level as reported at the balance sheet date, taking into consideration the current portfolio credit quality trends, business and economic and credit conditions, the impact of policy and process changes, and other supporting factors. Future cash flows for a group of loans are collectively evaluated for impairment on the basis of the contractual cash flows of the loans in the group and historical loss experience for loans with credit risk characteristics similar to those in the group. Historical loss experience is adjusted based on current observable data to reflect the effects of current conditions that did not affect the period on which the historical loss experience is based and to remove the effects of conditions in the historical period that do not currently exist. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

Collectively-assessed impairment losses reduce the carrying amount of the aggregated loan position through an allowance account and the amount of the loss is recognized in Provision for credit losses. The methodology and assumptions used to calculate collective impairment allowances are subject to uncertainty, in part because it is not practicable to identify losses on an individual loan basis due to the large number of individually insignificant loans in the portfolio. Significant judgment is required in assessing historical loss experience, the loss identification period and its relationship to current portfolios including delinquency, and loan balances; and current business, economic and credit conditions including industry specific performance, unemployment and country risks. Changes in these assumptions would have a direct impact on the Provision for credit losses and may result in changes in the related Allowance for credit losses.

*Past due*

The Company consider a loan being past due when the contractual payment of either principal of interest is not received by the Company in according with the payment schedule agreed. The past due loan is assessed for impairment purposes.

As at 31 October 2016, the Company does not have any specific credit risk adjustments (2015: nil). Detailed analysis on general provisions is included in the relevant disclosure below.

**Table 19: Reconciliation of provision for credit losses**

<u>Collectively assessed</u>	<b>2016</b>	2015
	<b>£'000</b>	£'000
Provisions brought forward	-	-
Provisions raised during the year	3,814	-
Provisions as at year end	<b>3,814</b>	-

No specific adjustments were proposed as at 31 October 2016 (2015: nil).

### 5.3.3 Counterparty Credit Risk

Trading book counterparty risk arises from exposure to the following:

- Securities finance transactions (SFT), as part of Capital Market's Fixed Income, Central Funding Group and Equity Finance businesses.
- Derivatives, primarily through Capital Market's Exchange traded derivatives (ETD) and over-the-counter (OTC) derivatives.

**Table 20: Trading credit risk**

As at 31 October 2016

£'000

Counterparty credit risk exposure by products	Original Exposure	Final Exposure	Risk-weighted Exposure
<i>Calculated under the Standardised Approach</i>			
Exchange traded derivatives	1,316,325	1,101,208	157,293
OTC derivatives	250,268	46,572	16,576
SFTs	2,162,397	2,162,397	942,659
<b>Total</b>	<b>3,728,990</b>	<b>3,310,176</b>	<b>1,116,527</b>

As at 31 October 2015

£'000

Counterparty credit risk exposure by products	Gross Exposure	Final Exposure	Risk-weighted Exposure
<i>Calculated under the Standardised Approach</i>			
Exchange traded derivatives	1,073,612	950,051	121,617
OTC derivatives	465,632	177,410	40,601
SFTs	2,586,808	2,586,808	952,423
<b>Total</b>	<b>4,126,052</b>	<b>3,714,269</b>	<b>1,114,641</b>

Each trading credit risk type is managed both separately as part of the RBC Group framework, and as part of a combined exposure metric specific to the Company, with exposure and limit usage reported daily to senior management by GRM Trading Credit Risk.

The Company's Single Name Limit Framework is the primary constraint of the Company's trading credit exposure. The limits defined as part of this framework are directly related to the Company's risk appetite.

The Company's counterparty credit risk profile is largely made up of equity securities finance / stock lending and fixed income repurchase transactions (repo). Counterparty credit risk is managed through increasing over-collateralisation margins on riskier counterparties with margins being actively managed and exchanged daily. Cash margins are introduced once the market value of collateral is insufficient to cover the underlying amount of the repurchase agreement or securities borrowed or loaned. Collateral is an important mitigation of credit risk. The Company holds collateral mainly in the form of debt securities and equities and has the ability to use CDSs in order to enhance credit protection.

Credit counterparty risk from derivatives is mitigated where possible through netting agreements whereby derivative assets and liabilities with the same counterparty can be offset. The Company requires all netting arrangement to be legally enforceable. Collateral and cash margins are also obtained as an important mitigation of credit risk.

The Company ensures that any collateral held is sufficiently liquid, legally effective, enforceable and regularly reassessed. Any collateral taken is generally subject to a valuation adjustment with a

percentage applicable to each type of collateral, which will be largely based on liquidity and price volatility of the underlying security.

As at 31 October 2016, the Company had total gross credit exposures of £3.7 billion (2015: £4.1 billion), and the average gross credit exposure is £3.7 billion over the year (2015: £4.5 billion). Detailed exposures by products, exposure class, residual maturity and geographic distribution are shown in the tables below.

**Table 21: Counterparty credit risk by exposure class**

**As at 31 October 2016**

£'000

<b>Exposure amounts for counterparty credit risk in trading book</b>	<b>Gross Exposure</b>	<b>Final Exposure</b>	<b>Risk-weighted Exposure</b>
<i>Calculated under the Standardised Approach</i>			
Central governments or central banks	350,219	350,219	23,620
Public sector entities	1,225	1,225	245
Institutions	2,491,354	2,131,942	376,295
Corporates	886,193	826,791	716,367
<b>Total</b>	<b>3,728,990</b>	<b>3,310,176</b>	<b>1,116,527</b>
Small and medium enterprises, included in Corporates	-	-	-

**As at 31 October 2015**

£'000

<b>Exposure amounts for counterparty credit risk in trading book</b>	<b>Gross Exposure</b>	<b>Final Exposure</b>	<b>Risk-weighted Exposure</b>
<i>Calculated under the Standardised Approach</i>			
Central governments or central banks	265,013	265,013	8,601
Public sector entities	92	92	18
Institutions	2,946,594	2,553,813	469,809
Corporates	914,353	895,351	636,213
<b>Total</b>	<b>4,126,052</b>	<b>3,714,269</b>	<b>1,114,641</b>
Small and medium enterprises, included in Corporates	-	-	-

**Table 22: Average counterparty credit risk exposure****For the year ended 31 October 2016**

£'000

<b>Exposure amounts for counterparty credit risk in trading book</b>	Gross Exposure	Final Exposure	Risk-weighted Exposure
<i>Calculated under the Standardised Approach</i>			
Central governments or central banks	277,322	277,322	7,106
Public sector entities	927	927	185
Institutions	2,601,033	2,047,803	321,507
Corporates	808,540	775,390	645,118
<b>Total</b>	<b>3,687,823</b>	<b>3,101,443</b>	<b>973,916</b>
Small and medium enterprises, included in Corporates	-	-	-

**For the year ended 31 October 2015**

£'000

<b>Exposure amounts for counterparty credit risk in trading book</b>	Gross Exposure	Final Exposure	Risk-weighted Exposure
<i>Calculated under the Standardised Approach</i>			
Central governments or central banks	313,155	313,155	6,942
Public sector entities	4,023	4,023	2,257
Institutions	2,950,560	2,555,782	525,728
Corporates	1,261,803	1,244,739	618,262
<b>Total</b>	<b>4,529,541</b>	<b>4,117,699</b>	<b>1,153,189</b>
Small and medium enterprises, included in Corporates	-	-	-

**Table 23: Gross counterparty credit exposure by residual maturity****As at 31 October 2016**

£'000

<b>Gross exposure amounts for counterparty credit risk</b>	<b>Less than 1 month</b>	<b>1 to 3 months</b>	<b>3 to 12 months</b>	<b>1 to 5 years</b>	<b>Greater than 5 years</b>	<b>Total</b>
Central governments or central banks	90,472	255,533	4,214	-	-	350,219
Public sector entities	-	1,225	-	-	-	1,225
Institutions	1,198,865	385,122	555,413	330,719	21,235	2,491,354
Corporates	514,594	208,350	135,083	19,637	8,529	886,193
<b>Total</b>	<b>1,803,931</b>	<b>850,230</b>	<b>694,709</b>	<b>350,356</b>	<b>29,764</b>	<b>3,728,990</b>

**As at 31 October 2015**

£'000

<b>Gross exposure amounts for counterparty credit risk</b>	<b>Less than 1 month</b>	<b>1 to 3 months</b>	<b>3 to 12 months</b>	<b>1 to 5 years</b>	<b>Greater than 5 years</b>	<b>Total</b>
Central governments or central banks	242,668	436	21,909	-	-	265,013
Public sector entities	8	84	-	-	-	92
Institutions	1,442,402	504,276	432,543	535,964	31,409	2,946,594
Corporates	700,852	113,330	90,403	9,768	-	914,353
<b>Total</b>	<b>2,385,930</b>	<b>618,126</b>	<b>544,855</b>	<b>545,732</b>	<b>31,409</b>	<b>4,126,052</b>

**Table 24: Final counterparty credit exposure by residual maturity**

As at 31 October 2016  
£'000

Final exposure amounts for counterparty credit risk	Less than 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Greater than 5 years	Total
Central governments or central banks	90,472	255,533	4,214	-	-	350,219
Public sector entities	-	1,225	-	-	-	1,225
Institutions	1,155,905	293,964	525,743	156,330	-	2,131,942
Corporates	513,138	157,003	129,061	19,061	8,529	826,791
<b>Total</b>	<b>1,759,514</b>	<b>707,725</b>	<b>659,017</b>	<b>175,391</b>	<b>8,529</b>	<b>3,310,176</b>

As at 31 October 2015  
£'000

Final exposure amounts for counterparty credit risk	Less than 1 month	1 to 3 months	3 to 12 months	1 to 5 years	Greater than 5 years	Total
Central governments or central banks	242,668	436	21,909	-	-	265,013
Public sector entities	8	84	-	-	-	92
Institutions	1,355,871	411,944	415,806	370,192	-	2,553,813
Corporates	699,687	101,627	85,405	8,632	-	895,351
<b>Total</b>	<b>2,298,234</b>	<b>514,091</b>	<b>523,120</b>	<b>378,824</b>	<b>-</b>	<b>3,714,269</b>

**Table 25: Gross counterparty credit exposure by geographic distribution**

As at 31 October 2016  
£'000

Gross exposure amounts for counterparty credit risk	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
Central governments or central banks	13,755	-	271,219	-	11,517	53,728	-	350,219
Public sector entities	-	-	-	-	-	1,225	-	1,225
Institutions	192,245	-	1,594,461	119,430	33	585,013	173	2,491,354
Corporates	457	71,630	602,951	85,670	-	125,485	-	886,193
<b>Total</b>	<b>206,456</b>	<b>71,630</b>	<b>2,468,631</b>	<b>205,100</b>	<b>11,550</b>	<b>765,451</b>	<b>173</b>	<b>3,728,990</b>

As at 31 October 2015  
£'000

Gross exposure amounts for counterparty credit risk	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
Central governments or central banks	34,789	-	131,792	-	37,154	61,278	-	265,013
Public sector entities	-	-	-	-	-	92	-	92
Institutions	78,025	-	1,717,569	144,499	7,021	999,480	-	2,946,594
Corporates	40,584	31,193	502,542	21,926	-	318,103	5	914,353
<b>Total</b>	<b>153,398</b>	<b>31,193</b>	<b>2,351,903</b>	<b>166,425</b>	<b>44,175</b>	<b>1,378,953</b>	<b>5</b>	<b>4,126,052</b>

**Table 26: Final counterparty credit exposure by geographic distribution**

As at 31 October 2016  
£'000

Final exposure amounts for counterparty credit risk	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
Central governments or central banks	13,755	-	271,219	-	11,517	53,728	-	350,219
Public sector entities	-	-	-	-	-	1,225	-	1,225
Institutions	191,603	-	1,593,724	119,430	33	226,980	173	2,131,942
Corporates	457	71,630	558,782	84,708	-	111,214	-	826,791
<b>Total</b>	<b>205,815</b>	<b>71,630</b>	<b>2,423,724</b>	<b>204,138</b>	<b>11,550</b>	<b>393,147</b>	<b>173</b>	<b>3,310,176</b>

As at 31 October 2015  
£'000

Final exposure amounts for counterparty credit risk	Asia-Pacific	Caribbean	EEA	Europe Other	Middle East	North America	Others	Total
Central governments or central banks	34,789	-	131,792	-	37,154	61,278	-	265,013
Public sector entities	-	-	-	-	-	92	-	92
Institutions	65,951	-	1,708,626	144,499	7,021	627,716	-	2,553,813
Corporates	40,584	31,193	499,925	21,926	-	301,718	5	895,351
<b>Total</b>	<b>141,324</b>	<b>31,193</b>	<b>2,340,343</b>	<b>166,425</b>	<b>44,175</b>	<b>990,804</b>	<b>5</b>	<b>3,714,269</b>



Further details on geographic distribution in relation to the EEA member states and North America are shown below.

**Table 27: Gross credit exposure by geographic distribution within the EEA and North America**

As at 31 October 2016										
£'000										
Gross exposure in relation to the EEA member states	United Kingdom	France	Netherlands	Germany	Belgium	Sweden	Finland	Ireland	Others	Total
Central governments or central banks	268,977	-	-	-	-	2,241	-	-	-	271,219
Institutions	1,500,247	9,040	13,822	6,862	40,647	-	-	9,507	14,335	1,594,461
Corporates	306,961	2,783	14,429	29	1	248	594	257,714	20,191	602,951
<b>Total</b>	<b>2,076,185</b>	<b>11,823</b>	<b>28,251</b>	<b>6,891</b>	<b>40,648</b>	<b>2,490</b>	<b>594</b>	<b>267,221</b>	<b>34,527</b>	<b>2,468,631</b>

As at 31 October 2016				
£'000				
Gross exposure in relation to North America	Canada	United States	Bermuda	Total
Central governments or central banks	-	53,728	-	53,728
Public sector entities	-	1,225	-	1,225
Institutions	356,964	228,050	-	585,013
Corporates	6,679	116,058	2,748	125,485
<b>Total</b>	<b>363,642</b>	<b>399,061</b>	<b>2,748</b>	<b>765,451</b>

As at 31 October 2015										
£'000										
Gross exposure in relation to the EEA member states	United Kingdom	France	Netherlands	Germany	Belgium	Sweden	Finland	Ireland	Others	Total
Central governments or central banks	128,848	1,426	-	-	-	1,518	-	-	-	131,792
Institutions	1,327,916	182,097	94,469	56,940	44,600	-	-	7,932	3,615	1,717,570
Corporates	361,014	1,127	13,719	-	-	123	21,554	89,439	15,565	502,541
<b>Total</b>	<b>1,817,778</b>	<b>184,650</b>	<b>108,189</b>	<b>56,940</b>	<b>44,600</b>	<b>1,641</b>	<b>21,554</b>	<b>97,371</b>	<b>19,180</b>	<b>2,351,904</b>

As at 31 October 2015				
£'000				
Gross exposure in relation to North America	Canada	United States	Bermuda	Total
Central governments or central banks	-	61,278	-	61,278
Public sector entities	-	92	-	92
Institutions	822,228	177,252	-	999,480
Corporates	261,159	27,375	29,569	318,103
<b>Total</b>	<b>1,083,386</b>	<b>265,998</b>	<b>29,569</b>	<b>1,378,953</b>

**Table 28: Final credit exposure by geographic distribution within the EEA and North America**

As at 31 October 2016										
£'000										
Final exposure in relation to the EEA member states	United Kingdom	France	Netherlands	Germany	Belgium	Sweden	Finland	Ireland	Others	Total
Central governments or central banks	268,977	-	-	-	-	2,241	-	-	-	271,219
Institutions	1,499,510	9,040	13,822	6,862	40,647	-	-	9,507	14,335	1,593,724
Corporates	306,961	2,481	14,429	29	1	248	594	213,847	20,191	558,782
<b>Total</b>	<b>2,075,448</b>	<b>11,521</b>	<b>28,251</b>	<b>6,891</b>	<b>40,648</b>	<b>2,490</b>	<b>594</b>	<b>223,354</b>	<b>34,527</b>	<b>2,423,724</b>

As at 31 October 2016				
£'000				
Final exposure in relation to North America	Canada	United States	Bermuda	Total
Central governments or central banks	-	53,728	-	53,728
Public sector entities	-	1,225	-	1,225
Institutions	50,216	176,764	-	226,980
Corporates	6,679	101,787	2,748	111,214
<b>Total</b>	<b>56,894</b>	<b>333,504</b>	<b>2,748</b>	<b>393,147</b>

As at 31 October 2015										
£'000										
Final exposure in relation to the EEA member states	United Kingdom	France	Netherlands	Germany	Belgium	Sweden	Finland	Ireland	Others	Total
Central governments or central banks	128,848	1,426	-	-	-	1,518	-	-	-	131,792
Institutions	1,318,973	182,097	94,469	56,940	44,600	-	-	7,932	3,615	1,708,627
Corporates	361,014	281	13,719	-	-	123	21,554	87,668	15,565	499,924
<b>Total</b>	<b>1,808,835</b>	<b>183,805</b>	<b>108,189</b>	<b>56,940</b>	<b>44,600</b>	<b>1,641</b>	<b>21,554</b>	<b>95,600</b>	<b>19,180</b>	<b>2,340,344</b>

As at 31 October 2015				
£'000				
Final exposure in relation to North America	Canada	United States	Bermuda	Total
Central governments or central banks	-	61,278	-	61,278
Public sector entities	-	92	-	92
Institutions	497,082	130,634	-	627,716
Corporates	249,121	23,028	29,569	301,718
<b>Total</b>	<b>746,203</b>	<b>215,032</b>	<b>29,569</b>	<b>990,804</b>

### 5.3.4 Wrong-Way Risk Exposures

The Company has detailed policies and procedures in place to ensure that the wrong-way risk is closely monitored. General wrong-way risk exists when there is a positive correlation between the probability of default of counterparties to general market risk factors. GRM-Enterprise Market Risk monitors general wrong-way risk using a variety of counterparty risk metrics including geographically centred hypothetical and historical stress events and single risk factor stresses and sensitivities.

For securities financing transactions, specific wrong-way risk counterparty exposure is incurred when the Company enters into a securities financing transaction with a counterparty where the underlying collateral held by the Company includes securities issued by the counterparty or any affiliate of that counterparty. Collateral value will be deemed to be zero for any such security included in a counterparty collateral pool. Where the risk to the collateral and the risk of default by the counterparty are potentially correlated, GRM will evaluate and perform ad hoc wrong-way risk analyses against potential scenarios, as appropriate.

For derivative transactions, specific wrong-way risk exists when the exposure to a particular counterparty is positively and highly correlated with the probability of default of the counterparty due to the nature of the transactions with the counterparty. Specific guidelines have been established to calculate the exposure as well as the internal approval process to be used. GRM-Market Risk and GRM-Trading Credit Risk are responsible for the monitoring of the wrong-way risk in derivative transactions.

### 5.3.5 Counterparty Credit Risk Arising from Derivative Transactions

As at 31 October 2015, the final exposure arising from derivative transactions amounted to £818.5 million (2014: £861.4 million), excluding £329.3 million relating to the margin receivables (2015: £266.1 million). Refer to the previous section for detailed disclosure on exposures by product type.

**Table 29: Counterparty credit risk for derivative transactions**

As at 31 October 2016	Gross Positive Fair Value	Gross PFCE*	Netting Benefits	Initial Exposure	Collateral Allocated**	Final Exposure**	Gross Notional
<i>£'000</i>							
<i>Calculated under the Mark to Market Method</i>							
<i>Exchanged Traded Derivatives</i>							
Commodities	349,297	637,997	(396,875)	590,419	(33,763)	556,656	6,286,233
Equities	42,069	294,554	(94,483)	242,140	(111,479)	130,661	4,486,928
Interest Rate	61,516	137,513	(55,691)	143,338	(58,730)	84,608	152,651,897
	<u>452,883</u>	<u>1,070,064</u>	<u>(547,049)</u>	<u>975,897</u>	<u>(203,972)</u>	<u>771,925</u>	<u>163,425,058</u>
<i>Over-The-Counter Derivatives</i>							
Commodities	35,620	2,859	-	38,479	(19,561)	18,918	28,592
Credit Default Swaps	2,309	12,762	(9,960)	5,111	(5,111)	-	205,884
Equities	8,832	38,015	(31,641)	15,206	-	15,206	827,939
Foreign Exchange and Gold	70,098	384,917	(300,547)	154,468	(154,468)	-	14,540,006
Interest Rate	533,128	52,939	(552,548)	33,519	(21,072)	12,447	17,351,842
	<u>649,987</u>	<u>491,492</u>	<u>(894,696)</u>	<u>246,784</u>	<u>(200,212)</u>	<u>46,572</u>	<u>32,954,262</u>
<b>Total</b>	<b><u>1,102,870</u></b>	<b><u>1,561,556</u></b>	<b><u>(1,441,745)</u></b>	<b><u>1,222,681</u></b>	<b><u>(404,184)</u></b>	<b><u>818,497</u></b>	<b><u>196,379,320</u></b>

\*PFCE stands for potential future credit exposure.

\*\*Collateral allocated amount is the collateral mark to market value after appropriate volatility adjustments.

\*\*\*The final exposure does not include margin receivable of £329.3million (2015: £266.1 million).

As at 31 October 2015	Gross Positive Fair Value	Gross PFCE*	Netting Benefits	Initial Exposure	Collateral Allocated**	Final Exposure** *	Gross Notional
<i>£'000</i>							
<i>Calculated under the Mark to Market Method</i>							
<i>Exchanged Traded Derivatives</i>							
Commodities	194,982	267,535	(163,480)	299,037	(22,678)	276,359	2,654,413
Equities	38,699	391,391	(141,656)	288,434	(52,966)	235,468	6,091,394
Interest Rate	26,516	385,658	(197,293)	214,881	(39,460)	175,421	179,753,195
	<u>260,197</u>	<u>1,044,584</u>	<u>(502,429)</u>	<u>802,352</u>	<u>(115,104)</u>	<u>687,248</u>	<u>188,499,002</u>
<i>Over-The-Counter Derivatives</i>							
Commodities	200,621	1,543.0	(181,102)	21,062.0	(15,510)	5,552	15,428
Credit Default Swaps	2,438	39,103	(25,248)	16,293	(16,293)	-	457,208
Equities	152,706	438,823	(416,000)	175,529	(8,748)	166,781	8,276,245
Foreign Exchange and Gold	28,602	298,611	(192,321)	134,892	(134,892)	-	13,284,787
Interest Rate	629,570	77,652	(653,670)	53,552	(51,767)	1,785	18,719,381
	<u>1,013,937</u>	<u>855,732</u>	<u>(1,468,341)</u>	<u>401,328</u>	<u>(227,210)</u>	<u>174,118</u>	<u>40,753,049</u>
<b>Total</b>	<b><u>1,274,134</u></b>	<b><u>1,900,316</u></b>	<b><u>(1,970,770)</u></b>	<b><u>1,203,680</u></b>	<b><u>(342,314)</u></b>	<b><u>861,366</u></b>	<b><u>229,252,051</u></b>

\*PFCE stands for potential future credit exposure.

\*\*Collateral allocated amount is the collateral mark to market value after appropriate volatility adjustments.

\*\*\*The final exposure does not include margin receivable of £329.3million (2015: £266.1 million).

The Company uses (CDS) to manage the traded credit risk arising from its trading activities. The table below indicates the notional amounts of CDS sold and purchased at year end.

**Table 30: Notional of CDS**

Notional £'000	2016	2015
<i>Own credit portfolio</i>		
Buy	146,655	315,605
Sell	<u>59,229</u>	<u>141,603</u>
<b>Total</b>	<b><u>205,884</u></b>	<b><u>457,208</u></b>

As at 31 October 2016, the Company received total collateral of £368.8 million for derivative transactions (2015: £537.0 million). The Company also pledges collateral for its OTC derivative transactions. As at the year end, if RBC's credit rating had been downgraded by three notches, it would be required to pledge additional collateral of £53.0 million to its OTC derivative counterparties (2015: £35.9 million). The Company maintains a sufficient level of high quality liquid assets to satisfy any additional collateral requirements triggered by the downgrade of its credit rating.

### 5.3.6 Use of Credit Risk Mitigation Techniques

The Company uses the following credit risk mitigation techniques to actively manage its credit risks within its banking and trading portfolios:

- Netting and set-off,
- Collateral, and
- Risk transfers.

The Company has detailed policies in place to ensure that credit mitigation is appropriately recognised and captured for regulatory capital purposes. In order to recognise the credit risk mitigation, the Company takes into account the following factors:

- Effectiveness and enforceability of the legal arrangements in place;
- Correlation between the value of collateral and the credit quality of the obligor;
- Eligibility and quality of the collateral received.

The Company will often seek to enter into standard master netting agreements with counterparties for derivative and SFT transactions. These master netting agreements enable the Company to apply on/off balance sheet netting to reduce net credit exposure.

Collateral received from derivative and SFT transactions are mainly government and other high quality securities. All financial collateral is subject to daily revaluation and the Company also performs a revaluation on all properties held as collateral every three years. The valuation is then reviewed by a Credit Specialist and GRM. Credit Management is responsible for ensuring that the revaluation is executed in a timely manner.

The Company has established the following principles for collateral management:

- Collateral must be liquid i.e. actively traded in secondary markets.
- Collateral must be of high credit quality.
- Collateral must be readily settled at an authorized clearing agency.
- Collateral should be exchanged on a regular basis.
- GRM risk capture and reporting must be in place.
- Collateral must be able to be independently valued.
- Collateral should be held so that it is available and protected in the event of a counterparty's default.
- Securities issued by a counterparty or its related entities are not eligible as collateral, (excludes specified equity derivative transactions).
- Collateral should be diversified and not concentrated by issuer type or issue.

Guarantees and funded/unfunded risk participation arrangements have been sought mainly from other financial institutions by the Company to transfer its credit exposure to a counterparty which is more credit worthy than the original counterparty to reduce the overall credit risk.

The market risk and credit concentrations within the credit mitigation taken are monitored by the Regulatory Reporting team through its daily capital requirements and large exposure reporting process.

### **5.3.7 Use of External Credit Assessment Institutions**

The Company uses the following external credit assessment institutions (ECAIs) for banking book credit risk and counterparty credit risk calculations purposes throughout the reporting period:

- Standard & Poor's, and
- Moody's.

As at 31 October 2016, the gross exposure amount subject to the use of the ECAIs was about £5.8 billion (2015: £4.3 billion), which accounts for 37.4% of the total gross exposure<sup>4</sup> at year end (2014: 35.8%).

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<sup>4</sup> Total gross exposure amounts exclude the exposure amount for contributions to the default fund of a CCP.

**Table 31: Exposures amounts subjected to the use of the ECAIs**

As at 31 October 2016

<i>£'000</i>	Gross Exposure	Final Exposure	Risk- weighted Exposures
<b>Exposure amounts subject to the use of the ECAIs</b>			
Central governments or central banks	402,853	365,835	2,218
Public sector entities	-	-	-
Institutions	1,026,143	718,426	200,866
Corporates	<u>4,353,539</u>	<u>913,708</u>	<u>639,472</u>
<b>Total</b>	<b><u>5,782,535</u></b>	<b><u>1,997,969</u></b>	<b><u>842,555</u></b>

As at 31 October 2015

<i>£'000</i>	Gross Exposure	Final Exposure	Risk- weighted Exposures
<b>Exposure amounts subject to the use of the ECAIs</b>			
Central governments or central banks	322,001	292,550	7,018
Public sector entities	92	92	18
Institutions	1,888,974	1,543,006	354,006
Corporates	<u>2,055,592</u>	<u>474,000</u>	<u>320,369</u>
<b>Total</b>	<b><u>4,266,659</u></b>	<b><u>2,309,648</u></b>	<b><u>681,411</u></b>

As at 31 October 2016, majority of the Company's credit exposures subject to the use of ECAIs are to those counterparties with Credit Quality Step (CQS) 1 and 2<sup>5</sup> (2016: 73.56%; 2015: 84.4%). Exposures amounts by CQS are shown below.

**Table 32: Exposures amounts by CQS**

<i>£'000</i>	2016			2015		
	Gross Exposure	Final Exposure	Risk- weighted Exposures	Gross Exposure	Final Exposure	Risk- weighted Exposures
<b>CQS</b>						
1	1,787,948	896,399	65,514	2,000,402	1,533,222	183,266
2	2,465,787	651,213	322,245	1,599,639	555,100	274,275
3	1,190,226	333,734	333,735	565,960	178,078	178,078
4	269,877	107,744	107,744	76,319	38,159	38,159
5	68,696	8,879	13,318	24,338	5,089	7,633
6	-	-	-	-	-	-
<b>Total</b>	<b><u>5,782,535</u></b>	<b><u>1,997,969</u></b>	<b><u>842,555</u></b>	<b><u>4,266,659</u></b>	<b><u>2,309,648</u></b>	<b><u>681,411</u></b>

<sup>5</sup> CQS 1-3 represent investment grades (e.g. S&P: AAA+ to BBB-).

## 6.0 Market Risk

### 6.1 Definition of Market Risk

The Company defines the market risk as the risk of loss resulting from changes in market factors and the volatility of these factors. Market risk can be exacerbated by thinly-traded or illiquid markets.

The Company considered market risk to fall into the following categories:

- *Credit Spread Risk*<sup>6</sup>: The risk of loss due to the change in credit spreads on all financial instruments whose accounting fair value depends on credit spreads. This includes securities, credit derivatives and fair value liabilities.
- *Interest Rate Risk*: The risk of loss resulting from changes in interest rates and/or the volatility of interest rates.
- *Foreign Exchange Risk*: The risk of loss resulting from changes in exchange rates and/or the volatility of exchange rates.
- *Equity Risk*: The risk of loss resulting from changes in equity prices, indices and/or equity implied volatility.
- *Commodity Risk*: The risk of loss resulting from changes in commodity prices and/or the volatility of commodity prices.
- *Underwriting Risk*: The risk of loss resulting from (i) the failure to place or sell a particular security or bond concurrent with a negative market or credit risk event; and (ii) inadequate due diligence in connection with a securities offering.

### 6.2 Governance and Framework

Market Risk is managed through the Company's Market Risk Framework which is governed and overseen by the Head of Market Risk in London. The Company is also subject to the RBC Group policies laid out in the RBC Group Market Risk Framework and standing orders.

The market risk management function produces daily reports for the business and senior management detailing the Company's exposure against limits, as well as monthly summary reports for the UKMRMC and quarterly for the RC.

The Company's market risk appetite is set and reviewed by the Board. The Company has a range of limits in place covering the risk measurement metrics noted above. All limits set by the Company are consistent with the stated risk appetite. In addition to the Board approved limits, exposures are also limited by the RBC Group limit structure.

The Company uses a two tier market risk limit structure:

- *Tactical limits* are set and approved by the Board and are constrained by economic capital limits. Tactical limits are designed so risk taken cannot exceed available financial resources. All tactical limit excesses and limit changes are reported to the UKMRMC and the RC; and
- *Operational limits* are approved by the Managing Director of GRM-Market Risk and reviewed as required by the UKMRMC. Operational limits must always remain lower than tactical limits. All operational limit excesses and limit changes are reported to the UKMRMC.

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<sup>6</sup> CRR considers the credit spread risk in the trading book is part of specific interest rate risk.

The Regulatory Reporting team also reports the overall capital requirement, including capital requirement on market risk, to the Company's senior management on a daily basis.

Additional information is provided in the Company's Annual Accounts and Financial Statements.

## 6.3 Risk Profile

As at 31 October 2015, the Company's capital requirement in relation to the market risk is £91.7 million (2014: £183.1 million).

**Table 33: Market risk by risk type**

As at 31 October 2016	Risk-weighted Exposure	Capital Requirement
<i>£'000</i>		
Interest rate risk	1,336,751	106,940
<i>of which: Securitisation position risk</i>	27,360	2,189
Equity risk	1,387	111
Foreign-exchange risk	32,133	2,571
Settlement risk	-	-
Commodities risk	121,100	9,688
	<b>1,491,371</b>	<b>119,310</b>
As at 31 October 2015	Risk-weighted Exposure	Capital Requirement
<i>£'000</i>		
Interest rate risk	1,064,063	85,125
<i>of which: Securitisation position risk</i>	183,882	14,711
Equity risk	1,423	114
Foreign-exchange risk	24,850	1,988
Settlement risk	-	-
Commodities risk	55,395	4,432
	<b>1,145,731</b>	<b>91,658</b>

The Company had no Underwriting or CIU trading book risk as at the financial year-end.

## 6.4 Securitisations

### 6.4.1 Definitions

The Company defines securitisation as a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranching, having both of the following characteristics:

- payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures; and
- the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme.

Re-securitisation means securitisation where the risk associated with an underlying pool of exposures is tranching and at least one of the underlying exposures is a securitisation position.

A securitisation position can be either classified as:

- *Traditional securitisation:* a securitisation involving the economic transfer of the exposures being securitised.
- *Synthetic securitisation:* a securitisation where the transfer of risk is achieved by the use of credit derivatives or guarantees, and the exposures being securitised remain exposures of the originator institution.

## 6.4.2 Objectives of Securitisation Activities

The Company trades a range of European securitised products in the secondary market. These transactions are included in the Company's trading book. The Company is not engaged in any securitisation of its own originated assets or the securitisation of third party assets via special purpose vehicles.

The Company monitors the market and credit risks arising from its securitisation positions in the similar manner as those of non-securitisation trading positions. Refer to the Company's risk governance and control framework discussion in the previous sections.

In addition, the Company adopts RBC's Trading Book Securitisation Framework, which requires:

- a comprehensive understanding of the risk characteristics of its individual securitisation exposures as well as the risk characteristics of the pools underlying its securitisation exposures;
- access performance information on the underlying pools on an on-going basis in a timely manner, including exposure type, percentage of loans past due, default rate, prepayment rates, loans in foreclosure, property type, occupancy, average credit score or other measures of creditworthiness, average loan-to-value ratio and industry and geographic diversifications;
- a thorough understanding of all structural features of a securitisation transaction that would materially impact the performance of the Company's exposures to the transactions, such as the contractual waterfall and waterfall-related triggers, credit enhancement, liquidity enhancements, market value triggers, and deal-specific definitions of default.

## 6.4.3 Summary of Relevant Accounting Policies

### *Recognition and measurement of financial instruments*

Financial instruments, including securitisation positions, are classified at inception, based on management's intention, as at fair value through profit or loss (FVTPL) or available-for-sale (AFS). Certain debt securities with fixed or determinable payments and which are not quoted in an active market may be classified as loans and advances.

Trading securities include securities purchased for sale in the near term which are classified as FVTPL by nature and securities which are designated as FVTPL under the fair value option and are reported at fair value. Obligations to deliver trading securities sold short are recorded as liabilities and carried at fair value. Realised and unrealised gains and losses on these securities are recorded as Net trading income. Dividend and interest income accruing on trading securities are recorded in Interest income. Interest and dividends accrued on interest-bearing and equity securities sold short are recorded in Interest expense.

AFS securities include: (i) securities which may be sold to meet liquidity needs, in response to or in anticipation of changes in interest rates and resulting prepayment risk, changes in foreign currency risk, changes in funding sources or terms; and (ii) loan substitute securities which are client financings that have been structured as after-tax investments rather than conventional loans in order to provide the clients with a borrowing rate advantage. AFS securities are measured at fair value. Unrealised gains and losses arising from changes in fair value are included in Other components of equity. Changes in foreign exchange rates for AFS equity securities are recognised in Other components of equity, while changes in foreign exchange rates for AFS debt securities are recognised in Net trading income. When the security is sold, the cumulative gain or loss recorded in Other components of equity is included as net gain (loss) on AFS securities in Net trading income. Purchase premiums or discounts on AFS debt securities are amortised over the life of the security using the effective interest method and are recognised in Net interest income. Dividend and interest income accruing on AFS securities are recorded in Net interest income.



At each reporting date, and more frequently when conditions warrant, the Company evaluates AFS securities to determine whether there is any objective evidence of impairment. Such evidence includes: for debt instruments, when an adverse effect on future cash flows from the asset or group of assets can be reliably estimated; for equity securities, when there is a significant or prolonged decline in the fair value of the investment below its cost.

When assessing impairment for debt instruments the Company primarily considers counterparty ratings and security-specific factors, including subordination, external ratings, and the value of any collateral held, for which there may not be a readily accessible market. Significant judgement is required in assessing impairment as management is required to consider all available evidence in determining whether objective evidence of impairment exists and whether the principal and interest on the AFS debt security can be fully recovered.

In assessing whether there is any objective evidence that suggests that equity securities are impaired, the Company considers factors which include the length of time and extent the fair value has been below cost, along with management's assessment of the financial condition, business and other risks of the issuer. Management weighs all these factors to determine the impairment but to the extent that management judgement may differ from the actual experience of the timing and amount of the recovery of the fair value, the estimate for impairment could change from period to period based upon future events that may or may not occur, the conclusion for the impairment of the equity securities may differ.

If an AFS security is impaired, the cumulative unrealised loss previously recognised in Other components of equity is removed from equity and recognised under Net trading income. This amount is determined as the difference between the cost/amortised cost and current fair value of the security less any impairment loss previously recognised. Subsequent to impairment, further declines in fair value are recorded in Net trading income, while increases in fair value are recognised in Other components of equity until sold. For AFS debt securities, reversal of previously recognised impairment losses is recognised in Statement of Income if the recovery is objectively related to a specific event occurring after recognition of the impairment loss.

#### *Derecognition of financial assets*

Financial assets are derecognised from the Balance Sheet when the contractual rights to the cash flows from the assets have expired, when the Company retains the rights to receive the cash flows of the assets but assume an obligation to pay those cash flows to a third party subject to certain pass-through requirements or when the contractual rights to receive the cash flows and substantially all of the risk and rewards of the assets have been transferred. When the Company retains substantially all of the risks and rewards of the transferred assets, the transferred assets are not derecognised from the Balance Sheet and are accounted for as secured financing transactions. When the Company neither retains nor transfers substantially all risks and rewards of ownership of the assets, the Company derecognises the assets if control over the assets is relinquished. If the Company retains control over the transferred assets, the Company continues to recognise the transferred assets to the extent of its continuing involvement.

## 6.4.4 Risk Profile

As at 31 October 2015, the Company had a total exposure of £150.0 million (2014: £57.9 million) in relation to the securitisation positions, resulting in own funds requirement of £8.3 million (2014: £8.3million) using the Standardised calculation. Detailed analysis on the securitisation positions is included in the tables below.

**Table 34: Exposures by underlying exposure type**

**As at 31 October 2016**

£'000

<b>Exposure Type</b>	<b>Exposure</b>	<b>Risk-weighted Exposure</b>	<b>Capital Requirement</b>
<i>Traditional securitisation</i>			
Residential mortgages	23,404	4,681	374
Credit card receivables	100	20	2
Consumer loans	-	-	-
Other assets	2,538	22,659	1,813
	<b>26,042</b>	<b>27,360</b>	<b>2,189</b>

**As at 31 October 2015**

£'000

<b>Exposure Type</b>	<b>Exposure</b>	<b>Risk-weighted Exposure</b>	<b>Capital Requirement</b>
<i>Traditional securitisation</i>			
Residential mortgages	82,849	48,073	3,846
Credit card receivables	19,670	3,934	315
Consumer loans	38,856	128,909	10,313
Other assets	8,659	2,966	237
	<b>150,034</b>	<b>183,882</b>	<b>14,711</b>

**Table 35: Securitisation exposures by seniority**

**As at 31 October 2016**

£'000

<b>Tranche</b>	<b>Exposure</b>	<b>Risk-weighted Exposure</b>	<b>Capital Requirement</b>
Senior	26,042	27,360	2,189
Mezzanine	-	-	-
First loss	-	-	-
	<b>26,042</b>	<b>27,360</b>	<b>2,189</b>

**As at 31 October 2015**

£'000

<b>Tranche</b>	<b>Exposure</b>	<b>Risk-weighted Exposure</b>	<b>Capital Requirement</b>
Senior	37,395	35,260	2,821
Mezzanine	112,117	144,285	11,543
First loss	522	4,337	347
	<b>150,034</b>	<b>183,882</b>	<b>14,711</b>

**Table 36: Securitisation exposures by risk weighting**

As at 31 October 2016

£'000

Risk Weighting	Exposure	Risk-weighted Exposure	Capital Requirement
<i>Exposures rated by ECAIs</i>			
20%	24,241	4,848	388
50%	-	-	-
100%	-	-	-
350%	-	-	-
1250%	-	-	-
	<u>24,241</u>	<u>4,848</u>	<u>388</u>
<i>Exposures not rated by ECAIs</i>			
1250%	1,801	22,512	1,801
<b>Total</b>	<b><u>26,042</u></b>	<b><u>27,360</u></b>	<b><u>2,189</u></b>

As at 31 October 2015

£'000

Risk Weighting	Exposure	Risk-weighted Exposure	Capital Requirement
<i>Exposures rated by ECAIs</i>			
20%	62,842	12,568	1,005
50%	41,911	20,955	1,676
100%	30,660	30,660	2,453
350%	7,006	24,523	1,962
1250%	5,059	63,239	5,059
	<u>147,478</u>	<u>151,945</u>	<u>12,155</u>
<i>Exposures not rated by ECAIs</i>			
1250%	2,556	31,937	2,556
<b>Total</b>	<b><u>150,034</u></b>	<b><u>183,882</u></b>	<b><u>14,711</u></b>

The Company uses the following three ECAIs in assigning the appropriate risk weights for the securitisation positions held:

- Standard & Poor's,
- Moody's, and
- Fitch Ratings.

## 7.0 Operational Risk

The Company defines operational risk as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk. The Company assesses its operational risk profile through a combination of qualitative and quantitative methods.

A variety of risk and control criteria are used to assess different business lines within the Company. The information is used to generate the risk profiles for each business area. These quantitative profiles are analysed at an aggregate level to provide a view of the risk profile of the business and the local platform as a whole. These profiles are reported to various committees for discussion and action. Specific risks and issues as well as overall themes are discussed.

The Operational Risk Appetite Framework is a formally articulated structure comprised of an operational risk appetite, operational risk tolerance and operational risk profile. The Company's Operational Risk Appetite definition is: 'The level of operational risk the Company is willing to accept on a risk-reward basis. The operational risk tolerance is defined as the operational risk level beyond which the entity/ platform/ business line should not go, regardless of what the entity/ platform/ business is comfortable with'.

An operational risk report is presented to each of the committees and captures both Capital Markets and Wealth Management activities within the Company.

The Company has adopted the Basic Indicator Approach to calculate the own funds requirement for operational risk. As at 31 October 2016, the own funds requirement for operational risk is £47.0 million (2015: £39.7 million).

## 8.0 Non-trading Book Equity Exposures

The Company holds a small equity portfolio within its non-trading book in order to maintain its memberships with a number of clearing houses and exchanges in Europe. The Company has no intention of actively trading these equities for short term profit making purposes.

This equity portfolio has been disclosed as AFS securities in the Company's audited financial statements in accordance with IFRS. The Company measures its AFS securities at fair value. Unrealised gains and losses arising from changes in fair value are included in Other components of equity. Changes in foreign exchange rates for AFS equity securities are recognised in Other components of equity, while changes in foreign exchange rates for AFS debt securities are recognised in Net trading income. When the security is sold, the cumulative gain or loss recorded in Other components of equity is included as net gain (loss) on AFS securities in Net trading income. Dividend and interest income accruing on AFS securities are recorded in Net interest income.

At each reporting date, and more frequently when conditions warrant, the Company evaluates AFS securities to determine whether there is any objective evidence of impairment (e.g. a significant or prolonged decline in the fair value of the investment below its cost). If an AFS security is impaired, the cumulative unrealised loss previously recognised in Other components of equity is removed from equity and recognised under Net trading income. This amount is determined as the difference between the cost and current fair value of the security less any impairment loss previously recognised. Subsequent to impairment, further declines in fair value are recorded in Net trading income, while increases in fair value are recognised in Other components of equity until sold.

As at 31 October 2016, the Company had a total AFS reserve of £20.5 million (2015: £16.8 million) arising from the non-trading book equity exposures. This AFS reserve has been fully included in the Company's CET1 Capital since 1 January 2015.

**Table 37: Non-trading book equity exposures**

<i>£'000</i>	2016	2015
	Unlisted	Unlisted
<b><u>As at 1 November</u></b>		
Cost	925	925
Accumulated unrealised gains	<u>20,955</u>	<u>22,904</u>
	21,880	23,829
Realised gains/(losses)	-	-
Unrealised gains/(losses)	<u>6,151</u>	<u>(1,949)</u>
<b>As at 31 October</b>	<b><u>28,031</u></b>	<b><u>21,880</u></b>
Accumulated unrealised gains	27,106	20,955
Less: Deferred tax	<u>(6,621)</u>	<u>(4,191)</u>
<b>AFS reserve</b>	<b><u>20,485</u></b>	<b><u>16,764</u></b>

## **9.0 Interest Rate Risk in the Banking Book**

Interest Rate Risk in the Banking Book (IRRBB) arises from a mismatch of maturity and re-pricing between assets and liabilities. Financial instruments leading to IRRBB include loans and advances, debt securities and deposits. RBCEL's IRRBB is governed by Royal Bank of Canada's interest rate risk policies which define the acceptable limits within which risks to Economic Value of Equity (EVE) and Net Interest Income (NII) over a 12-month time horizon are to be contained.

RBCEL's limit framework is maintained by Corporate Treasury which sets maximum unmatched exposures for Wealth Management, Capital Markets and Investor & Treasury Services. Interest rate risk in the banking book is not material and is monitored monthly by ALCO.

## 10.0 Remuneration

Remuneration disclosures are made in line with the Company's application of the requirements of Article 450 of the CRR.

### 10.1 Constitution and Activities of the EHRC

RBC Europe Limited has a Human Resources Committee (UKHRC) which is responsible for the application of the compensation principles, practices and processes within all of RBC's operations on the UK mainland, except BlueBay Asset Management Ltd. The UKHRC ensures that our compensation policies supports the business objectives determined by the Board of Directors and/or senior management and take into appropriate account sound risk management practices, including long-term and short-term risk.

Within the authority delegated by the Board, the UKHRC is responsible for approving compensation policy and, in doing so, takes into account the pay and benefits across our Company. This includes the terms of bonus plans, other incentive plans and the individual compensation packages of Executive Directors and Senior Managers.

<b>Members (fiscal year end)</b>	<b>Meeting Attendance (4 meetings in total)</b>
▪ Nicola Mumford (Chair)	4 meetings
▪ Dr John Roberts	3 meetings
▪ Janice Fukakusa	4 meetings
▪ Jim Pettigrew	4 meetings
▪ Zabeen Hirji <sup>7</sup>	1 Meeting

All of the members of the UKHRC are independent of day to day management under the standards set out by the Board. Dr Roberts, Mr Pettigrew and Ms Mumford are all independent Non-Executive Directors. No individual is involved in decisions relating to his or her own compensation.

During the year, the UKHRC received advice from the Company's Head of Human Resources, Head of Compliance, Chief Financial Officer and Chief Risk Officer, who provided advice to the UKHRC on the implications of the compensation policy on risk and risk management.

#### External Consultants

The UKHRC received independent advice on executive compensation issues from Willis Towers Watson in September 2016. The company had no ties to members of the UKHRC or management that could jeopardize its independence.

#### Role of the Relevant Stakeholders

The UKHRC takes full account of the Company's strategic goals in setting compensation policy and is mindful of its duties to shareholders and other stakeholders. The UKHRC seeks to preserve shareholder value by ensuring the successful retention, recruitment and motivation of employees.

### 10.2 Criteria for the Identification of Material Risk Takers

The following groups of employees have been identified as meeting the criteria for Material Risk Takers:

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<sup>7</sup> Ms Hirji resigned from the Committee in March 2016 but continued to attend meetings as an invitee

*Employees captured by qualitative criteria include:*

- Board of Directors
- Senior management including individuals registered with the UK regulators as holding a Senior Manager Function (an SMF)
- Senior control function management including risk, compliance and internal audit and heads of human resources, information technology, legal and tax
- Those who have authority either individually or as members of a Committee to approve or veto new products or decisions that result in market or credit risk exposures that exceed specified thresholds (the lower of €5m and 0.5% of the Company's Common Equity Tier One Capital).

*Employees captured by quantitative criteria*

- Employees awarded total compensation of €500,000 or more in the preceding financial year
- Employees within the 0.3% of the number of staff who have been awarded the highest total compensation in the preceding year
- Employees awarded compensation in the preceding financial year which was equal to or greater than the lowest total compensation awarded to those meeting specified qualitative criteria
- In accordance with Remuneration Part of the PRA Rulebook (UK remuneration rules), employees identified under the quantitative criteria were then assessed to determine if the professional activities of the employee or category of employees gave them the ability to make decisions that could have a material impact on the risk profile of the Company. All regulatory reporting and approval requirements on the outcomes of this assessment were completed in respect of 2016 in accordance with the UK remuneration rules.

### **10.3 Design and Structure of Compensation for Material Risk Takers**

The Company's approach to compensation is based on five guiding principles:

- Compensation aligns with shareholder interests
- Compensation aligns with sound risk management principles
- Compensation rewards performance
- Compensation enables the Company to attract, engage and retain talent
- Compensation rewards behaviours that are consistent with the core values of the Company

All the Company's compensation policies and plans align with these principles and are approved by the UKHRC.

#### **Elements of compensation**

##### *a) Fixed Remuneration*

All Material Risk Takers receive fixed remuneration that reflects their market value, responsibility and contribution to the Company.

##### *b) Variable Remuneration*

All Material Risk Takers, other than the Independent Non-Executive Directors and overseas Board Directors, are eligible to participate in discretionary performance-based incentive schemes.

Performance-based annual discretionary incentives may be awarded based on the performance of the Company, the business, and the individual as detailed below. Annual incentives for Material Risk Takers are subject to review by the Chief Risk Officer Europe to ensure they adequately reflect risk and performance, and are subject to review by the UKHRC.

RBC Europe Limited has obtained the necessary approvals to operate a maximum level of the ratio between the fixed and variable components of remuneration that does not exceed 200% of the fixed component of the total remuneration for each individual as required under the UK remuneration rules and Article 91(1)(g) of CRD IV.

All compensation plans contain minimum compensation deferral requirements for Material Risk Takers in line with the UK remuneration rules.

At least 50% of variable compensation is delivered in equity-linked awards which are subject to retention periods of 6 months post vesting, in line with the UK remuneration rules.

Depending on the compensation plan, deferred compensation will vest as follows:

	<b>End of year 1</b>	<b>End of year 2</b>	<b>End of year 3</b>
<b>Scenario 1</b>	25%	25%	50%
<b>Scenario 2</b>	-	-	100%

## **10.4 The Link between Pay and Performance for Material Risk Takers**

Variable compensation plans reward employees on the basis of several factors, including individual, business segment and enterprise results relative to established performance objectives that are aligned with the risk appetite of RBC. A significant portion of performance-based pay is deferred in the form of equity incentive awards in order to align compensation with the risk time horizon and motivate employees to generate longer-term value for shareholders and remain accountable for decisions with longer risk-tails. To create a clear relationship between pay and performance, employees have an opportunity to earn higher compensation for outstanding performance, and conversely, earn less compensation when RBC, a business segment and/or individual results fall below expectations.

At the individual level, there are a number of factors that are considered in determining the extent to which an employee participates in a discretionary bonus distribution. Individual performance is evaluated using both financial and non-financial measures. Non-financial measures considered in the discretionary bonus evaluation process include the following:

- Adherence to our Code of Conduct. All employees are expected to adhere to our Code of Conduct, and failure to adhere through unethical or non-compliant behaviours results in disciplinary or corrective action, which may include immediate or eventual dismissal. All employees receive Code of Conduct training and testing on joining RBC and every year thereafter
- Compliance with a full range of risk management policies specific to individual job requirements as outlined in employee Performance Management Documents
- Assessment of key behaviours, which are part of the RBC Global Performance Management process, and typically include the obligation to:
  - Abide by the letter and spirit of rules and procedures established by regulators



- Follow all relevant internal policies and procedures including, but not limited to, trading and position limits and standing order
  - At all times, act in the best interests of RBC and its clients
  - Escalate, on a timely basis, any areas of material concern related to any of the above
  - Lead by example so that direct reports adopt similar high standards
- Reports from control functions, including those from Internal Audit, Compliance (regulatory gaps, trades beyond excess limits), and Group Risk Management regarding operational, market and credit risks, among others
  - Assessment of accountabilities and detailed action plans to implement and monitor changes required to close the gaps identified during risk management or internal audit reviews

Employees that are not meeting the above mentioned non-financial performance standards for their role are subject to our corrective action process, which can include either a significant reduction in bonus amounts or dismissal.

Furthermore, prior to vesting, Material Risk Takers deferred compensation is subject to review under the firm's risk and performance adjustment process whereby actual risk and performance outcomes are reviewed and if materially different from assessments made when deferred compensation was granted, or if misconduct has occurred, then deferred compensation may be reduced or forfeited in full.

## 10.5 Disclosures on Remuneration

During the year ended 31 October 2016, remuneration for staff whose professional activities have a material impact on the risk profile of the business was as follows:

**Table 38: Aggregate remuneration expenditure**

	<b>2016</b>
	<b>RBC Europe Limited</b>
	<b>GBPmm</b>
<b>Aggregate remuneration expenditure (Material Risk Takers)</b>	69.7

*Includes fixed and variable remuneration awarded in respect of performance year 2016 (including deferred components)*

**Table 39: Analysis of remuneration between fixed and variable amounts**

	<b>2016</b>		
	<b>Material Risk Takers</b>		
	<b>Senior Management</b>	<b>Other</b>	<b>Total</b>
<b>Number of Material Risk Takers</b>	25	86	111
	<b>GBPmm</b>	<b>GBPmm</b>	<b>GBPmm</b>
<b>Total Fixed Remuneration</b>	9.4	25.6	35.0
<b>Total Variable Remuneration</b>	11.9	22.8	34.7

## 11.0 Appendices

### 11.1 Appendix 1: Board Membership

#### Current Independent Non-Executive Directors

Director	Role	Biography
John Roberts  (Residency: UK)	Chair  Member of Audit Committee, Risk Committee, Nomination Committee, and UK Human Resources Committee	<p>John Roberts is the former Chief Executive Officer (CEO) of United Utilities plc, Manweb and Hyder Utilities. His current appointments include Chairman of the Halite Energy Group Limited, Impello plc, Electricity North West plc. and BlueBay Asset Management.</p> <p>He is a Fellow of the Royal Academy of Engineering, the Institution of Engineering and Technology, and the Association of Chartered Certified Accountants. He is also a Companion of the Chartered Management Institute.</p> <p>He was awarded the CBE in 2005.</p>
Jim Pettigrew  (Residency: UK)	Chair of Audit Committee and Risk Committee  Member of Nomination Committee and UK Human Resources Committee	<p>Jim Pettigrew was born and educated in Dundee. He graduated in Law at Aberdeen University, and obtained a post-graduate diploma in accountancy studies from Glasgow University, before embarking on Chartered Accounting (CA) training with Arthur Young McClelland Moores &amp; Co (now Ernst and Young). After qualifying as a CA in 1984, Jim undertook a number of commercial finance roles in Scotland, prior to joining the London-based FTSE 100 international insurance broker, Sedgwick Group plc. During an 11-year tenure at Sedgwick, he held several senior financial positions, including Group Treasurer and Deputy Chief Financial Officer (CFO).</p> <p>He was then appointed CFO at the money and derivatives broker ICAP, for 8 years before joining Ashmore, the FTSE 250 emerging asset manager, as Chief Operating Officer (COO), and as part of the management team that successfully floated the business on the London Stock Exchange in October 2006. Most recently, Jim has been CEO of CMC markets. He currently holds a number of non-executive directorships, including Aberdeen Asset Management plc and Hermes. He is Chairman of Edinburgh Investment Trust plc, in addition to Senior Independent Director at Crest Nicholson plc.</p> <p>He is also President of the Institute of Chartered Accountants of Scotland.</p>

<p>Nicola Mumford</p> <p>(Residency: UK)</p>	<p>Chair of UK Human Resources Committee</p> <p>Member of Audit Committee, Risk Committee and Nomination Committee</p>	<p>Nicola has spent the majority of her career with Wragge &amp; Co LLP, the international law firm. She joined as a solicitor in 1987 and, since then, has gone on to become Senior Director and Managing Partner of the London Office. In her role as London Managing Partner, she was responsible for strategy for the London office, and the firm's business development. As a lawyer, she was Senior Litigation Partner in the firm's Dispute Resolution Group working with clients such as Legal and General, London Stock Exchange and others in the automotive sector. She currently also resides on the Board of Harbour Litigation Funding, the UK's largest provider of litigation funding.</p>
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### Current Shareholder Representative Non-Executive Directors

Director	Role	Biography
<p>Janice Fukakusa</p> <p>(Residency: Canada)</p> <p>Resigned – 15 Dec 2016</p>	<p>Chief Administrative Officer and Chief Financial Officer, RBC</p> <p>Member of Audit Committee, Nomination Committee and UK Human Resources Committee.</p>	<p>Janice started her career with PricewaterhouseCoopers LLP, where she obtained the professional designations of chartered accountant and chartered business valuator.</p> <p>She holds a BA from University of Toronto and holds an MBA from Schulich School.</p>
<p>Doug McGregor</p> <p>(Residency: Canada)</p> <p>Resigned – 10 Feb 2016</p>	<p>Chair and CEO of RBC Capital Markets</p>	<p>Doug joined Pitfield MacKay Ross Limited in 1979 before moving to Marcil Trust in 1982. Marcil Trust was acquired by Royal Bank of Canada in 1990.</p> <p>Doug holds a BA (Hons) and an MBA from the University of Western Ontario.</p> <p>Doug is currently Chairman of the Board of Directors of Investment Industry Regulatory Organization of Canada (IIROC).</p>

<p>Richard Talbot  (Residency: Canada)  Resigned – 31 May 2016</p>	<p>COO of RBC Capital Markets</p>	<p>Richard is Chief Operating Officer of RBC Capital Markets with global responsibility for all operational and administrative matters of the bank. Previously, Richard was Co-Head of Global Research at RBC Capital Markets, where his primary focus was on equity, fixed income, &amp; currencies and credit research in Canada, Europe and Australia. Richard joined Royal Bank of Canada in 1991 as an Account Manager in Corporate Banking, and in 1993 he joined RBC Dominion Securities as a telecom research analyst, over the years gaining recognition as the leading analyst in the sector. He was ranked the #1 telecom and cable analyst in Canada from 2000 to 2005 by Brendan Wood, and the No. 1 ranked analyst for all sectors in Canada by Reuters/Tempest in 1999. Since 2010, RBC's Canadian Equity Research team has been rated #1 according to Greenwich and Brendan Wood. Prior to joining RBC, Richard was a senior accountant with Coopers and Lybrand. Richard holds an MBA and an honours degree in Business Administration from the Ivey School of Business at Western University, and he is a qualified Chartered Accountant and a Chartered Financial Analyst.</p>
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<p>Troy Maxwell (Residency: Canada)  Appointed– 14 Sep 2016</p>	<p>COO of RBC Capital Markets</p>	<p>Troy Maxwell is Chief Operating Officer of RBC Capital Markets with global responsibility for all operational and administrative matters of the firm, including optimizing cost base management and financial resources, and leading the response to regulatory change. Previously, Mr. Maxwell was Executive Vice President of Finance and Chief Financial Officer of RBC Capital Markets and Technology &amp; Operations, where he oversaw all finance services to RBC's wholesale business and technology and operations platform.</p> <p>Mr. Maxwell is a champion for diversity-related initiatives at RBC and an active member of the community. Since 2009, he has served as the executive sponsor of RBC's Advancement of Women in Leadership committee, a global leadership forum responsible for driving actions to improve representation of senior women at the bank. Additionally, Mr. Maxwell is a senior advisor for RWomen, RBC Capital Markets' internal forum dedicated to fostering the development and career aspirations of women. Mr. Maxwell has played a key role in RBC's annual United Way campaign for several years and acts as Co-Chair of RBC's national Major Individual Gifts Committee. He is also a member of the United Way Toronto &amp; York Region's Major Individual Giving Cabinet.</p> <p>Prior to joining RBC, Mr. Maxwell was Chief Financial Officer of CIBC World Markets and a partner at PricewaterhouseCoopers LLP, where he led the financial institutions and corporate treasury risk management consulting and advisory business.</p> <p>Mr. Maxwell is a Chartered Professional Accountant, and holds an Honours BA and a Master's Degree in Accounting from the University of Waterloo.</p>
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## Executive Directors

Director	Role	Biography
Stephen Krag (Residency: UK)	Chief Financial Officer, Europe	<p>Stephen joined RBC Capital Markets in April 2011 from Daiwa Capital Markets Europe where he was Chief Financial Officer.</p> <p>Prior to this, Stephen was Chief Operating Officer for HBOS Treasury Services and held a number of senior finance positions within capital markets, equities and global financial market businesses for NatWest Securities.</p> <p>Stephen graduated from Cambridge University and is a qualified Chartered Accountant.</p>
Bruce MacLaren (Residency: UK)	Chief Risk Officer, Europe & APAC	<p>Bruce is the Chief Risk Officer in Europe, with responsibility for providing independent oversight of risk for all RBC businesses across the region. He sets the strategic direction of risk management and provides leadership in the implementation and execution of leading practices in risk oversight and governance for Europe. Bruce also has global accountability for risk oversight in Investor &amp; Treasury Services, as well as the majority of RBC's Asian operations.</p> <p>Based in London, Bruce is a member of the global Investor &amp; Treasury Services Operating Committee and the Capital Markets Europe Operating Committee.</p> <p>Bruce is a graduate of the University of Toronto and York University. He joined RBC in 1987 and held various positions in client-facing roles in corporate banking, corporate finance, loan syndications and market management in both Toronto and London. He was appointed Vice President of Risk Management in 1997 responsible for financial institutions, and became Senior Vice President within Group Risk Management – Credit, in 2003. He assumed his current responsibilities in September 2015.</p>
Harry Samuel (Residency: UK)	CEO, RBC Investor & Treasury Services	<p>Harry started with RBC in 1989 in FX and Money Markets, working in London, Toronto and Sydney.</p> <p>He holds a BA (Hons) from McGill University and MSc from the London School of Economics.</p>

David Thomas (Residency: UK)	CEO, RBC Europe Limited	David joined RBC Capital Markets in 1992, following periods at National Westminster Bank and Sherwood Systems. He has held positions in IT, Risk Management and Compliance.  He holds a BSc (Hons) in Chemistry and Management Studies from Loughborough University.
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**Number of Directorships as at 31 October 2016**

Chief Executive (1)	1
Non-Executive (2)	3
Independent Non-Executive (3)	11
Executive (3)	1

## 11.2 Appendix 2: Governance Committees

Committee	Frequency
Risk Committee (RC)	Quarterly
Asset and Liability Committee (ALCO)	Monthly
Audit Committee (AC)	Quarterly
European Operating Committee (EOC)	Monthly
Human Resources Committee (HRC)	Quarterly
Nominations Committee	Semi-annually
European Trading Credit Risk Management Committee (ETCRMC)	Monthly
UK Market Risk Management Committee (UKMRMC)	Fortnightly and as required
UK Lending Risk Management Committee (UKLMC)	Monthly
Operational Risk Committee (ORC)	Monthly
Reputation and Compliance Committee (RACC)*	Monthly
Attestation Committee	Monthly
Valuations Committee (VC)	Monthly
New Business Committee (NBC)	Monthly and as required
Regulatory Policy Interpretation Committee (RPIC)	Quarterly and as required
Common Reporting Data Attestation Committee (CRDAC)	Quarterly

\*The Reputation and Compliance Committee was disbanded in September 2016.



## 11.3 Appendix 3: Regulatory Capital Calculation Methods

The table below lists the relevant approaches elected to calculate the capital requirements for each applicable risk:

Risk Type	Approach or Treatment
<b>Market Risk</b>	Market risk pillar 1 calculations are undertaken according to the standardised approach. This provides a method for calculating position risk requirement (PRR) for all categories of market risk in the trading book in accordance with Part Three, Title 4 of the Capital Requirements Regulation (CRR). Market risk categories include interest rate risk, equity position risk, foreign exchange risk, commodities risk, options risk, collective investment undertakings risk and securities underwriting risk.
<b>Specific Interest Rate Market Risk</b>	Specific interest rate risk is calculated based on Articles 334 to 338 of the CRR for products for which there is a risk of loss for reasons other than a general move in market interest rates.
<b>General Interest Rate Market Risk</b>	General interest rate risk calculation is based on the modified duration method described in Article 340 of the CRR.
<b>Foreign Exchange Position Risk</b>	Net open position risk by currency is calculated in accordance with the provisions set out in Part Three, Title 4, Chapter 4 of the CRR.
<b>Equity Position Risk</b>	Equity risk PRR is calculated in accordance with Part Three, Title 4, Chapter 3, Section 3 of the CRR. Specific risk is calculated in line with Article 342, and general market risk is calculated in line with Article 343 of the CRR.
<b>Option Position Risk</b>	The Company calculates option risk PRR in accordance with Article 329 of the CRR.
<b>Commodity Risk</b>	Commodity risk is calculated in accordance with Part Three, Title 4, Chapter 4 of the CRR. The Company calculates commodity risk PRR using the Maturity ladder approach, as described in Article 359 of the CRR.
<b>Credit Risk Capital Component</b>	The Company has adopted the standardised approach to credit risk in accordance with Part Three, Title 2, Chapter 2 of the CRR.
<b>Intra Group Exposures</b>	In the absence of any intra-group waivers, exposures to RBC group entities are treated in the same manner as exposures to third-parties.
<b>Counterparty Risk Capital Component</b>	For repo-style transactions, OTC derivatives and other products generating counterparty credit risk in the trading books, the exposure amounts are calculated as per Part Three, Title 2, Chapter 6 of the CRR. The credit risk mitigation techniques are applied per Part Three, Title 2, Chapter 4 of the CRR. Calculation of the capital requirements is then derived by applying a risk weight depending on the counterparty and other criteria, as set out in Part Three, Title 2, Chapter 2, Section 2 of the CRR. Settlement Risk capital requirements for unsettled transactions are derived directly based on Part Three, Title 5 of the CRR.
<b>Credit Risk Mitigation</b>	CRM is recognised in line with the requirements of Part Three, Title 2, Chapters 4 and 6 of the CRR for the calculation of the counterparty risk capital component arising from derivatives, repurchased transactions and securities lending and borrowing, and for banking book exposures arising from Wealth Management and Corporate Investment Banking businesses.
<b>Operational Risk</b>	The Company has adopted the Basic Indicator Approach (BIA) to calculate its operational risk capital requirements, per Part Three, Title 3, Chapter 2 of the CRR. Under the BIA, capital for operational risk is determined by multiplying gross average positive operating and interest revenues for the past three years by a fixed percentage (15%).
<b>Concentration Risk Capital Component</b>	The Company monitors and, if applicable, calculates the concentration risk capital component of the credit risk capital requirement in line with Part Four of the CRR.

## 11.4 Appendix 4: Countercyclical Buffer Disclosure

Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer  
As at 31 October 2016  
£'000

	General Credit Exposures		Trading Book Exposures		Securitisation Exposures		Own Funds Requirements				Own Funds Requirements Weight	Countercyclical Capital Buffer Rate
	Exposure Value for SA	Exposure Value for IRB	Sum of long and short positions of trading book exposures for SA	Value of trading book exposures for internal models	Exposure Value for SA	Exposure Value for IRB	of which: General credit exposures	of which: Trading book exposures	of which: Securitisation exposures	Total		
<b>Breakdown by Country:</b>												
AUSTRALIA	723	-	189	-	-	-	42	15	-	57	0.02%	0.00%
AUSTRIA	33,999	-	-	-	-	-	2,720	-	-	2,720	1.12%	0.00%
BELGIUM	396	-	1	-	-	-	32	-	-	32	0.01%	0.00%
BERMUDA	-	-	2,748	-	-	-	-	220	-	220	0.09%	0.00%
UNITED KINGDOM	1,283,766	-	306,961	-	-	-	69,073	17,330	-	86,403	35.67%	0.00%
VIRGIN ISLANDS, BRITISH	3,336	-	-	-	-	-	93	-	-	93	0.04%	0.00%
CANADA	81,751	-	6,679	-	-	-	2,796	107	-	2,903	1.20%	0.00%
CAYMAN ISLANDS	20,921	-	71,630	-	-	-	1,624	5,730	-	7,354	3.04%	0.00%
CURACAO	58,187	-	-	-	-	-	931	-	-	931	0.38%	0.00%
CZECH REPUBLIC	5	-	-	-	-	-	-	-	-	-	0.00%	0.00%
FINLAND	17,564	-	594	-	-	-	1,405	48	-	1,453	0.60%	0.00%
FRANCE	467,522	-	2,481	-	-	-	26,722	99	-	26,821	11.07%	0.00%
GERMANY	135,159	-	29	-	-	-	10,473	2	-	10,475	4.32%	0.00%
GUERNSEY	6,040	-	-	-	-	-	170	-	-	170	0.07%	0.00%
HONG KONG	23,255	-	-	-	-	-	1,691	-	-	1,691	0.70%	0.63%
HUNGARY	10,003	-	8,679	-	-	-	800	694	-	1,495	0.62%	0.00%
IRELAND	101,131	-	213,847	-	-	-	8,090	17,108	-	25,198	10.40%	0.00%
ISLE OF MAN	20,200	-	-	-	-	-	1,616	-	-	1,616	0.67%	0.00%
ITALY	46,373	-	-	-	-	-	3,632	-	-	3,632	1.50%	0.00%
JAPAN	-	-	268	-	-	-	-	11	-	11	0.00%	0.00%
JERSEY	38,045	-	-	-	-	-	2,031	-	-	2,031	0.84%	0.00%
LUXEMBOURG	128,052	-	11,340	-	-	-	10,244	907	-	11,151	4.60%	0.00%
MALTA	-	-	149	-	-	-	-	12	-	12	0.00%	0.00%
MEXICO	4,350	-	-	-	-	-	122	-	-	122	0.05%	0.00%
MONACO	6,159	-	-	-	-	-	493	-	-	493	0.20%	0.00%
NETHERLANDS	67,015	-	14,429	-	-	-	5,484	1,154	-	6,638	2.74%	0.00%
NORWAY	-	-	24	-	-	-	-	2	-	2	0.00%	1.50%
OMAN	5,132	-	-	-	-	-	244	-	-	244	0.10%	0.00%
PORTUGAL	38,704	-	-	-	-	-	3,096	-	-	3,096	1.28%	0.00%
QATAR	7,165	-	-	-	-	-	211	-	-	211	0.09%	0.00%
ROMANIA	1	-	-	-	-	-	-	-	-	-	0.00%	0.00%
RUSSIAN FEDERATION	1,420	-	-	-	-	-	40	-	-	40	0.02%	0.00%
SAUDI ARABIA	125,862	-	-	-	-	-	7,991	-	-	7,991	3.30%	0.00%
SINGAPORE	16,220	-	-	-	-	-	981	-	-	981	0.41%	0.00%
SOUTH AFRICA	19,915	-	-	-	-	-	1,593	-	-	1,593	0.66%	0.00%
SPAIN	107,854	-	-	-	-	-	8,628	-	-	8,628	3.56%	0.00%
SWEDEN	-	-	248	-	-	-	-	20	-	20	0.01%	1.50%
SWITZERLAND	105,709	-	84,708	-	-	-	4,204	5,707	-	9,911	4.09%	0.00%
THAILAND	1,410	-	-	-	-	-	39	-	-	39	0.02%	0.00%
UNITED ARAB EMIRATES	8,609	-	-	-	-	-	273	-	-	273	0.11%	0.00%
UNITED STATES	107,331	-	101,787	-	-	-	7,330	8,143	-	15,473	6.39%	0.00%
<b>Total</b>	<b>3,099,286</b>	-	<b>826,791</b>	-	-	-	<b>184,917</b>	<b>57,309</b>	-	<b>242,227</b>	<b>100.00%</b>	

Total risk exposure amount	5,609,747
Institution specific countercyclical capital buffer rate	0.0045%
Institution specific countercyclical capital buffer requirements	252