



**Pillar III Disclosure for the year ended 31  
December 2016**

## Table of Contents

<b>1</b>	<b>Introduction.....</b>	<b>3</b>
1.2	Background.....	5
1.3	Disclosure Policy: verification, medium, location & frequency.....	5
<b>2</b>	<b>Governance – Board &amp; Committees.....</b>	<b>7</b>
2.1	Shareholders.....	7
2.2	The Board .....	7
2.3	Board & Executive Committees .....	7
2.4	Diversity policy .....	9
2.5	Board Recruitment policy.....	9
<b>3</b>	<b>Risk Management&amp; Risk Appetite .....</b>	<b>10</b>
3.1	Principal risks.....	10
3.2	Risk Declaration - Adequacy of the risk management arrangements .....	21
<b>4</b>	<b>Own Funds .....</b>	<b>22</b>
<b>5</b>	<b>Compliance with CRD IV and Capital Adequacy.....</b>	<b>23</b>
5.1	Capital requirements framework .....	23
5.2	Pillar 1 capital requirements.....	24
5.3	Internal Capital Adequacy Assessment Process (ICAAP) .....	25
5.4	Capital adequacy .....	26
<b>6</b>	<b>Asset Encumbrance .....</b>	<b>27</b>
<b>7</b>	<b>Leverage Ratio.....</b>	<b>28</b>
<b>8</b>	<b>Remuneration.....</b>	<b>29</b>
8.1	Remuneration governance and decision making .....	29
8.2	Performance and reward.....	29
	<b>Appendix I - Reconciliation from regulatory capital to balance sheet items.....</b>	<b>31</b>
	<b>Appendix II Own funds disclosure .....</b>	<b>32</b>
	<b>Appendix III Main features of regulatory capital instruments.....</b>	<b>37</b>
	<b>Appendix IV - Declaration Board Risk Management Declaration .....</b>	<b>38</b>

## 1 Introduction

Kexim Bank (UK) Limited (“KEXIM UK” or “the Bank”) is a United Kingdom (“UK”) bank authorised by the Prudential Regulation Authority (“PRA”) and regulated by the Financial Conduct Authority (“FCA”) and the PRA.

The Bank is a wholly-owned subsidiary of the Export-Import Bank of Korea (“Parent Bank”). The Parent Bank is 100% owned by the Korean government and is solely mandated to promote international trade and investment by providing comprehensive export credit and guarantee programmes to support Korean enterprises in conducting overseas business. The Bank was established in 1992 with the objective of supporting and complementing the Parent Bank’s global network. In line with this objective, its main activities revolve around providing credit facilities such as loans to corporates which have a Korean linkage.

### Purpose

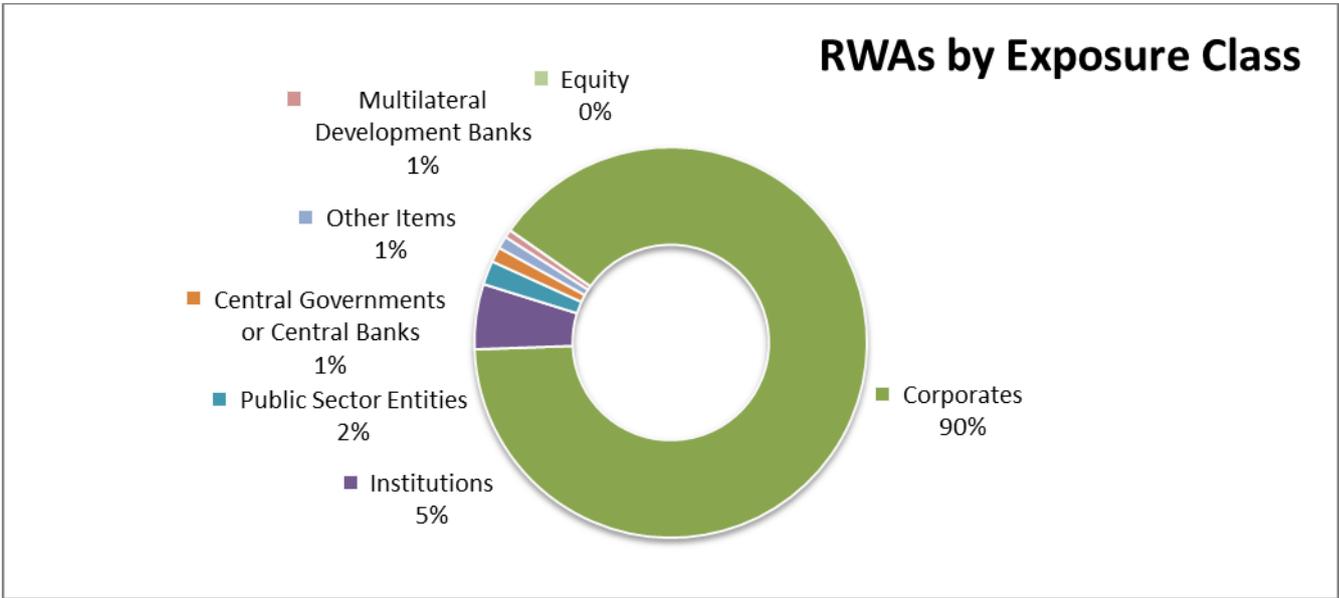
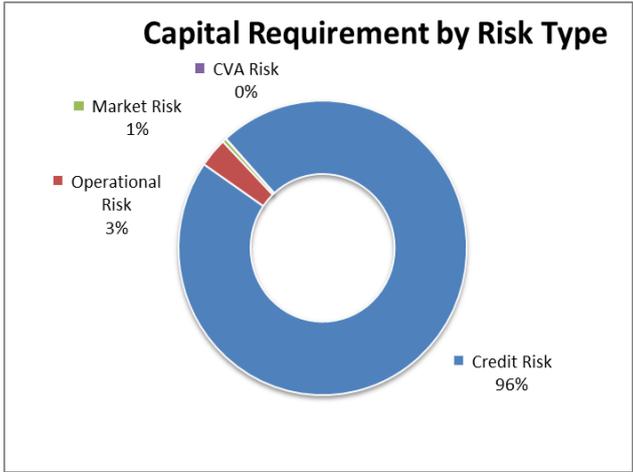
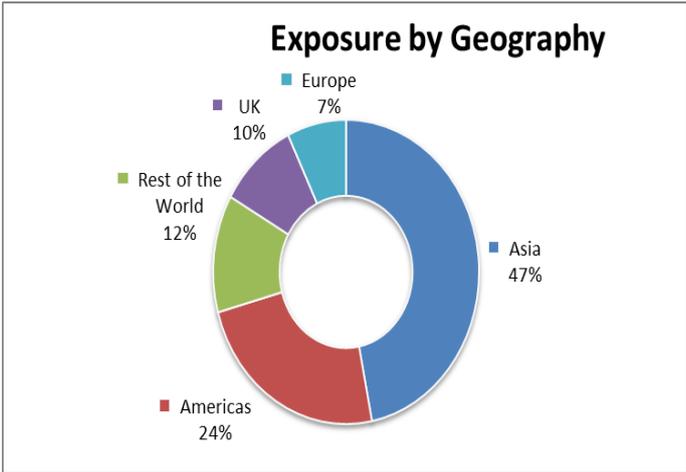
This document comprises KEXIMUK’s Pillar 3 disclosures on capital and risk management at 31 December 2016. It has two principal purposes:

- To meet the regulatory disclosure requirements under Capital Requirement Regulations & Directive, Part 8 – Disclosure by Institutions, and the rules the PRA set out in the PRA Rulebook, Part PB – Public Disclosure and as the PRA has otherwise directed, and including Remuneration Code disclosures; and
- To provide further useful information on the capital and risk profile of KEXIM UK.

Additional relevant information may be found in KEXIM UK’s Annual Report and Financial Statements 2016.

### Key metrics

<b>Total Assets</b> <b>£364.4 m</b> <i>Up 16.5%, 2015: £312.8 m</i>	<b>Profit after taxation</b> <b>£1.2 m</b> <i>Up 1300%, 2015: £(0.1) m</i>	<b>Shareholders’ funds</b> <b>£32.8 m</b> <i>Up 3.5%, 2015: £31.7 m</i>
<b>Common equity tier 1 capital</b> <b>£32.8 m</b> <i>Up 3.8%, 2015: £31.6 m</i>	<b>Tier-1 capital</b> <b>£32.8 m</b> <i>Up 3.8%, 2015: £31.6 m</i>	<b>Total regulatory capital</b> <b>£45.4 m</b> <i>Up 3.2%, 2015: £44.0 m</i>
<b>Common equity tier 1 ratio</b> <b>11.8%</b> <i>2015: 12.0% (Minimum Pillar 1 requirement: 4.5%)</i>	<b>Tier-1 capital ratio</b> <b>11.8%</b> <i>2015: 12.0% (Minimum Pillar 1 requirement: 6%)</i>	<b>Total capital ratio</b> <b>16.3%</b> <i>2015: 16.7% (Minimum Pillar 1 requirement: 8%)</i>
<b>Total Risk Exposure Amount</b> <b>£277.9 m</b> <i>Up 5.5%, 2015: £263.5 m</i>	<b>Liquid Coverage Ratio</b> <b>20832%</b> <i>2015: 4190% (Minimum Pillar 1 requirement: 80%)</i>	<b>Leverage Ratio</b> <b>8.7%</b> <i>2015: 9.91% (Minimum proposed requirement: 3%)</i>



## 1.2 Background

The European Union (“EU”) Capital Requirements Directive (“CRD”) and Capital Requirements Regulations (“CRR”), commonly known as CRDIV, came into effect on 1 January 2014. It introduced consistent capital adequacy standards and an associated supervisory framework in the EU based on the Basel III Accord.

Basel III requirements were formally introduced in Part Eight of the EU Capital Requirements Regulation (CRR) No 575/2013 of the European Parliament, along with Directive 2013/36/EU of the European Parliament (CRD), commonly known as the Capital Requirements Directive IV (CRD IV). The Pillar 3 disclosure requirements are contained in Articles 431 – 455 of the Capital Requirements Regulation (“CRR”). The Directives are enforced in the UK by the PRA.

The Basel framework comprises of three “pillars” which are designed to promote market discipline through the disclosure of key information about risk exposures and risk management processes.

- **Pillar 1** sets out the minimum capital requirements that firms are required to meet for credit and counterparty credit, market, operational and credit valuation adjustment risks.
- **Pillar 2** of the supervisory review process requires firms and supervisors to take a view on whether a firm should hold additional capital against those factors not taken into account by the Pillar 1 process (e.g. interest rate risk in the banking book, concentration, business and strategic risk); and factors external to the firm (e.g. business cycle effects). To comply, firms are required to develop adequate arrangements, strategies, processes and mechanisms, to maintain sound management and coverage of their risks, including maintenance of the prescribed capital requirements.
- **Pillar 3** aims to promote market discipline by developing a set of disclosure requirements which will provide market participants with key information on a firm’s capital, risk exposures, risk assessment processes and the capital adequacy of the firm.

## 1.3 Disclosure Policy: verification, medium, location & frequency

This document represents the Pillar 3 disclosures of KEXIM UK for the year ended 31 December 2016. These disclosures have been prepared purely for the purpose of explaining the basis on which the Bank has prepared and disclosed certain capital requirements; providing information about the management of risks relating to those requirements. The Bank is a single entity and no consolidation is performed.

This document has been prepared to satisfy the Pillar 3 disclosure requirements set out in the CRR. The Bank does not seek any exemption from disclosure on the basis of materiality or on the basis of proprietary or confidential information.

Unless otherwise stated, all figures are as at 31 December 2016, the Bank’s financial year-end. These disclosures, which are based on the Bank’s regulatory returns having applied the relevant regulatory rules, may differ from similar information in the Annual Report and Financial Statements which are prepared in accordance with International Financial Reporting Standards (“IFRS”).

The following sets out the Bank’s Pillar 3 Disclosure Policy as applied to Basel III including the location of this information, verification, frequency and the Bank’s principal activities.

### 1.3.1 Location

This report will be published at KEXIM UK corporate website as part of the Bank's annual report ([www.koreaexim.go.kr/site/uk](http://www.koreaexim.go.kr/site/uk)).

The Bank's Pillar 3 disclosures have been primarily prepared to explain the capital requirements as well as the management's strategies on risks. This is not a financial statement and hence, has not been audited.

These disclosures have been subject to internal review and validation prior to being submitted to the Board for approval. The Bank's Pillar 3 disclosure has been approved by the Board as of 13 December 2017.

### 1.3.2 Frequency

These disclosures are updated annually and in line with the publication of the financial statements, unless there are in the meantime significant changes in the risk profile or governance structure of the Bank.

### 1.3.3 Principal activities

The principal activity of the Bank is wholesale banking. The Bank is a solely mandated to promote international trade and investment by providing comprehensive export credit and guarantee programmes to support Korean enterprises in conducting overseas business. In line with this objective its main activities revolve around providing credit facilities such as loans and guarantees to corporates which have a Korean linkage. KEXIM UK is a wholesale bank with no trading book or retail customers.

## 2 Governance – Board & Committees

### 2.1 Shareholders

The Bank is a wholly-owned subsidiary of the Export-Import Bank of Korea. The Parent Bank is 100% owned by the Korean government and is solely mandated to promote international trade and investment by providing comprehensive export credit and guarantee programmes to support Korean enterprises in conducting overseas business.

### 2.2 The Board

The Board of directors has responsibility for the overall governance and risk management of the Bank. There are six members on the Board, comprising of 2 executive directors and 4 non-executive directors (“NEDs”), of which two are independent non-executive directors (“INEDs”). Directors are appointed by the Parent Bank and selected according to their knowledge and experience and the needs of the Bank. The directors as at the date this report was published were:

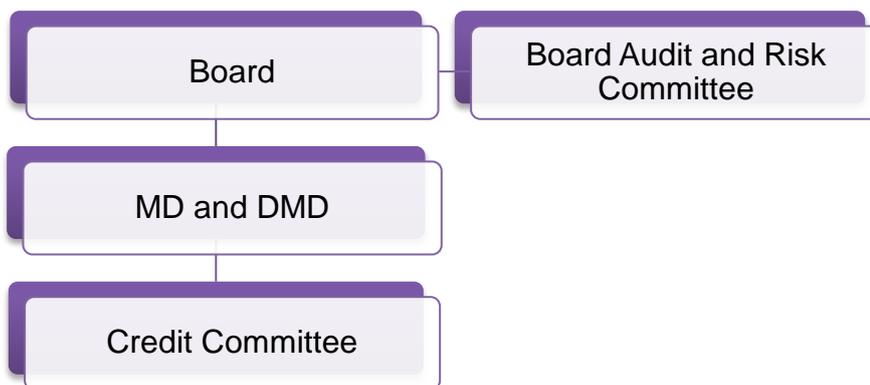
Name	Appointed	Position with KEXIM UK	Directorships including KEXIM UK
Jong-Hyuck AHN	3-Jan-2017	Non-Executive Director	1
Christopher FITZGIBBON	17-Mar-2014	Chairman and Independent Non-Executive Director	2
Dominic GIBB	1-Jul-2016	Independent Non-Executive Director	1
Jong-Min HONG	18-Sep-2017	Deputy Managing Director (“DMD”)	1
Hojun KIM	28-Mar-2017	Managing Director (“MD”)	1
Joong Yul KOH	23-Sep-2016	Non-Executive Director	1

### 2.3 Board & Executive Committees

KEXIM UK operates two committees as stated in the chart below. The Board has delegated responsibility for the day-to-day management of the business to the MD and DMD. The Audit and Risk Committee is a sub-committee of the Board. The MD has delegated responsibility for certain risk processes and decision making to the Credit Committee that he chairs.

The Board has established an Audit and Risk Committee to monitor compliance with the Bank’s risk management policies and procedures, and for reviewing the adequacy of the risk management framework in relation to the risks faced by the Bank.

The diagram below shows the various Board and Management Committees and their reporting lines:



The different committee constituents, roles and responsibilities can be summed up as follows:

Constitution and Responsibilities of Committees			
Committee	Members	Responsibilities	Frequency of meetings
Audit and Risk Committee	<p><b>Chaired by Independent Non-Exec. Director;</b> members are another Independent NED and DMD</p>	<ul style="list-style-type: none"> <li>Review and recommend for the approval of the Board overall strategies, policies, processes and systems for the effective identification, measurement, monitoring and control of the Bank’s principal business risks;</li> <li>Review and recommend for the approval of the Board the appropriate level of risk appetite for the Bank’s principal business activities;</li> <li>Review and recommend for the approval of the Board management’s reports on the Bank’s overall risk profile, including the ICAAP, ILAAP and RRP;</li> <li>Monitor internal controls and governance and to report periodically to the Board;</li> <li>Review the accounts and accounting policies of the Bank including the draft annual financial statements;</li> <li>Consider and advise the Board on the appointment of the external auditor, the audit fee, the provision of any non-audit services by the external auditor and any questions of resignation or dismissal of the external auditor;</li> <li>Consider the external audit opinion and any relevant issue raised in the external auditor’s management letter and to confirm with the external auditors that the effectiveness of the internal control system has been reviewed, and to comment on this in its reports to the Board;</li> <li>Review the planned activity for the external audit; to consider major findings of external audit investigations and to monitor management response; to discuss with the external auditor before the audit commences the nature and scope of the audit; to discuss problems and reservations arising from the interim and final audits, and any matters the auditor may wish to discuss (in the absence of management where necessary); to monitor</li> </ul>	Quarterly or as work requires

<b>MD &amp; DMD</b>		<p>the performance and effectiveness of the external audit;</p> <ul style="list-style-type: none"> <li>• Oversee policy on fraud prevention, whistle-blowing processes and arrangements for special investigations;</li> <li>• Satisfy itself that satisfactory arrangements are in place to promote economy, efficiency and effectiveness;</li> <li>• Consider elements of the annual financial statements in the presence of the external auditor, including the auditor's formal opinion and any corporate governance statement;</li> <li>• Help ensure that the Committee implements best practice in all its deliberations</li> </ul>	
	<p>This is not a committee. However, the individual roles of the MD &amp; DMD together form the function of the Executive Management Team, which in larger banks is located in the Executive Committee (EXCO).</p>	<ul style="list-style-type: none"> <li>• Run day-to-day business, approving new business and operational budgeting;</li> <li>• Key involvement in review and challenge of ICAAP and ILAAP documents;</li> <li>• Ensure business conduct of all units is in line with Board-approved strategy;</li> <li>• Consider Bank performance in the context of financial ratios, risk levels undertaken;</li> <li>• Report conduit to the Board;</li> <li>• Monitor and react to external shifts and trends amongst competitors and regulatory developments</li> </ul>	As work requires
<b>Credit Committee (CC)</b>	<p><b>Chaired by MD;</b> members are DMD, Manager Credit and Manager Securities</p>	<ul style="list-style-type: none"> <li>• Oversee lending and debt securities investment;</li> <li>• Advise Board on concentration risk and credit events;</li> <li>• Approve risk targets and credit limits;</li> <li>• Manage the Bank's own credit rating system;</li> <li>• Approve new credit products;</li> <li>• Review credit risk reports;</li> <li>• Take action and make provisions</li> </ul>	As work requires

## 2.4 Diversity policy

KEXIM UK is committed to the principle of equal opportunity in employment.

Accordingly, management will ensure that recruitment, selection, training, development and promotion procedures result in no job applicant or a member of staff receiving less favourable treatment because of a protected characteristic i.e. race, colour, nationality, ethnic or national origin, religion or belief, disability, trade union membership or non-membership, gender, sexual orientation, pregnancy and maternity, gender reassignment, marriage/civil partnership, age, or on the basis of being a part-time or fixed term worker. The Bank's objective is to ensure that individuals are selected, promoted and otherwise treated solely on the basis of their relevant aptitudes, skills, abilities and the needs of the organisation.

## 2.5 Board Recruitment policy

Executive Directors and Group NED's are nominated by the Parent Bank and their appointment is approved by the Bank's Board. Local Independent NED's are recruited in the UK. The Board considers each nomination on the basis of the individual competence, skill and experience measured against identified objective criteria. The Board is keen to promote diversity when recruiting new directors. Regulatory approval is co-ordinated through the Company Secretary.

### 3 Risk Management & Risk Appetite

---

The Bank has a robust risk management framework, policies and procedures to manage its risk profile.

As part of the risk framework the Bank produces a Business Risk Policies & Procedures statement, Annual Risk Management Plan and Interbank Counterparty Limits. These well-articulated policy documents outline the general procedures and limits, on how the Bank identifies, analyses and mitigates particular risks that are inherent to the Bank's business activities, including stress testing.

The Board sets the Bank's overall risk appetite, which are in line with business' objectives. The Bank risk appetite thresholds and tolerances are recommended to the Board by Executive Directors and the Credit Committee. The Board reviews these recommendations in line with the specific business activities and Bank's objectives.

The MD and DMD in their joint role as the Bank's executive team continue to ensure that the risk management framework is fully integrated with the day-to-day risk management processes of KEXIM UK, ensuring all staff members have the role of ensuring potential risks are identified and escalated to executive managers.

KEXIM's risk management framework is based on the 'three lines of defence model'. Under this model, responsibilities and accountabilities for risk management resides with all levels within the Bank, from the Board of Directors down to the lowest levels. The first line of defence consists of all business line functions with primary responsibilities for risk management, the second line of defence consists of functions with primary responsibilities for oversight and monitoring, and the third line of defence consists of the internal and external audit functions providing independent assurance and reporting directly to the Board.

The Board retains overall responsibility for the oversight of risk and risk management within the Bank and determine what types of risk are acceptable.

#### 3.1 Principal risks

The Bank has identified seven principal risk types across its business model, which might adversely impact its ability to achieve its strategic objectives. The principal risks that the Bank is exposed to are as follows:

- Credit and Counterparty Credit Risk
- Market Risk
- Liquidity Risk
- Operational Risk
- Interest Rate Risk
- Business Risk
- Other Risks (Insurance, Regulatory, Technological and Residual Risks)

A brief description of each principal risk and framework for managing them are provided below.

### 3.1.1 Credit and counterparty credit risk

Credit risk is the risk that counterparties will be unable to meet their obligations to the Bank. Credit risk arises principally from lending but also from securities investment transactions involving both cash and derivative instruments. The most important step in managing this risk is the initial decision whether or not to extend credit. The Bank's strong credit culture extends to the management of resultant exposures to individual and connected group counterparties, concentration limits and the monitoring of counterparty creditworthiness.

The Bank has adopted a policy of only dealing with creditworthy counterparties and obtaining sufficient collateral where appropriate, as a means of mitigating the risk of financial loss from defaults. The Bank has opted to nominate all three of Fitch, Moody's Investor Service and Standard & Poor's as External Credit Assessment Institutions ("ECAIs"), whose ratings are used for evaluating the appropriate risk weightings. The Bank's exposure and the credit ratings of its counterparties are continuously monitored and the aggregate value of transactions concluded is spread amongst approved counterparties.

The Bank assesses and measures credit risk based on the Standardised Approach, which most accurately reflects the Bank's risk weighted credit exposure relative to its size and the nature of its business. The credit risk capital requirement is calculated as 8% of the total risk weighted assets.

The day-to-day management of the credit risk function is performed by designated members of the management team who perform regular appraisals of counterparty credit quality for consideration by the Credit Committee.

#### Credit Risk Mitigation:

- Adhering to the Credit Risk Policy document which details the Bank's approach to credit risk.
- Implementing a conservative credit policy, which serves as a robust mitigant. KEXIM UK also intends to ensure that individual corporate and committed off-balance exposures are within the large exposure limits. This provides some diversification of the portfolio.
- The balance sheet is a mixture of high quality corporate bonds, bank placements and corporate lending (based on credit assessment). This reduces the credit risk and exposure.
- Co-financing the corporate lending services business with the Parent Bank providing enhanced assurance.
- Obtaining Guarantees from the Parent company of the borrower (subsidiary), and in some cases the Parent Bank.
- Conducting a review of the counterparty's credit rating ensuring that ratings of counterparties are average or above. This is completed by the Credit Committee on a semi-annual basis.

The table below shows the exposure and risk weighted exposure applicable for credit risk as at 31 December 2016<sup>1</sup>:

---

<sup>1</sup>Total minimum capital requirement for credit risk using the standardised approach is calculated by 8% of total risk weighted. For 31 December 2016 and 2015 the capital requirement are respectively £21.4 million (2016) and £18.7 million (2015)

Total Credit Risk by Exposure Class 31 December 2016 £000s	Original Exposure Pre-Conversion Factors	Credit Risk Mitigation & Value Adjustments	Fully Adjusted Exposure Value (after adjustments & mitigation)	Risk Weighted Exposure
Central Governments or Central Banks	23,485	-	23,485	3,317
Public Sector Entities	16,695	-	16,695	5,292
Multilateral Development Banks	9,178	-	9,178	1,719
Institutions	38,421	-	38,421	14,441
Corporates	285,291	11,372	273,919	240,024
Equity	-	-	-	-
Other Items	2,758	-	2,758	2,758
<b>Total</b>	<b>375,828</b>	<b>11,372</b>	<b>364,456</b>	<b>267,551</b>

Total Credit Risk by Exposure Class 31 December 2015 £000s	Original Exposure Pre-Conversion Factors	Credit Risk Mitigation & Value Adjustments	Fully Adjusted Exposure Value (after adjustments & mitigation)	Risk Weighted Exposure
Central Governments or Central Banks	5,718	-	5,718	4,438
Public Sector Entities	7,549	-	7,549	4,106
Multilateral Development Banks	4,714	-	4,714	0
Institutions	98,948	-	98,948	38,063
Corporates	197,822	-	197,822	182,971
Equity	1	-	1	0
Other Items	4,125	-	4,125	4,125
<b>Total</b>	<b>318,877</b>	<b>-</b>	<b>318,877</b>	<b>233,703</b>

### 3.1.1.1 Maturity Analysis of Credit Risk

The analysis below shows the cash flows on the Bank's financial assets on the contractual residual maturity by exposure class:

As at 31 Dec 2016 £000s	Undefined Maturity	Less than 1 month	More than one month but less than three months	More than three months but less than one year	More than one year but less than five years	More than five years	Total
Central Governments or Central Banks	-	18,683	-	1,200	3,408	194	<b>23,485</b>
Public Sector Entities	319	-	-	8,888	7,488	-	<b>16,695</b>
Multilateral Development Banks	-	-	-	9,178	-	-	<b>9,178</b>
Institutions	11,339	2,829	1,730	2,440	20,083	-	<b>38,421</b>
Corporates	672	14,036	43,292	110,873	111,368	5,050	<b>285,291</b>
Other Items	1,363	-	-	63	1,332	-	<b>2,758</b>
<b>Total</b>	<b>13,693</b>	<b>35,548</b>	<b>45,022</b>	<b>132,642</b>	<b>143,679</b>	<b>5,244</b>	<b>375,828</b>

As at 31 Dec 2015 £000s	Undefined Maturity	Less than 1 month	More than one month but less than three months	More than three months but less than one year	More than one year but less than five years	More than five years	Total
Central Governments or Central Banks	-	-	-	1,671	3,564	483	<b>5,718</b>
Public Sector Entities	-	-	1,554	-	5,995	-	<b>7,549</b>
Multilateral Development Banks	-	-	-	4,714	-	-	<b>4,713</b>
Institutions	7,461	35,212	-	15,289	35,612	5,374	<b>98,948</b>
Corporates	-	3,169	11,546	63,960	116,221	2,926	<b>197,822</b>
Equity	-	-	-	-	-	1	<b>1</b>
Other Items	2,803	1	-	48	1,273	-	<b>4,125</b>
<b>Total</b>	<b>10,264</b>	<b>38,382</b>	<b>13,100</b>	<b>85,681</b>	<b>162,667</b>	<b>8,784</b>	<b>318,877</b>

### 3.1.1.2 Credit Quality Step Analysis

The Bank calculates credit risk using the standardised approach and uses 3 ECAI's (Fitch, Moody's Investor Service and Standard & Poor's), in order to evaluate the appropriate credit quality step. The credit ratings

identified by the ECAI's are grouped together in different Credit Quality Steps ("CQS"), and the CQS determines the risk weighting. The CQS are categorised based on the credit quality of the risks, and are graded from CQS1 to CQS6, with CQS1 being of the highest quality and CQS6 being the lowest and subject to the highest risk weighting.

The following table illustrates exposure values associated with each credit quality step, as of 31 December 2016 and 2015:

Credit Quality Step Analysis	CQS 1	CQS 2	CQS 3	CQS 4	CQS 5	UNRATED	TOTAL
31 Dec 2016 £000s							
Rating scale	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to BB-	B+ to B-		
Central Governments or Central Banks	18,683	1,856		812	2,134		23,485
Public Sector Entities	11,390	1,739	3,566				16,695
Multilateral Development Banks	5,740		3,438				9,178
Institutions	20	21,196	17,205				38,421
Corporates	6,740	54,115	33,226	6,831		184,379	285,291
Other Items						2,758	2,758
<b>Total</b>	<b>42,573</b>	<b>78,906</b>	<b>57,435</b>	<b>7,643</b>	<b>2,134</b>	<b>187,137</b>	<b>375,828</b>

Credit Quality Step Analysis	CQS 1	CQS 2	CQS 3	CQS 4	CQS 5	UNRATED	TOTAL
31 Dec 2015 £000s							
Rating scale	AAA to AA-	A+ to A-	BBB+ to BBB-	BB+ to BB-	B+ to B-		
Central Governments or Central Banks	-	1,600	-	2,024	2,094	-	5,718
Public Sector Entities	3,806	1,313	2,430	-	-	-	7,549
Multilateral Development Banks	4,714	-	-	-	-	-	4,714
Institutions	13,026	53,377	32,545	-	-	-	98,948
Corporates	8,752	38,428	29,182	2,081	-	119,379	197,822
Equity	-	1	-	-	-	-	1
Other Items	-	-	-	-	-	4,125	4,125
<b>Total</b>	<b>30,297</b>	<b>94,719</b>	<b>64,157</b>	<b>4,104</b>	<b>2,094</b>	<b>123,505</b>	<b>318,877</b>

### 3.1.1.3 Credit risk concentration by Geography

The Bank manages credit risk concentration by applying and managing total exposure limits to prevent excessive risk concentration to specific borrowers and geographies. The Bank analyses its exposures by country on a monthly basis. KEXIM UK has large proportion of assets being lodged with institutions of the same country of exposure as the Parent organisation, namely Republic of Korea. The intent of the Bank is to ensure that credit exposures are held in economically stable regions whilst also ensuring that risks are minimised via a geographically even spread.

The table below summarises the geographical credit concentration risk for the Bank as of 31 December 2016 and 2015:

Concentration by Location	UK	ASIA	EUROPE	AMERICAS	REST OF THE WORLD	TOTAL
<b>31 December 2016</b> £000s						
Central Governments or Central Banks	-	2,946	1,856	18,683	-	23,485
Public Sector Entities	-	13,129	-	3,566	-	16,695
Multilateral Development Banks	-	-	5,740	-	3,438	9,178
Institutions	13,164	4,048	2,434	18,775	-	38,421
Corporates	20,147	156,099	16,978	48,543	43,524	285,291
Other Items	2,758	-	-	-	-	2,758
<b>Total</b>	<b>36,068</b>	<b>176,222</b>	<b>27,008</b>	<b>89,567</b>	<b>46,962</b>	<b>375,828</b>

Concentration by Location	UK	ASIA	EUROPE	AMERICAS	REST OF THE WORLD	TOTAL
<b>31 December 2015</b> £000s						
Central Governments or Central Banks	-	4,118	1,600	-	-	5,718
Public Sector Entities	-	5,119	-	2,430	-	7,549
Multilateral Development Banks	-	-	2,692	2,022	-	4,714
Institutions	50,908	20,718	6,984	20,338	-	98,948
Corporates	19,096	114,145	14,843	25,264	24,474	197,822
Equity	1	-	-	-	-	1
Other Items	4,125	-	-	-	-	4,125
<b>Total</b>	<b>74,130</b>	<b>144,100</b>	<b>26,199</b>	<b>50,054</b>	<b>24,474</b>	<b>318,877</b>

### 3.1.1.4 Counterparty credit risk

Counterparty Credit Risk ("CCR") can be defined as the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows.

KEXIM UK encounters counterparty credit risk from its derivative portfolio over the use over the counter (“OTC”) derivative (Interest rate swaps and currency swaps) transactions to hedge exposures on foreign exchange risk and interest rates in the banking book. The mark-to-market method is used to measure the net replacement cost. The potential future credit exposure is calculated by multiplying the notional principle of underlying values by the appropriate regulatory set percentage. The totals are added together to arrive at the total exposure value and the multiplied by a set percentage to obtain the CCR capital requirement. In the case of KEXIM UK, the capital requirement for counterparty credit risk has been covered under the standardised approach of credit risk.

The Bank has exposure to Over-the-Counter (OTC) derivatives, in the form of currency swaps and interest rate swaps. This will give rise to Credit Valuation Adjustment (CVA) risk.

Credit Valuation Adjustment (CVA) risk is the risk of loss caused by changes to the credit spread of a swap due to changes in the counterparty’s credit quality. As of 31 December 2016 the capital requirement due to CVA risk, under the standardised approach, was £10,360.

#### **3.1.1.5 Credit risk mitigation**

The Bank has put policies in place which allow the use of credit mitigation to reduce Credit Risk. As at 31 December 2016, the Bank has made use of eligible guarantees that it has received. Therefore, allowing the Bank to reduce its credit risk exposure on external counterparties. As of December 2016 the total amount of credit risk mitigation used is £11.4 million

#### **3.1.1.6 Impairment**

The Bank’s accounting policy for the determination of impairment is set out in section 2 page 22 of the 2016 Annual Report and Financial Statements. The impairment of financial assets is set out below.

Financial assets, other than those at Fair Value through Profit & Loss (“FVTPL”), are assessed for indicators of impairment at each balance sheet date. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected. As of 31 December 2016, KEXIM UK had no impaired exposures.

The Bank assesses at the end of each reporting period whether there is any objective evidence that a financial asset or group of financial assets is impaired.

#### **Loans**

If there is objective evidence that an impairment loss on loans carried at amortised cost has been incurred, the amount of the loss is measured as the difference between the loan’s carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the loan’s original effective interest rate. The Bank first assesses whether objective evidence of impairment exists individually for loans that are individually significant (individual evaluation of impairment), and individually or collectively for financial assets that are not individually significant.

If the Bank determines that no objective evidence of impairment exists for an individually assessed loan, whether significant or not, it includes the loan in a group of loans with similar credit risk characteristics and collectively assesses them for impairment (collective evaluation of impairment).

Individual assessment of impairment losses are calculated by discounting the expected future cash flows of a loan at its original effective interest rate and comparing the resultant present value with the loan’s current carrying amount. This process normally encompasses management’s best estimate, such as

operating cash flow of the borrower and fair value less cost to sell of any collateral held and the timing of anticipated receipts.

Collective assessment of impairment is based on the historical loss experience which is used to estimate inherent incurred loss on groups of loans. Such methodology incorporates factors such as type of product and borrowers, credit rating, portfolio size, loss emergence period, recovery period and applies probability of default (“PD”) on each loan (or pool of loans) and loss given default (“LGD”) by type of collateral. Also, consistent assumptions are applied to form a formula-based model in estimating inherent loss and to determine factors on the basis of historical loss experience and current condition. The methodology and assumptions used for estimating future cash flows are reviewed regularly to reduce any differences between loss estimates and actual loss experience.

#### **Available-For-Sale (“AFS”) financial assets**

When a decline in the fair value of an AFS financial asset has been recognised in other comprehensive income and there is objective evidence that the asset is impaired, the cumulative loss (the difference between the acquisition cost and current fair value, less any impairment loss on that financial asset previously recognised in profit or loss) that had been recognised in other comprehensive income is reclassified from equity to profit or loss as part of other operating income and expenses.

If, in a subsequent period, the fair value of an AFS debt instrument increases and the increase can be objectively related to an event occurring after the impairment loss was recognised in profit or loss, the impairment loss is reversed, with the amount of the reversal recognised in profit or loss as part of other operating income and expenses. However, impairment losses recognised in profit or loss for an AFS equity instrument are not reversed through profit or loss.

#### **Held-to-maturity financial assets**

If there is objective evidence that an impairment loss on held-to-maturity financial assets carried at amortised cost has been incurred, the amount of the loss is measured as the difference between the assets’ carrying amount and the present value of estimated future cash flows discounted at the financial asset’s original effective interest rate. Impairment loss of held-to-maturity financial assets is directly deducted from the carrying amount. The amount of the loss is recognised in profit or loss as part of other operating income and expenses. In case of financial asset classified as held-to-maturity, if, in a subsequent period, the amount of the impairment loss is decreased and objectively related to the event occurring after the impairment is recognised, the previously recognised impairment loss is reversed to the extent of amortised cost at the date of recovery. The amount of reversal is recognised in profit or loss as part of other operating income and expenses in the statement of comprehensive income.

### **3.1.2 Market risk**

Market risk is the risk that changes in the level of interest rates, the levels of exchange rates between currencies or the price of securities and other financial contracts could have an adverse impact on profits.

The Bank’s activities expose it primarily to the financial risks of changes in interest rates and foreign currency exchange rates. The Bank enters into derivative financial instruments to manage its exposure to interest rate and foreign currency risk, including:

- 1) Interest Rate Swaps – to mitigate the risk of rising interest rates; and
- 2) Cross Currency Swaps - to hedge exchange rate risk

Market risk exposures are measured using value-at-risk (“VaR”) analysis supplemented by sensitivity analysis. The VaR measure estimates the potential loss in pre-taxation profit over a given holding period for a specified confidence level. VaR methodology is a statistically defined, probability-based approach that takes into account market volatilities as well as risk diversification by recognising offsetting positions and correlations between products and markets. Risks can be measured consistently across all markets and products, and risk measures can be aggregated to arrive at a single risk number. The one-day 99 per cent VaR number used by the Bank reflects the 99 per cent probability that the daily loss will not exceed the reported VaR.

In addition, sensitivity analysis evaluates the impact of a reasonably possible change in interest or foreign currency rates over a year. The longer time frame of sensitivity analysis complements VaR and helps the Bank to assess its market risk exposure.

As KEXIM UK does not operate a trading book; the other market risk applicable to KEXIM UK is foreign currency risk. This is calculated using the Position Risk Requirement (PRR) which is 8% of the foreign currency open position.

#### **Market Risk Mitigation:**

- It is the Bank’s policy that all foreign exchange positions should be hedged with a maximum overnight position of not more than £1.25m.
- Manager Treasury & Securities controls and manages market risk exposures to optimise return relative to risks and net interest income.
- A conservative and cautious approach is adopted within overall parameters approved by the Board.
- A low key approach is adopted towards trading. There is no market making in any products and no trading in FX and interest rate products other than to hedge the banking book.
- The Bank’s financial investments (such as bonds) portfolio are held-to-maturity, fair value options and available for sale securities. No trading portfolios are maintained.
- Risk and concentration parameters are approved by the Board and managed through the Credit Committee and the credit management process.
- Market risks are identified and evaluated for all products as part of the credit approval process.
- Value-at-Risk analysis is employed by KEXIM UK and managed by the Manager Treasury & Securities.

#### **3.1.3 Liquidity risk**

Liquidity risk is the risk that the Bank’s cash and committed facilities may be insufficient to meet its obligations as they fall due.

The Bank measures and manages its cash flow commitments on a daily basis and maintains a diversified portfolio of high quality liquid assets (“HQLA”), which will enable KEXIM UK to meet obligations as they fall due under normal and a range of stressed conditions.

The Bank uses various methods, including predictions of future daily cash positions, to monitor and manage its liquidity risk to avoid undue concentration of funding requirements at any point in time or from any particular source. Maturity mismatches between lending and funding are managed within internal risk policy limits.

The Bank follows the PRA and FCA liquidity guidance and assesses liquidity risk through the Internal Liquidity Adequacy Assessment Process (“ILAAP”) at least once a year and is reviewed and approved by the Board. The ILAAP is subject to rigorous review and challenge by both the executive management team and the Board. The ILAAP report is submitted to the Bank’s prudential regulator, which will periodically revisit the Individual Liquidity Guidance requirements for the Bank in the light of the most recent ILAAP and the regulator’s own supervisory processes.

The Manager Treasury & Securities ensures that a strong liquidity position is maintained in line with the risk appetite. Up-to-date liquidity positions, available at a granular level are reports and circulated to management daily.

As 31 December 2016 the Bank’s HQLA buffer was £51.6 million, in the form of cash and HQLA securities, and the LCR was 20831% well above the regulatory requirement.

### **3.1.4 Operational risk**

The primary operational risk arises from the potential for computer system breakdown and the need for the rapid recovery of operational data. Other operational risks include front and back office errors, fraud, breaches in internal controls and external events resulting in financial loss or reputational damage. The Bank manages these risks through appropriate risk controls and loss mitigation actions. These actions include a balance of policies, procedures, internal controls and contractual business continuity arrangements.

KEXIM UK has adopted the Basis Indicator Approach (“BIA”) for operational risk, which is 15% of three-year average of the sum of the Bank’s net interest income and net non-interest income.

KEXIM UK is a small-sized wholesale bank. The Bank operates a strict policy of segregation of duties, meaning that no member of the marketing side has access to any payment or data update process within the Bank. Equally, no member of the operations side of the organisation has any influence upon the terms and conditions of any business conducted by the marketing officers. KEXIM UK has robust governance structure to reduce the risk of a failure in processes. Extensive training is conducted at all levels of KEXIM UK and a detailed disaster Recovery Plan where the mitigation and required action is outlined in the event of a disaster is in place.

### **3.1.5 Interest rate risk**

Interest rate risk is the possibility that changes in interest rates will result in higher financing costs and/or reduced income from the Bank’s interest bearing financial assets and liabilities.

The Bank is exposed to interest rate risk in the banking book, as the Bank lends at floating and fixed interest rates. The risk is managed by the Bank by maintaining an appropriate mix between fixed and floating rate borrowings, and by the use of interest rate swap contracts. Hedging activities are evaluated regularly to align with interest rate views and defined risk appetite; ensuring the most cost-effective hedging strategies is applied.

Interest rate risk is managed by measuring interest rate Earnings at Risk (“EaR”) and interest rate VaR. As part of the sensitivity analysis, the Bank analysis reflects market environment, product features and the Bank’s strategies.

The sensitivity analysis is determined based on the exposure to interest rates for both derivatives and non-derivative instruments consistently. For floating rate liabilities, the analysis is prepared assuming the amount of liability outstanding at balance sheet date was outstanding for the whole year.

Sensitivity analysis calculating the impact of a 200 bps movement in interest rates is done to evaluate an impact in interest rate movements.

The table below shows the impact on income of a 200 basis point rise or fall in the yield curve, as of 31 December 2016:

200 basis points increase £000s	% of total regulatory capital	200 basis points decrease £000s	% of total capital resources
(1,008)	(2.2%)	1,083	2.4%

### 3.1.6 Business risks

This is the risk that the business will fail to establish and sustain viability due to competition, lack of availability of business, pace of growth, inappropriate strategy and business plans, unrealistic targets or inability to recruit and retain professional staff.

KEXIM UK's main business segment is lending to corporates. Any significant impact on this business segment will impact the Bank. The Bank intends to make a capital allocation as a certain proportion of the loan book to cover the risk of deterioration in this business segment, in line with the implementation of accounting standards.

The Bank uses SWIFT for electronic funds transfer and if the SWIFT system were to fail, almost every bank worldwide would be adversely affected. The Bank maintains a flat cash position within its accounts based upon the expected delivery of funds from its counterparties, all of whom are major banking institutions. It is recognised, though, that there exists a small chance of a systemic failure leading to non-receipt of expected funds which could, in turn, lead to the Bank seeking temporary emergency funds. The Bank would expect full recovery of any costs involved in such an event, once the process of making the required claims has run its course. The Bank has allocated additional capital resources to cover incidental operational charges based upon the failure of others to make timely payments.

As for the mitigation of business risk, KEXIM UK's management team and Board view that the proposed business growth targets are achievable provided there is no significant deterioration in the macro-economic environment. The business risk is mitigated by the following:

- Adequacy of capital relative to costs and risk profile.
- Forecast of significant growth in core and niche market.
- Provision of funding by the Parent.

Budgets and financial forecasts are already very conservative. A specific capital allocation has been provided for business risks, though in practice there is an overlap with operational risk allocation. Taken together these represent a material allocation to cover unforeseen risks, including 'any other' i.e. unspecified risks.

### 3.1.7 Other risks

These are mainly residual risks that are not covered fully in the earlier six principal risks.

Risk	Mitigants
Insurance Risk	<ul style="list-style-type: none"> <li>KEXIM UK has taken out policies which comprehensively cover the risks identified. This cover has been obtained through reputable UK-based brokers with first class insurance companies. The cover is reviewed annually with advice from an external broker.</li> </ul>
Regulatory Risk	<ul style="list-style-type: none"> <li>The risk is mitigated by continuing to maintain a strong compliance ethos across the entire organisation, commitment to comprehensive staff training in regulatory aspects and compliance and an experienced Manager Compliance.</li> </ul>
Technological Risk	<ul style="list-style-type: none"> <li>KEXIM UK does not use untried nor untested technology systems. All systems including the core banking system have been recently implemented and employ the latest technology. The Bank's strategy is to install only systems that are known to offer a high degree of stability, ease of use and standardisation of operation.</li> </ul>
Residual Risk	<ul style="list-style-type: none"> <li>KEXIM UK believes it has put in place a robust governance structure. Taken together with the experience of the management team and the 'four eyes' principle, this risk is effectively managed.</li> <li>KEXIM UK has taken out insurance policies which comprehensively cover the risks that may arise due to incident of fraud.</li> </ul>

## 3.2 Risk Declaration - Adequacy of the risk management arrangements

The Board is ultimately responsible for the Bank's risk management framework. The risk management framework is the totality of systems, structures, policies, processes and people within the Bank that identify, assess, mitigate and monitor all internal and external sources of risk that could have a material impact on the Bank's operations.

The Board is of the opinion that it has taken appropriate steps to provide reasonable assurance that the activities of the Bank are and will continue to be managed in a prudent manner which is under-pinned by the governance and risk management framework.

The Board provides an annual declaration on the adequacy of the Bank's risk management arrangements and provides assurances that the risk management systems in place are adequate and in line with Risk Appetite. This is provided in Appendix IV of this document.

## 4 Own Funds

Own funds (also referred to as capital resources) is the type and level of regulatory capital which must be held to enable the Bank to absorb losses. The Bank is required to hold own funds in sufficient quantity and quality in accordance with CRD IV which sets out the characteristics and conditions for own funds.

Under the CRD IV framework three tiers of capital are recognised, being Common Equity Tier 1 (“CET1”), Tier 1 and Tier 2 Capital with the sum of Tier 1 and Tier 2 Capital constituting “own funds”. The table below shows the breakdown of KEXIM UK’s capital resources:

<u>Type of Capital</u>	<u>31-12-2016</u> £000s	<u>31-12-2015</u> £000s
<b>Common Equity Tier 1 capital</b>		
Paid up capital instruments	20,000	20,000
Retained Earnings	12,859	11,646
Accumulated other comprehensive income	(26)	(8)
<b>Sub-Total</b>	<b>32,833</b>	<b>31,638</b>
Deductions for non-qualifying items	0	0
<b>Total Common Equity Tier 1 capital</b>	<b>32,833</b>	<b>31,638</b>
<b>Additional Tier 1 capital</b>	<b>0</b>	<b>0</b>
<b>Tier 2 capital</b>		
Subordinated Loan	12,131	12,102
General credit risk adjustments	404	260
<b>Total Tier 2 capital</b>	<b>12,535</b>	<b>12,362</b>
<b>Total regulatory capital<sup>2</sup></b>	<b>45,368</b>	<b>44,000</b>

**Common Equity Tier 1 capital** comprises of the permanent paid up capital instruments, retained earnings and accumulated other comprehensive income resulting from the revaluation of the available-for-sale financial assets. This is the core capital of the Bank and acts as a buffer to absorb losses to protect depositors and other creditors of the Bank.

**Tier 2 capital** is the supplementary capital and in KEXIM UK’s case it comprises of a Subordinated Loan amortised over the life of the loan and a general provision for its loan portfolio.

<sup>2</sup>A reconciliation of the regulatory capital to the balance sheet is shown in Appendix I.

## 5 Compliance with CRD IV and Capital Adequacy

---

### 5.1 Capital requirements framework

In order to protect the solvency of the Bank, the Bank holds internal capital resources to absorb unexpected losses. The capital resources requirement is determined by the regulators guidance.

The Capital Framework as applicable to the Bank business model is described below.

**Pillar 1** sets out the minimum capital requirements that the Bank is required to meet for credit, market, operational and credit valuation adjustment risk.

**Pillar 2A / Individual Capital Guidance (ICG)** sets out requirements for the Bank with regard to its internal capital adequacy assessment processes (“ICAAPs”), internal procedures and control mechanisms. The PRA requires that the Bank meet its Pillar 2A with at least 56% Common Equity Tier 1 (“CET1”).

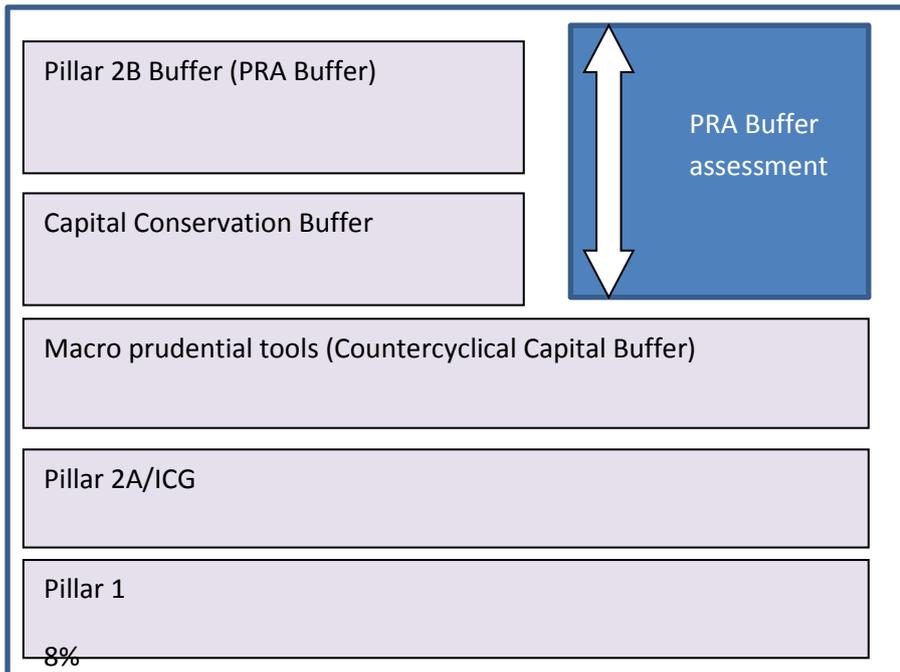
**Countercyclical buffer (CCyB)** requires the Bank to build up capital when aggregate growth in credit is judged to be associated with a build-up of system-wide risk. The buffer can be drawn down to absorb losses during periods of stress. The Financial Policy Committee (FPC) is responsible for setting the UK CCyB rate that applies to eligible UK exposures. The UK CCyB rate as at 31 December 2016 was 0%.

**Capital conservation buffer (CCoB)** - the purpose of this buffer is to enable firms to absorb losses in stressed periods. A capital conservation buffer of 2.5 per cent, comprised of Common Equity Tier 1 capital, is required to be maintained above the regulatory minimum capital requirement. The PRA has introduced this buffer using a phased approach from 1 January 2016, in line with the transition timetable set out in the Capital Requirements Directive (CRD). The final level of 2.5% must be attained by 1 January 2019.

**Pillar 2B (PRA buffer)**-The PRA buffer is an amount of capital that the Bank must hold, in addition to its’ ICG, to cover losses that may arise under a severe scenario, but avoiding duplication with the CRD IV buffers (CCyB and CCoB). The PRA Buffer imposes a firm-specific PRA buffer incremental to Pillar 1, Pillar 2A and the CRD buffers. The PRA determines the amount required to be maintained by firms using a range of factors, but not limited to, firm-specific stress test results.

Please note that this is a simplified view of the capital framework, and there are other elements like systemic buffers and sectoral capital requirements that are currently not applicable to KEXIM UK. These additional elements could be included in the future, based on specific thresholds, exposure types and changes to regulatory guidance. The Bank, due to its simple business model, is unlikely to be identified as a Globally Systemically Important Bank (G-SIB).

The diagram below illustrates a simplified view of the revised capital framework:



## 5.2 Pillar 1 capital requirements

The Bank's overall minimum capital requirement under Pillar 1 is calculated by adding the credit and counterparty credit risk, operational risk, market risk and credit valuation adjustment capital requirements.

Under CRD IV the Bank has adopted the following approaches for the calculation of Pillar 1 minimum capital requirement:

- 1) Standardised approach ("SA") to Credit Risk
- 2) Mart-to-Market method for Counterparty Credit Risk;
- 3) Basic Indicator Approach ("BIA") for Operational Risk;
- 4) Position Risk Requirement ("PRR") for Market Risk; and
- 5) Standardised Approach for Credit Valuation Adjustment ("CVA").

The table below shows Pillar 1 capital requirement of the Bank at 31 December 2016:

Minimum Capital Requirement (8%) 31 December 2016	RWA £000s	Capital Requirement £000s
<b>Credit and Counterparty Credit Risk (Standardised Approach)</b>	<b>267,551</b>	<b>21,403</b>
Central government or central banks	3,318	265
Public Sector Entities	5,292	423
Multilateral development banks	1,719	137
Institutions	14,441	1,155
Corporate	240,023	19,202
Other items	2,758	221
<b>Operational Risk (Basic Indicator Approach)</b>	<b>9,046</b>	<b>724</b>
<b>Market Risk (Position Risk Requirement)</b>	<b>1,172</b>	<b>94</b>
<b>Credit Valuation Adjustment Risk (Standardised Approach)</b>	<b>133</b>	<b>11</b>
<b>Pillar 1 Capital Resources Requirement</b>	<b>277,902</b>	<b>22,232</b>

### 5.3 Internal Capital Adequacy Assessment Process (ICAAP)

The Bank undertakes a comprehensive formal assessment of its capital adequacy at least on an annual basis, and additionally when considered necessary in the light of changes in market or specific KEXIM UK circumstances, including strategic decisions in respect of the product set offered by the Bank.

The KEXIM UK ICAAP is based on experience gained in running KEXIM UK since its establishment in 1992 and also the business plan for the next three years. The ICAAP is also founded on management's familiarity with the risks and opportunities posed by the particular market focus adopted by KEXIM UK. This experience is supplemented by expertise of the non-executive directors and their knowledge of proposed core business activities. There is a clear view at the Board level of the business that works successfully for KEXIM UK, and how it needs to be conducted. The rationale behind Pillar 2 calculations contained within the ICAAP is therefore to allocate capital for the various risks well recognised in the type of business carried out by KEXIM UK, and also to acknowledge and ensure that the transactions carry appropriate risk mitigation measures and are executed and controlled with the requisite operational competence.

The Board has ultimate responsibility for the ICAAP and submission to the PRA. The MD and DMD in their joint role as the Bank's executive team continue to ensure that it is fully integrated with the day-to-day risk management processes of KEXIM UK.

The ICAAP is subject to rigorous review and challenge by both the executive management team and the Board. The report is submitted to the Bank's prudential regulator, which will periodically revisit the Individual Capital Guidance requirements for the Bank in the light of the most recent ICAAP and the regulator's own supervisory processes.

## 5.4 Capital adequacy

The various capital ratios of the Bank as of 31 December 2016 and 2015, with reference to its risk weighted assets (RWAs) are show below:

	Minimum capital ratio requirement (as a % of RWAs)	Bank's capital ratios 31-Dec-2016	Bank's capital ratios 31-Dec-2015
<b>Common Equity Tier 1 capital</b>	4.5%	11.81%	12.01%
<b>Tier-1 capital</b>	6%	11.81%	12.01%
<b>Total capital</b>	8%	16.33%	16.70%

The PRA in their capacity as supervisors set targets for, and monitor, the capital adequacy of the Bank. Capital adequacy returns are submitted quarterly to the Regulators.

As at 31 December 2016, and throughout the year, the Bank's capital ("Own Funds") exceeded its minimum regulatory requirement.

## 6 Asset Encumbrance

Asset encumbrance arises from collateral pledged against secured lending and secured obligations. As of 31 December 2016, the Bank only has encumbered assets of £2.5 million, arising from the initial margin provided against derivatives. Previously as of December 2015 the Bank had encumbered assets with a carrying value of £27.7 million, relating to the Securities sold under agreement to repurchase and derivatives. KEXIM adopts the definition of encumbrance in accordance with regulatory guidelines.

The Tables below show the encumbered assets as detailed in the regulatory returns provided to the PRA:

Asset encumbrance – 31/12/2016 £000s	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of non-encumbered assets	Fair value of non-encumbered assets
<b>Template F32.01</b>				
Loans on Demand	-	-	11,339	-
Equity Instruments	-	-	-	-
Debt Securities – Issued by general Governments	-	-	26,279	26,279
Debt Securities – Issued by Financial Institutions	2,452	2,452	64,806	64,806
Debt Securities – Issued by non-financial corporations	-	-	54,490	54,490
Loans and advances other than loans on demand	-	-	203,132	-
Other assets	-	-	2,758	-
<b>Total</b>	<b>2,452</b>	<b>2,452</b>	<b>362,804</b>	<b>145,575</b>

Asset encumbrance – 31/12/2015 £000s	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of non-encumbered assets	Fair value of non-encumbered assets
<b>Template F32.01</b>				
Loans on Demand	-	-	3,246	-
Equity Instruments	-	-	1	1
Debt Securities – Issued by general Governments	-	-	6,314	6,319
Debt Securities – Issued by Financial Institutions	20,408	20,408	49,596	49,596
Debt Securities – Issued by non-financial corporations	7,252	7,252	44,777	44,777
Loans and advances other than loans on demand	-	-	177,505	-
Other assets	-	-	4,125	-
<b>Total</b>	<b>27,660</b>	<b>27,660</b>	<b>285,564</b>	<b>100,693</b>

## 7 Leverage Ratio

The leverage ratio was introduced under the Basel III reforms to restrict the build-up of leverage in the banking sector to avoid distressed deleveraging processes that can damage the broader financial system and the economy.

The calculation of leverage ratio is defined as the ratio of Tier 1 capital to the total exposure measure and applies an equal weighting to all assets regardless of their risk.

The leverage framework has a preliminary target level set by the Basel Committee that banks should hold a minimum leverage ratio of 3%. As of the current reporting date the Bank's leverage ratio is 8.71%, which is well above the proposed minimum requirement.

The table below shows the breakdown of how the leverage ratio is calculated for 31 December 2016 and 2015. The lines/rows of the table that are not applicable to the Bank have not been included:

LRCalc: Leverage Ratio (in £000s)				
	Description	LR Exposure 31/12/2016	LR Exposure 31/12/2015	Ref
	Derivatives: Current replacement cost	1,195	332	A
	Derivatives: Add-on under the mark-to-market method	434	650	B
	Off-balance sheet items with a 20% CCF in accordance with Article 429 (10) of the CRR	8,947	5,653	C
	Off-balance sheet items with a 50% CCF in accordance with Article 429 (10) of the CRR	2,031	-	D
	Other assets	364,254	312,892	E
	<b>Total Leverage Ratio exposure</b>	<b>376,860</b>	<b>319,527</b>	F=A+B+C+D+E
<b>Capital</b>				
	Tier 1 capital	<b>32,833</b>	<b>31,678</b>	G
<b>Leverage Ratio</b>				
	Leverage Ratio	<b>8.71%</b>	<b>9.91%</b>	H=G/F %

## 8 Remuneration

---

### 8.1 Remuneration governance and decision making

The Board is responsible for the oversight of remuneration policies within the Bank. The Board is chaired by an independent non-executive director, and consists of the other non-executive directors as well as the Managing Director. The Board ensures that the Bank is in compliance with all relevant employment law and remuneration rules set out by UK regulators.

The Bank operates two different discretionary bonus schemes for the expatriate employees who are temporarily transferred from the Parent Bank and also for the locally hired employees.

- 1) Transferred employees: The bonus is determined by the performance of the Parent Bank, the Bank and individuals. The bonus scheme and the performance evaluations are governed by the Parent Bank's remuneration policy and the Korean government. The Bank's remuneration practices strictly follow the rules of the Parent Bank. Being a government-owned export credit agency, the Parent Bank does neither pursue profit making nor reward risky operations with higher profit potentials.
- 2) Locally hired employees: The bonus payment is based on the qualitative review of individual performances. Locally hired employees perform middle/back office functions or independent non-executive directorship. Hence, in order to ensure effective check, balance and prudent risk by the management, the Bank designed their performance reviews not directly dependent on the Bank's financial performance.

### 8.2 Performance and reward

The Bank's policy when determining remuneration arrangements is to ensure that there is a clear and identifiable link between reward and performance by combining a number of remuneration components. This ensures an appropriate and balanced remuneration package that reflects the business unit, the employee's rank in the Bank and the professional activity as well as the market practice.

The four remuneration components are:

- 1) Fixed remuneration: This is determined on the basis of the role of the individual employees, including responsibility and job complexity, experience, performance and market conditions.
- 2) Performance based remuneration: This remuneration is awarded in a manner which promotes sound risk management and non-inducement of excessive risk-taking. It motivates and rewards high performers who strengthen long-term customer relations and improve the Bank's performance. The Bank operates a discretionary non-contractual salary increase and/or an annual bonus scheme. In deciding whether to make any payments under the scheme, the Bank takes into account its own financial results, its assessment of an individual's contribution towards those results, its assessment of their overall conduct and performance during the course of the year and such other factors as it considers relevant.
- 3) Pension Schemes
- 4) Other benefits such as medical insurance and mortgage subsidy.

The table below shows the remuneration charged to the profit & loss account during 2016:

Staff Remuneration	Fixed	Variable	Total
Wages & salaries	945,217	46,450	991,667
Social security costs	22,304	0	22,304
Other pension costs	25,731	0	25,731
Other staff costs	24,781	0	24,781
<b>Total</b>	<b>1,064,483</b>	<b>0</b>	<b>1,064,483</b>
<b>Average number of employees</b>			<b>11</b>

The remuneration paid in 2016 was in respect of the principal activities of the Bank, which is corporate banking. The Bank's remuneration policy is in line with the Remuneration Code and the requirements of SYSC 19A.

## Appendix I - Reconciliation from regulatory capital to balance sheet items

	Balance Sheet Extract	Eligible Capital Components
<b>Assets</b>		
Loans and Advances to customers	106,164,773	
<i>of which: gross provisions eligible for Tier 2</i>		404,273
<b>Total Assets</b>	<b>364,446,649</b>	
<b>Liabilities</b>		
Subordinated Loan Capital	17,058,608	
<i>of which: included in Tier 2 capital</i>		12,131,308
<b>Total Liabilities</b>	<b>331,613,904</b>	
<b>Equity</b>		
Called up Share capital	20,000,000	
<i>of which: amount eligible for common equity tier 1 capital</i>		20,000,000
Revaluation Reserve	(26,785)	
<i>of which: amount eligible for tier 1 capital</i>		(26,785)
Profit and Loss Account	12,859,530	
<i>of which: Retained Earnings</i>	11,657,851	
<i>of which: Profit or Loss for year</i>	1,201,679	
<i>of which: amount eligible for tier 1 capital</i>		12,859,530
<b>Total Equity</b>	<b>32,832,745</b>	
<b>Total Liabilities &amp; Equity</b>	<b>364,446,649</b>	
<b>Regulatory Capital Calculation</b>		
Share capital		20,000,000
Retained Earnings		12,859,530
Accumulated Other Comprehensive Income		(26,785)
<b>Common Equity Tier 1 Capital</b>		<b>32,832,745</b>
Subordinated Loans eligible as tier 2 capital		12,131,308
General credit risk adjustment eligible for tier 2 capital		404,273
<b>Tier 2 Capital</b>		<b>12,535,581</b>
<b>Total Regulatory Capital</b>		<b>45,368,326</b>

## Appendix II Own funds disclosure

The following Own Funds disclosure aims to reflect the capital position of the Bank.

Own funds Disclosure Template			
	Common Equity Tier 1 capital: instruments and reserves	(A) Amount at disclosure date (£000s)	(B) Regulation (EU) No 575/2013 Article reference
1	Capital instruments and the related share premium accounts	20,000	26 (1), 27, 28, 29,
	<i>of which: ordinary share capital</i>		EBA list 26 (3)
	<i>of which: instrument type 2</i>		EBA list 26 (3)
	<i>of which: instrument type 3</i>		EBA list 26 (3)
2	Retained earnings	12,860	26 (1) (c)
3	Accumulated other comprehensive income (and other reserves)	(27)	26 (1)
3a	Funds for general banking risk		26 (1) (f)
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1		486 (2)
	Public sector capital injections grandfathered until 1 January 2018		483 (2)
5	Minority interests (amount allowed in consolidated CET1)		84, 479, 480
5a	Independently reviewed interim profits net of any foreseeable charge or dividend		26 (2)
6	Common Equity Tier 1 (CET1) capital before regulatory adjustments	32,833	
<b>Common Equity Tier 1 (CET1) capital: Regulatory Adjustments</b>			
7	Additional value adjustments (negative amount)		34, 105
8	Intangible assets (net of related tax liability) (negative amount)		36 (1) (b), 37, 472 (4)
9	Empty Set in the EU		
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)		36 (1) (c), 38, 472 (5)
11	Fair value reserves related to gains or losses on cash flow hedges		33 (a)
12	Negative amounts resulting from the calculation of expected loss amounts		36 (1) (d), 40, 159, 472 (6)
13	Any increase in equity that results from securitised assets (negative amount)		32 (1)
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing		33 (b)
15	Defined-benefit pension fund assets (negative amount)		36 (1) (e), 41, 472 (7)
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)		36 (1) (f), 42, 472 (8)
17	Holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		36 (1) (g), 44, 472 (9)

Own funds Disclosure Template			
	Common Equity Tier 1 capital: instruments and reserves	(A) Amount at disclosure date (£000s)	(B) Regulation (EU) No 575/2013 Article reference
18	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)		36 (1) (h), 43, 45, 46, 49 (2) (3), 79, 472 (10)
19	Direct, indirect and synthetic holdings by the institution of CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)		36 (1) (i), 43, 45, 47, 48 (1) (b), 49 (1) to (3), 79, 470, 472 (11)
20	Empty Set in the EU		
20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative		36 (1) (k)
20b	<i>of which: qualifying holdings outside the financial sector (negative amount)</i>		36 (1) (k) (i), 89 to 91
20c	<i>of which: securitisation positions (negative amount)</i>		36 (1) (k) (ii), 243 (1) (b), 244 (1) (b), 258
20d	<i>of which: free deliveries (negative amount)</i>		36 (1) 9k (iii), 379 (3)
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in 38 (3) are met) (negative amount)		36 (1) (c), 38, 48 (1) (a), 470, 472 (5)
22	Amount exceeding the 15% threshold (negative amount)		48 (1)
23	<i>of which: direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities</i>		36 (1) (i), 48 (1) (b), 470, 472 (11)
24	Empty Set in the EU		
25	<i>of which: deferred tax assets arising from temporary differences</i>		36 (1) (c), 38, 48 (1) (a), 470, 472 (5)
25a	Losses for the current financial year (negative amount)		36 (1) (a), 472 (3)
25b	Foreseeable tax changes relating to CET1 items (negative amount)		36 (1) (l)
26	Regulatory adjustments applied to Common Equity Tier 1 in respect of amounts subject to pre-CRR Treatment		
26a	Regulatory adjustments relating to unrealised gains and losses pursuant to Articles 467 to 468		
	<i>of which: filter for unrealised loss 1</i>		467
	<i>of which: filter for unrealised loss 2</i>		467
	<i>of which: filter for unrealised gain 1</i>		468
	<i>of which: filter for unrealised gain 2</i>		468
26b	Amount to be deducted from or added to Common Equity Tier 1 capital with regard to additional filters and deductions required pre CRR		481
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)		36 (1) (j)

Own funds Disclosure Template			
	Common Equity Tier 1 capital: instruments and reserves	(A) Amount at disclosure date (£000s)	(B) Regulation (EU) No 575/2013 Article reference
28	Total regulatory adjustments to Common Equity Tier 1 (CET1)		
29	<b>Common Equity Tier 1 (CET1) capital</b>	<b>32,833</b>	
<b>Additional Tier 1 (AT1) capital: instruments</b>			
30	Capital instruments and the related share premium accounts		51, 52
31	<i>of which: classified as equity under applicable accounting standards</i>		
32	<i>of which: classified as liabilities under applicable accounting standards</i>		
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1		486 (3)
	Public sector capital injections grandfathered until 1 January 2018		483 (3)
34	Qualifying Tier capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties		85, 86, 480
35	<i>of which: instruments issued by subsidiaries subject to phase out</i>		486 (3)
36	Additional Tier 1 (AT1) capital before regulatory adjustments		
<b>Additional Tier 1 (AT1) capital: Regulatory Adjustments</b>			
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)		52 (1) (b), 56 (a), 57, 475 (2)
38	Holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		56 (b), 58, 475 (3)
39	Direct and indirect holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)		56 (c), 59, 60, 79, 475 (4)
40	Direct and indirect holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above the 10% threshold net of eligible short positions) (negative amount)		56 (d), 59, 79, 475 (4)
41	Empty set in EU		
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)		56 (e)
43	Total regulatory adjustments to Additional Tier 1 (AT1) capital		
44	Additional Tier 1 (AT1) capital		
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>32,833</b>	
<b>Tier 2 (T2) capital: instruments and provisions</b>			
46	Capital instruments and the related share premium accounts	12,131	62, 63

Own funds Disclosure Template			
	Common Equity Tier 1 capital: instruments and reserves	(A) Amount at disclosure date (£000s)	(B) Regulation (EU) No 575/2013 Article reference
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2		486 (4)
	Public sector capital injections grandfathered until 1 January 2018		483 (4)
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34), issued by subsidiaries and held by third parties		87, 88, 480
49	<i>of which: instruments issued by subsidiaries subject to phase out</i>		486 (4)
50	Credit risk adjustments	404	62 (c) & (d)
51	Tier 2 (T2) capital before regulatory adjustments	12,535	
Tier 2 (T2) capital: regulatory adjustments			
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)		63 b) (i), 66 (a), 67, 477 (2)
53	Holdings of T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		66 (b), 68, 477 (3)
54	Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)		66 (c), 69, 70, 79, 477 (4)
54a	of which: new holdings not subject to transitional arrangements		
54b	of which: holdings existing before 1 January 2013 and subject to transitional arrangements		
55	Direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)		66 (d), 69, 79, 477(4)
56	Empty set in the EU		
57	Total regulatory adjustments to Tier 2 (T2) capital		
58	Tier 2 (T2) capital 2	12,535	
59	<b>Total capital (TC = T1+T2)</b>	<b>45,368</b>	
60	Total Risk Weighted Assets	277,902	
61	Common Equity Tier 1 (as a percentage of risk exposure amount)	11.8%	92 (2) (a), 465
62	Tier 1 (as a percentage of risk exposure amount)	11.8%	92 (2) (b), 465
63	Total capital (as a percentage of risk exposure amount)	16.3%	92 (2) (c)

Own funds Disclosure Template			
	Common Equity Tier 1 capital: instruments and reserves	(A) Amount at disclosure date (£000s)	(B) Regulation (EU) No 575/2013 Article reference
64	Institution specific buffer requirement (CET1 requirement in accordance with Article 92 (1) (a) plus capital conservation and counter-cyclical buffer requirements, plus systemic risk buffer, plus the systemically important institution buffer (G-SII or O-SII buffer) expressed as a percentage of risk exposure amount)	1,737	CRD 128, 129, 130
65	<i>of which: capital conservation buffer requirement</i>	1,737	
66	<i>of which: counter-cyclical buffer requirement</i>		
67	<i>of which: systemic risk buffer requirement</i>		
67a	<i>of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer</i>		CRD 131
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	25.6%	CRD 128 (=£5.6m / (12.5 x £1.7m) excess CET-1 available after meeting Pillar I is £5.6 million
69	Empty set in the EU		
70	Empty set in the EU		
71	Empty set in the EU		
72	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)		36 (1) (h), 45, 46, 472 (10), 56 (c), 59, 60, 475 (4), 66 (c), 69, 70, 477 (4)
73	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)		36 (1) (i), 45, 48, 470, 472 (11)
74	Empty set in the EU		
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in 38 (3) are met)		36 (1) (c), 38, 48, 470, 472 (5)
<b>Applicable caps on the inclusion of provisions in Tier 2</b>			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	404	62
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach		62
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)		62
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings based approach		62
<b>Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)</b>			
80	Current cap on CET1 instruments subject to phase out arrangements		484 (3), 486 (2) & (5)
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)		484 (3), 486 (2) & (5)

Own funds Disclosure Template			
	Common Equity Tier 1 capital: instruments and reserves	(A) Amount at disclosure date (£000s)	(B) Regulation (EU) No 575/2013 Article reference
82	Current cap on AT1 instruments subject to phase out arrangements		484 (4), 486 (3) & (5)
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)		484 (4), 486 (3) & (5)
84	Current cap on T2 instruments subject to phase out arrangements		484 (5), 486 (4) & (5)
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)		484 (5), 486 (4) & (5)

## Appendix III Main features of regulatory capital instruments

		CET1	Additional Tier 1	Tier 2
1	Issuer	KEXIM Bank (UK) Limited	N/A	KEXIM Bank (UK) Limited
2	Unique identifier (eg CUSIP, ISN or Bloomberg identifier for private placement)	Private placement		Private placement
3	Governing law(s) of the instrument	English Law		English Law
<i>Regulatory Treatment</i>				
4	Transitional CRR rules	CET 1		Tier 2
5	Post-transitional CRR rules	CET 1		Tier 2
6	Eligible at solo/(sub-)consolidated/ solo & (sub-)consolidated	Solo		Solo
7	Instrument type (types to be specified by each jurisdiction)	Common Equity		Subordinated Loan
8	Amount recognised in regulatory capital (currency in million, as of most recent reporting date)	£20m		£12.1m
9	Nominal amount of instrument	£1		\$15m and \$6m
9a	Issue price	£1		\$15m and \$6m
9b	Redemption price	Not applicable		Not applicable
10	Accounting classification	Shareholders' equity		Liability – subordinated loans
11	Original date of issuance	£20,000,000 [1992-7-15]		\$15,000,000 [22 Dec 2009] \$6,000,000 [12 Dec 2014]
12	Perpetual or dated	Perpetual		Dated
13	Original maturity date	Not applicable		[23 Dec 2019] [12 Dec 2024]
14	Issuer call subject to prior supervisory approval	No		N/A
15	Optional call date, contingent call dates and redemption amount	Not applicable		N/A
16	Subsequent call dates, if applicable	Not applicable		N/A
<i>Coupons/dividends</i>				
17	Fixed or floating dividend/coupon	Floating		Floating
18	Coupon rate and any related index	Not applicable		6 month USD Libor + 0.62% 3 month USD Libor + 1.52%
19	Existence of a dividend stopper	No		N/A

20a	Fully discretionary, partial discretionary or mandatory (in terms of timing)	Fully discretionary		Mandatory
20b	Fully discretionary, partial discretionary or mandatory (in terms of amount)	Fully discretionary		Mandatory
21	Existence of step up or other incentive to redeem	No		No
22	Non-cumulative or cumulative	Non-cumulative		Non-cumulative
23	Convertible or non-convertible	Non-convertible		Non-convertible
24	If convertible, conversion trigger(s)	Not applicable		Not applicable
25	If convertible, fully or partially	Not applicable		Not applicable
26	If convertible, conversion rate	Not applicable		Not applicable
27	If convertible, mandatory or optional conversion	Not applicable		Not applicable
28	If convertible, specify instrument type convertible into	Not applicable		Not applicable
29	If convertible, specify issuer of instrument it converts into	Not applicable		Not applicable
30	Write-down features	No		No
31	If write-down, write-down trigger(s)	Not applicable		Not applicable
32	If write-down, full or partial	Not applicable		Not applicable
33	If write-down, permanent or temporary	Not applicable		Not applicable
34	If temporary write-down, description of write-up mechanism	Not applicable		Not applicable
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Subordinated Loan		All Liabilities
36	Non-compliant transitioned features	No		No
37	If yes, specify non-compliant features	Not applicable		Not applicable

## Appendix IV - Declaration Board Risk Management Declaration

The Board is responsible for reviewing the effectiveness of the Bank's risk management arrangements and systems of financial and internal controls. These are designed to manage rather than eliminate the risks of not achieving business objectives, and, as such, offer reasonable but not absolute assurance against fraud, material misstatement and loss. The Board considers that the Bank has in place adequate systems and controls with regard to the Bank's business model and strategy.