

Pillar 3 Disclosures

Year End 2016

Bank of China (UK) Ltd

Capital and Risk Management Pillar 3 Disclosures



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Version Control

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Abbreviations

Term	Definition	Term	Definition
Annual Report	Annual Report and Financial Statements	EMEA	Europe, the Middle East and Africa
ALCO	Asset and Liability Committee	EBA	European Banking Authority
BOC UK	Bank of China (UK) Limited	EMC	Executive Management Committee
the Bank	Bank of China (UK) Limited	FCA	Financial Conduct Authority
BOC Group	Bank of China Limited	FMD	Financial Management Department
Basel Committee	Basel Committee on Banking Supervision	FSA	Financial Services Authority
BIA	Basic Indicator Approach	G-SIBs	Global Systemically Important Banks
BRC	Board Risk Committee	ICG	Individual Capital Guidance
BCC	Business Continuity Committee	IRRBB	Interest Rate Risk on Banking Book
CRD IV	Capital Requirement Directives IV	ICAAP	Internal Capital Adequacy Assessment Process
CEO	Chief Executive Officer	IRB	Internal Rating-Based
CFO	Chief Financial Officer	IFRS	International Financial Reporting Standards
COO	Chief Operating Officer	KRIs	Key Risk Indicators
CRO	Chief Risk Officer	L&C	Legal & Compliance Department
CET1	Common Equity Tier 1	NII	Net Interest Income
CFUs	Corporate Finance Units	ORC	Operational Risk Committee
CCB	Countercyclical Capital Buffer	OTC	Over the Counter
CCR	Counterparty Credit Risk	PFE	Potential Future Exposure
CCF	Credit Conversion Factor	PRA	Prudential Regulation Authority
CQS	Credit Quality Step	RTS	Regulatory Technical Standards
CRM	Credit Risk Mitigation	RemCo	Remuneration Committee
CRPC	Credit Risk Policy Committee	RC	Replacement Cost
CVA	Credit Valuation Adjustment	RMD	Risk Management Department
CEM	Current Exposure Method	SFTs	Security Financing Transactions
EWIs	Early Warning Indicators	VaR	Value at Risk
EEPE	Effective Expected Positive Exposure		

1. Introduction

Background

BOC UK was incorporated as a private limited company on 29th March 2007, a wholly owned subsidiary of BOC Group. BOC UK is regulated by the PRA and FCA. The Bank is authorised by the PRA. The Bank has been Basel compliant since 2008.

The Bank provides a comprehensive range of retail banking, corporate banking, trade financing and financial markets services in the UK. Our retail banking activities focus on branch banking. The Bank offers standard high street retail banking services including current accounts, savings accounts, debit cards, credit cards and mortgage products. The corporate and trade finance business encompass funding and advisory services for Chinese companies seeking to expand in the UK and EU.

BOC UK follows the mission and strategy of the BOC Group, with a main focus on the UK market development.

Basis of Disclosures

This disclosures report is prepared in accordance with the requirements set out in the Basel framework and CRD IV. The disclosures report is recommended to be read in conjunction with the Bank's Annual Report and Financial Statement 2016¹.

For accounting purposes, the Bank has availed itself of the exemption available under IAS27 Consolidated and Separate Financial Statements that permits an entity to prepare separate financial statements (referring to Note 2: Basis of Preparation in Annual Report and Financial Statements 2016). Therefore this disclosure does not take into account any subsidiaries.

The Pillar 3 Disclosures 2016 have been prepared in accordance with regulatory capital adequacy concepts and rules, rather than in accordance with IFRS. Therefore, some information in this report is not directly comparable with the Bank's Annual Report and Financial Statement 2016. Explanations and notes are given where appropriate.

Regulatory Framework for Disclosures

BOC UK is supervised by the PRA in the UK. The Bank refers to the information from PRA for assessing capital adequacy and setting capital requirements. The capital was assessed for prudential regulatory reporting purposes in 2016 using the Basel III framework of the Basel Committee as implemented by the EU in the amended CRD IV and in the PRA's Rulebook for the UK banking industry.

The Basel framework is structured under 3 pillars:

¹ See <http://www.bankofchina.com/uk/aboutus>

- Pillar 1 minimal capital requirements
- Pillar 2 supervisory review process
- Pillar 3 market disciplines.

Pillar 3 complements the Pillar 1 and Pillar 2. The aim for Pillar 3 is to enhance market disciplines by developing a set of disclosure requirements which allow the market participants to assess certain specified information on the scope of application of Basel, capital, particularly risk exposures and risk assessment processes and hence the capital adequacy of the institution. Disclosures consist of both qualitative and quantitative information.

As part of Pillar 3 framework, the Bank is required to disclose all the material risks.

Verification

The disclosures presented within this report have been verified and approved by various senior management members, through internal governance procedure and Pillar 3 procedure. The disclosures report does not require to be audited by the Bank's external auditor.

Frequency, Media and Location of Publication

The Bank's full Pillar 3 disclosures report is produced on an annual basis and published as soon as practically possible on the Bank of China (UK) Ltd website: <http://www.bankofchina.com/uk/aboutus/ab5/>

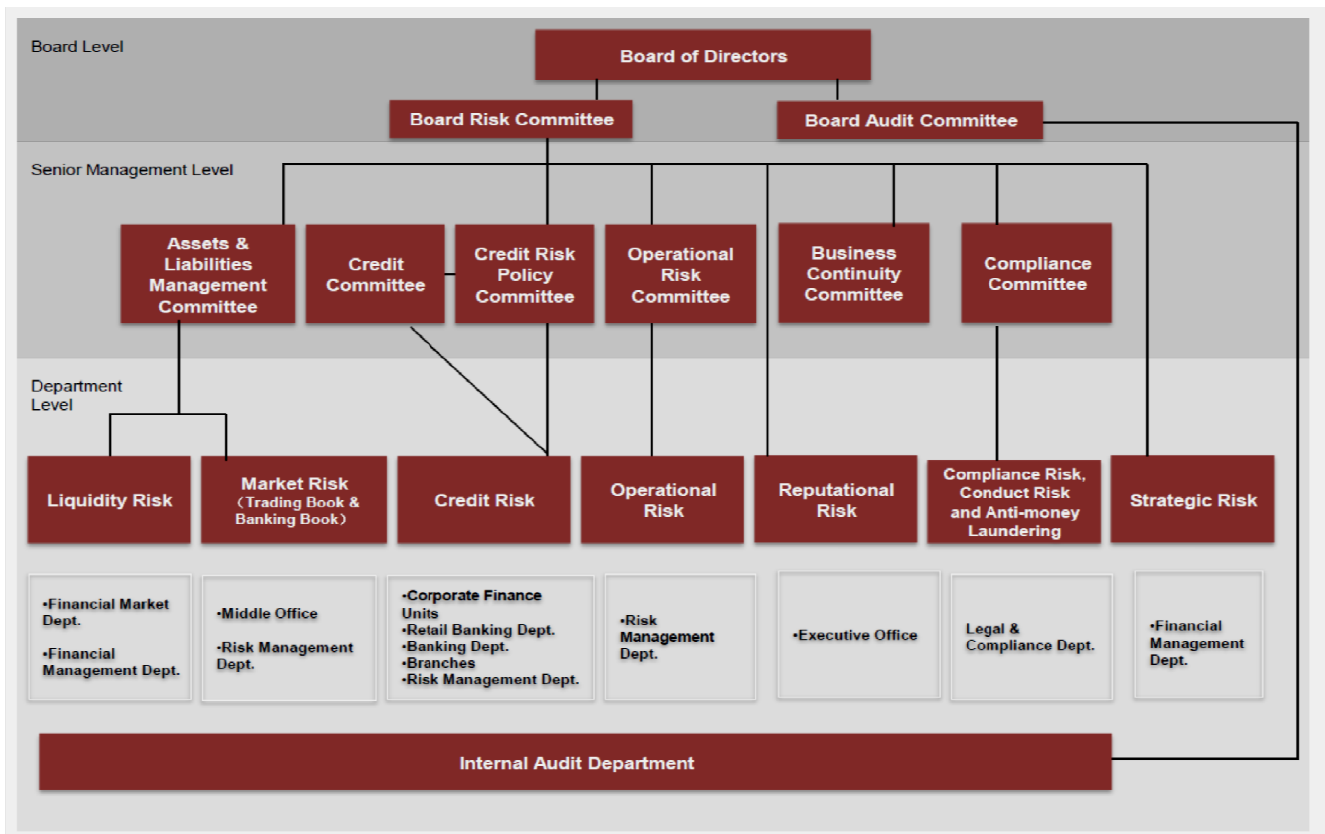
2. Risk Management Overview

Effective risk management is a key component of the Bank's strategy to deliver excellence. The Bank's business model is supported by a risk culture grounded in ensuring a sustainable risk appetite.

Risk Governance

The Bank's committees monitor and challenge risk exposures against risk appetite. Each committee within the governance structure, illustrated in the chart below, is responsible for ensuring the risk and control environment. The reporting lines are clearly defined through the committee level, Senior Management level and Board level.

BOC UK Risk Management Structure 2016



The Board is the primary governing body of the Bank. It has the ultimate responsibilities for setting the risk management framework, defining and managing the Bank's risk appetite statement, and approving the Bank's risk policies and exposure limits.

During the reporting year, there were 9 directors on the Board. The Board believes that it is of the Bank's best interests to attract and retain the most competent and experienced directors by offering competitive terms of engagement, including the granting of indemnities on terms consistent with applicable statutory provisions.

Board Audit Committee, performs oversight over internal controls and compliance, financial reporting issues, external auditor liaison.

Board Risk Committee ("BRC"), is responsible for assisting the Board of Directors ("the Board") with the establishment and ongoing review of the risk strategies, rules and policies, and the defining of Risk Appetite, the oversight of risk management performance across the bank, approval of non-standard credits, and credits above the delegated limits of the CEO, as well as approval of delegated limit authorities.

Executive Management Committee ("EMC") is responsible for overall monitoring of operations, approval of new products and services, new systems and procedures, as well as approval of expenditure budget and business budget.

The Senior Management, including the CEO, CRO, CCO and committees are delegated with power for daily management and control.

Committees Reporting to BRC:

- Asset and Liabilities Committee ("ALCO") - establishes and maintains asset and liability management policies and procedures, reviews and approves policies relating to market risk and liquidity management.
- Compliance Committee - oversees and supports the implementation of an effective and proactive compliance function.
- Credit Risk Policy Committee ("CRPC") – establishes and reviews the Bank's credit policies and related matters, including industry and country concentration limits.
- Credit Committee – is responsible for new facility assessment, classification review, provisioning, and other related matters.
- Operational Risk Committee - is responsible for reviewing operational risk, monitoring framework and operational risk compliance.
- Business Continuity Committee -oversees and supports the implementation and maintenance of an effective business continuity infrastructure and disaster recovery planning function.

Board meetings, Board Audit Committee, BRC, CRPC, ORC, BCC and Compliance Committee meet on a quarterly basis. ALCO is held on a monthly basis². Credit Committee meets as required in response to credit limit applications.

² BRC, CRPC Adhoc meetings and ALCO meetings are held as required.

Five Year Strategic Plan (2016-2020)

The core mission of the Bank in the next five years is to upgrade its business model. The mission cause huge challenges for the Bank on management of the related risk. Therefore, a comprehensive risk management framework and system has been established. Through the plan period, the focus is on maintaining efficient and effective risk management practice to support the business development by identifying and managing risks. To achieve this, the key focus areas are as follows:

Risk Appetite

Risk Appetite is the core instrument for aligning overall business strategy, capital allocation and risk management. The Board, BRC and the Senior Management set risk appetite through balancing Risk and Return under BOC Group's principles "Rational, Stable and Prudent".

The Bank's Risk Appetite Statement defines the aggregate amount and type of risk the Bank is willing to pursue or avoid in achieving its strategic goals. All strategic business plans for functional areas must be consistent with the risk appetite.

Risk management culture

The Bank recognizes the need to emphasise risk management as the key part of the corporate culture and is applicable to all staff.

Ongoing Enhancement of the Comprehensive Risk Management System

The Bank's long-term risk management objective is to enhance the efficiency of the overall risk management system, and strengthen risk management while supporting business sustainable development. The bank also has established and continues an effective reporting system. Risk Management Department submit Management Information Risk Report monthly and quarterly. The comprehensive report covering Credit Risk, Operational Risk, Market Risk disclosure and analysis.

Three Lines of Defence

The bank adopts three lines of defence model across all risk areas.

- The **first line defence** is provided by Corporate Finance Units³, Financial Markets Department, Personal Banking Department and retail branches.
- The **second line defence** is provided by Financial Management Department, Middle Office, Risk Management Department, and Legal & Compliance Department.
- The **third line defence** complements the risk management structure and is provided by Internal Audit Department.

³ CFUs at the Bank consist of Corporate Banking Department, EMEA Syndication Department, Financial Institutions and Trade Finance Department.

Stress Testing

Stress testing is an integral part of the ICAAP framework. It builds upon the results of financial forecasts and material risk assessment, and feeds into the Bank's capital planning process. The Bank applies stress testing under a set of economic factors, market factors, operational risk factors and regulatory factors. The scenario setting is in line with PRA anchor scenarios. For each risk factor, projection is made individually for Base Case Scenario, Moderate Scenario and Sever Scenario over 5 years forecast.

As a capital risk management process, stress testing and scenario analysis provide an important complement to quantitative risk management approaches. As credit risk is the Bank's dominant risk, the stress testing results for capital adequacy also provides a bridge between credit risk management and senior management's strategic actions for evaluating the impact of different business options on the risk appetite.

3. Capital Resources

Total Capital Resources

The Bank established its capital base externally through capital injection from BOC Group. The Bank retains the option to increase the capital internally by retained earnings. The capital resources comprise Tier 1 and Tier 2 capital as set out in Table 1. The PRA uses risk asset ratios as one of the measures for capital adequacy in the UK banking sector. All the risk asset ratios of the Bank are CRD IV compliant.

Table 1: Total capital resources and risk asset ratios

(£'000)	2016	2015
CET 1 Capital: Ordinary share capital	250,000	250,000
Audited retained earnings ⁴	24,958	24,958
Total Tier 1 Capital	274,958	274,958
Tier 2 Capital:		
Qualifying subordinated debt	60,000	60,000
Total Tier 1 and 2 capital after deductions	334,958	334,958
Risk-weighted assets (RWA)⁵	1,003,913	895,473
Risk Asset Ratios		
CET 1 capital ratio	27%	31%
Tier 1 capital ratio	27%	31%
Total capital ratio	33%	37%

CET 1 capital: consists of ordinary share capital and retained earnings. CET1 capital remained the same. The retained earnings represent the Bank's audited accumulated accounting profits after paid and proposed dividends. The Bank currently has not issued any innovative Tier 1 instruments. As at 31 December 2016, there is no reconciliation differences between the amounts disclosed as Tier 1 capital to those treated as equity under IFRS.

Tier 2 capital: includes qualifying subordinated debt of £60M, which was issued on 20 September 2007 on terms for inclusion in the Bank's capital resources. The debt is repayable upon notice of 5 years and one day. In the event of the Bank's winding-up, the subordinated debt is subject to the claims of depositors and all other creditors of the Bank. Further details are in Note 28 of the Bank's Annual Report and Financial Statement 2016.

The Bank's policy is to maintain a strong capital base so as to maintain market confidence and sustainable business development. The impact of the capital level on shareholders' return is also recognised by the Bank to strike a balance between higher returns and greater gearing risk. There are various limits applicable to the capital base elements. The bank has complied with all externally imposed capital requirements throughout the period.

⁴ A dividend of £35,690,000 was declared representing the 2016 profit and loss. For capital planning purpose, the capital is unchanged on 2015.

⁵ The total RWAs on this report is different with that in the Annual Report, due to the inclusion of SA-CCR (See Chapter 6)

Leverage Ratio

In January 2014, the Basel Committee published a revised Basel III leverage ratio framework⁶, which includes a number of amendments to the original calculations of the exposure measure. The framework introduced a simple, transparent, non-risk based leverage ratio to act as a credible supplementary measure to the risk-based capital requirements. The framework requires a minimum leverage ratio of 3%.

A Bank's total leverage exposure measure is the sum of the following exposures: 1) on-balance sheet exposures; 2) derivative exposures; 3) securities financing transaction exposure; and 4) off-balance sheet items.

In January 2015, the existing CRD IV rules on the calculation of leverage ratio were amended to align with the European Commissions' interpretation of the revised Basel leverage ratio framework. According to CRD IV rules, the leverage ratio is calculated by dividing Tier 1 capital resources by a defined measure of on-balance sheet assets and off-balance sheet items.

Table 2: Leverage ratio

Total Capital Resources (£'000)	2016	2015
Tier 1 capital for leverage ratio:	274,958	274,958
CET 1 capital: Ordinary shares	250,000	250,000
Audited retained earnings	24,958	24,958
Statutory balance sheet assets	1,549,898	1,291,410
Cash and cash equivalents	311,917	344,019
Loans and advances to banks	24,270	62,633
Loans and advances to customers	1,159,696	810,776
Derivative financial instruments	4,577	8,173
Prepayments, accrued income and other assets	4,762	25,831
Available for sale financial investments	40,716	35,859
Deferred tax assets	562	425
Property, plant and equipment	3,276	3,514
Intangible assets	122	180
Investment in subsidiary companies	-	-
Derivatives adjustments	-	-
Securities financing transaction adjustments	-	-
Off-balance sheet assets	251,468	226,708
Off-balance sheet items	251,468	224,342
Regulatory deductions and other adjustments	-	2,366
Total leverage exposure	1,801,366	1,518,118
Leverage ratio	15%	18%

The leverage ratio is 15%, which is well above Basel's requirement. The Bank does not face an issue of excessive leverage. The main reasons contributing to a relatively high leverage ratio are due to:

- Level of Tier 1 capital resources
- Small proportion of off-balance assets.

⁶ BOC UK is required to publicly disclose the leverage ratio on a consolidated basis from 1 January 2016.

4. Capital Adequacy

The Bank's capital requirement is supervised by the PRA. Since 2008, the Bank has been compliant with Basel II framework in regulatory capital requirement and subsequently with Basel III framework implemented in 2010. Basel III strengthened the Basel rules, which feature a redefined and higher capital requirement.

Capital ratios remain the international standards for measuring capital adequacy. The senior management uses regulatory capital ratios to monitor the Bank's capital position. The PRA's approach to such measurement based upon Basel III is now primarily based on monitoring the relationship of the capital resources requirement, which is 8% of the RWAs to available capital resources.

PRA also sets Individual Capital Guidance (ICG) in relationship to Pillar 1 minimum capital requirement based on the Bank's risk weighted assets. BOC (UK) received from PRA the Bank's new ICG in January 2016. The new ICG is 10.08% of RWAs, being 8% (credit capital requirement) and 2.08% (Pillar 2A capital). As advised by the PRA, from 1 January 2016, BOC (UK) should hold a PRA buffer of 3.38% of RWAs in excess of ICG and the CRD IV combined buffer.

ICAAP

A key input to the ICG setting process is the Bank's ICAAP. In line with the PRA requirements, the Bank has adopted the ICAAP approach since 2008. The Bank's ICG in force is subject to PRA's Supervisory Review and Evaluation Process. New ICG was advised in January 2016.

The Bank's ICAAP documents the internal process and methodology used to assess current and forecast future capital requirements under the Basel capital requirement framework. ICAAP is designed to cover a full scope of risks inherent in the Bank's business activities and operations. ICAAP is fully embedded in the corporate governance and risk management framework. It is conducted on an annual basis and under close supervision by the Senior Management. The final submission has to seek internal approval from the BRC and the Board.

Overview of RWA

RWA forms the denominator of the risk-based capital requirements. The RWA overview was brought into disclosures by the Basel Committee in January 2015. Minimum capital requirements are calculated as 8% of the RWAs. A further breakdown and comparison of the RWA and minimal capital requirements are illustrated in below Table 3.

Table 3: Overview of RWA

£'000	2016		2015	
	RWA	Min Capital	RWA	Min Capital
Credit risk (excluding counterparty credit risk (CCR))	840,455	67,236	754,715	60,377
Of which standardised approach (SA)	840,455	67,236	754,715	60,377
Of which internal rating-based (IRB) approach	-	-	-	-
Counterparty credit risk	4,164	333	2,062	165
Of which standardised approach for counterparty credit risk	4,164	333	2,062	165
Of which internal model method (IMM)	-	-	-	-
Equity positions in banking book under market-based approach	-	-	-	-
Equity investments in funds-look-through approach	-	-	-	-
Equity investments in funds-mandate-based approach	-	-	-	-
Equity investments in funds-fall-back approach	-	-	-	-
Settlement risk	-	-	-	-
Securitisation exposure in banking book	-	-	-	-
Of which IRB ratings-based approach (RBA)	-	-	-	-
Of which IRB supervisory Formula Approach (SFA)	-	-	-	-
Of which SA/simplified supervisory formula approach (SSFA)	-	-	-	-
Market risk	11,206	896	9,973	798
Of which standardised approach (SA)	11,206	896	9,973	798
Of which internal model approaches (IMM)	-	-	-	-
Operational risk	148,088	11,847	128,723	10,298
Of which Basic Indicator Approach	148,088	11,847	128,723	10,298
Of which Standardised Approach	-	-	-	-
Of which Advanced Measurement Approach	-	-	-	-
Amounts below thresholds for deduction (subject to 250% RW)	-	-	-	-
Floor adjustment	-	-	-	-
Total	1,003,913	80,312	895,473	71,638

Capital Adequacy

Table 4: Capital adequacy under Pillar 1

(£'000)	2016	2015
Credit Risk (Standardised Approach)	67,236	60,377
Market Risk (Foreign Exchange PRR)	896	798
Operational Risk (Basic Indicator Approach)	11,847	10,298
Counterparty Credit Risk (including CVA)	333	165
Total Pillar 1 minimum capital requirement	80,312	71,638
Total capital resources	334,958	334,958
Excess of capital resources over Pillar 1 minimum capital requirement	254,646	263,320

The Bank's Pillar 2 capital requirement is assessed to reflect IRRBB and concentration risk.

Countercyclical Capital Buffers (CCB)

CCB is identified in Basel III reforms, determined by Basel Committee and vary according to a percentage⁷ of risk weighted assets. In December 2010, Basel issued guidance regarding the CCB and required public disclosures at least the same frequency as the minimum capital requirements.

BOC UK is a subsidiary of BOC Group, hence, CCB disclosures on an individual basis for BOC UK is not required.

Global Systemically Important Banks (G-SIBs)

BOC UK is not identified as G-SIBs, although BOC Group is.

⁷ The percentage varies between 0 and 2.5%, exemptions are strictly subject to Basel and CRD IV rules.

Reconciliation between IFRS and Regulatory Balance Sheets

The consolidation of IFRS balance sheet scope is identical to that with regulatory scope in 2016. There is no reconciliation difference.

A further breakdown of the regulatory risk categories are illustrated below.

Table 5: Reconciliation between IFRS and Regulatory balance sheets

2016 Reconciliation (£'000)	IFRS/ Regulatory balance sheet	Subject to credit risk framework	Subject to counterparty credit risk framework	Subject to securitisation framework	Subject to market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets						
Cash and cash equivalents	311,917	311,917	-	-	-	1,847
Loans and advances to banks	24,270	24,270	-	-	-	-
Loans and advances to customers	1,159,696	1,159,696	-	-	-	-
Derivative financial instruments	4,577	4,577	4,577	-	4,577	-
Prepayments, accrued income and other assets	4,762	4,762	-	-	-	4,762
Available for sale financial investments	40,716	40,716	-	-	-	-
Deferred tax assets	562	562	-	-	-	-
Property, plant and equipment	3,276	3,276	-	-	-	3,276
Intangible assets	122	122	-	-	-	-
Investment in subsidiary companies	-	-	-	-	-	-
Total Assets	1,549,898	1,534,752	4,577	-	4,577	9,885
Liabilities						
Deposits from banks	164,849	-	-	-	-	164,849
Deposits from customers	982,361	-	-	-	-	982,361
Derivative financial instruments	4,150	-	4,150	-	4,150	-
Other liabilities	13,620	-	-	-	-	13,620
Accruals and deferred income	5,874	-	-	-	-	5,874
Current tax liabilities	8,680	-	-	-	-	8,680
Deferred tax liabilities	-	-	-	-	-	-
Subordinated liabilities	60,000	-	-	-	-	60,000
Total liabilities	1,239,534	-	4,150	-	4,150	1,235,384
Equity						
Authorised and called up share capital	250,000	-	-	-	-	-
Retained earnings	60,648	-	-	-	-	-
Available for sale reserve	(284)	-	-	-	-	-
Total shareholders' equity	310,364	-	-	-	-	-
Total shareholders' equity & liabilities	1,549,898	-	4,150	-	4,150	1,235,384

5. Credit Risk

Credit Risk Management and Controls

Credit risk is defined as the risk that parties with whom the Bank has contracted fail to meet their obligations (both on and off-balance sheet). Credit risk appetite is monitored and reported on a monthly basis through a suite of risk metrics derived from credit portfolio performance measures. Credit risk appetite limits and credit risk policies are reviewed regularly to ensure that the metrics continue to reflect the Bank's risk appetite appropriately. Credit risk management and controls also depend on increase of the professional personnel for key products, to proactively adjust credit portfolio to achieve more effective portfolio risk management through industry, country and other quota allocation mechanism.

Credit Risk Capital Requirement: Standardised Approach

Standardised approach is applied for credit risk. The Bank's minimum capital requirement for credit risk is expressed as 8% of the risk weighted exposure under each of the applicable standardised credit risk exposure classes, illustrated below:

Table 6: Capital requirement for credit risk under Standardised Approach

£'000	2016		2015	
	RWA	Capital Requirement	RWA	Capital Requirement
Central governments or central banks	-	-	-	-
Corporate	600,989	48,079	451,288	36,103
Institutions	18,040	1,443	18,288	1,463
Retail	629	50	475	38
Secured by mortgages on immovable property	203,382	16,271	178,938	14,315
Short term claims on institutions & corporate	5,379	430	28,775	2,302
Past due items	314	25	1,013	81
Other items	11,722	938	75,940	6,075
Total	840,455	67,236	754,715	60,377

The past due items related to residential mortgages, credit and debit cards. Other items on the asset class relate to cash, fixed assets and Sundry debtors.

Credit Risk Exposures

In general, credit risk exposures in the UK take the largest part of total exposure. Geographic risk exposure outside UK is well diversified. Table 7 shows the gross credit exposures under Standardised Approach and Table 8 shows the credit exposure broken down by exposure class and geographic locations.

Table 7: Gross credit exposure under Standardised Approach

£'000	2016		2015	
	Average Credit Exposure ⁸	Year End Exposure	Average Credit Exposure	Year End Exposure
Central governments or central banks	289,792	248,098	189,375	196,168
Corporate	587,350	615,247	389,702	458,119
Institutions	33,732	36,081	36,783	45,197
Retail	823	917	1,119	637
Secured by mortgages on immovable property	540,899	579,498	477,220	498,847
Short term claims on institutions and corporate	44,786	23,614	205,731	185,592
Past due items	538	210	933	674
Other items	40,766	12,931	88,810	76,467
Grand Total	1,538,685	1,516,596	1,389,672	1,461,700

Table 8: Geographic distribution of credit exposure

£'000	UK	Other EU Countries	North America	Rest of the World	Total
2016					
Central governments or central banks	248,098	-	-	-	248,098
Corporate	274,599	78,635	83,004	179,009	615,247
Institutions	10,673	-	-	25,408	36,081
Retail	826	1	5	85	917
Secured by mortgages on immovable property	579,498	-	-	-	579,498
Short term claims on institutions and corporate	10,477	25	516	12,596	23,614
Past due items	210	-	-	-	210
Other items	12,931	-	-	-	12,931
Grand Total	1,137,312	78,661	83,525	217,098	1,516,596
2015					
Central governments or central banks	196,168	-	-	-	196,168
Corporate	297,805	56,497	23,304	80,513	458,119
Institutions	30,533	-	-	14,664	45,197
Retail	505	1	1	130	637
Secured by mortgages on residential property	493,743	-	-	-	493,743
Secured by mortgages on commercial real estate	5,104	-	-	-	5,104
Short term claims on institutions and corporates	173,661	23	2,320	9,587	185,592
Past due items	672	-	-	2	674
Other items	76,467	-	-	-	76,467
Grand Total	1,274,658	56,521	25,625	104,896	1,461,700

⁸ Quarterly average is used here.

Total average credit exposure increased by £149M. Total credit exposure increased by £55M to £1,517M.

Key movements by gross credit exposure and geographical area are as follows:

- The year end exposure under asset class “Short term claims on institutions and corporate” decreased by £162M (2016: £24M, 2015: £186M) mainly due to some short term exposures which ran off in 2016.
- The year end exposure under asset class “Corporate” increased by £157M (2016: £615M, 2015: £458M) mainly due to corporate business expansion.

Table 9: Industry distribution of gross credit exposure

Industry Distribution of Gross Credit Exposure 2016 (£'000)			
Exposure Class	Industry Category	Gross Exposure	
Central governments or central banks	Financial intermediation	248,098	
Corporate	Accommodation And Food Services Activities	3,345	
	Agriculture, Hunting And Forestry	10,132	
	Real estate, professional services and support activities	81,644	
	Manufacturing	132,674	
	Education	28,126	
	Electricity, Gas And Water Supply	59,175	
	Individuals	574	
	Transport, storage and communication	191,319	
	Mining And Quarrying	51,652	
	Wholesale and retail trade	21,194	
	Financial intermediation	11,097	
	Human Health And Social Work	24,316	
	Institutions	Financial intermediation	36,081
	Retail	Financial intermediation	132
		Individuals	785
Secured by mortgages on immovable property	Accommodation And Food Services Activities	539	
	Real estate, professional services and support activities	4,810	
	Electricity, gas and water supply	291	
	Individuals	573,364	
	Transport, storage and communication	446	
Short term claims on institutions and corporate	Manufacturing	49	
	Financial intermediation	23,614	
Past due items	Individuals	210	
Other items	Financial intermediation	3,398	
	Individuals	9,533	
Grand Total		1,516,598	

Industry Distribution of Gross Credit Exposure 2015 (£'000)

Exposure Class	Industry Category	Gross exposure	
Central governments or central banks	Financial intermediation	170,013	
Corporate	Public administration and defence	26,155	
	Accommodation and food services activities	3,691	
	Agriculture, hunting and forestry	9,786	
	Education	23,454	
	Electricity, gas and water supply	57,034	
	Financial intermediation	44,818	
	Manufacturing	96,621	
	Mining and quarrying	36,880	
	Real estate, professional services and support activities	92,445	
	Transport, storage and communication	71,412	
	Wholesale and retail trade	21,979	
	Institutions	Financial intermediation	45,197
	Retail	Financial intermediation	59
		Individuals and individual trusts	578
Secured by mortgages on commercial real estate	Real estate, professional services and support activities	5,104	
Secured by mortgages on residential property	Individuals and individual trusts	493,743	
Short term claims on institutions and corporate	Financial intermediation	185,592	
Past due items	Individuals and individual trusts	671	
	Manufacturing	3	
Other items	Financial intermediation	76,076	
	Individuals and individual trusts	390	
Grand Total		1,461,700	

Table 9 shows the credit exposure broken down by credit exposure class and the industrial sectors. The industry highlights are as follows:

- Individuals of £584M, 39% of the total portfolio, mainly related to residential mortgages. The sector occupies the dominant sector.
- Total credit exposure of financial intermediation is £322M, 21% of the total portfolio.

Financial intermediation of Short term claims on institutions and corporate contains mainly “due from overseas subsidiaries” and “due from overseas banks”
 Financial intermediation of Central governments or central banks contains mainly “Due from other central bank”

Table 10: Residual contractual maturity of credit exposure

2016 (£'000)	Up to 12 months	1-5 years	More than 5 years	Total
Central governments or central banks		248,098	-	248,098
Corporate	143,391	311,634	160,222	615,247
Institutions	24,818	10,261	1,002	36,081
Retail	876	-	41	917
Secured by mortgages on immovable property	99	3,230	576,169	579,498
Short term claims on institutions and corporates	23,614	-	-	23,614
Past due items	210	-	-	210
Other items	12,931	-	-	12,931
Grand Total	205,939	573,223	737,434	1,516,596
2015 (£'000)				
Central governments or central banks	170,013	26,155	-	196,168
Corporate	55,270	356,255	46,594	458,119
Institutions	44,346	851	-	45,197
Retail	635	3	-	637
Secured by mortgages on residential property	29	514	4,561	5,104
Secured by mortgages on commercial real estate	133	3,555	490,054	493,743
Short term claims on institutions and corporates	185,592	-	-	185,592
Past due items	331	-	343	674
Other items	76,467	-	-	76,467
Grand Total	532,815	387,334	541,551	1,461,700

Key points:

- The exposure for between 1 and 5 years residual maturity increased by £186M and that for over 5 years increased by £196M. These movement was mainly due to business expansion and medium and long-term loan increase. The exposure up to 12 months decreased by £327M, of which £170M movement for Central governments or central banks is due to maturity of short-term Repo in 2016.
- The long-term exposure mainly related to residential mortgages.

Impairment Provisions

The Bank defines past due loan as an instalment on the whole or a part of the loan which is not received within 90 days of the instalment. The Bank identifies impairment through a list of prescribed credit events of the borrower. The impairment loss refers the difference between the carrying value of the loan and the present value of estimated future cash flow.

Provisioning for Loans and Advances

Allowance for impairment is established when objective evidence is identified:

- Significant financial difficulty of the obligor;
- A breach of contract, such as a default, or delinquency in interest or principal payments for a period exceeding 90 days, or the borrower has been exposed to substantial risk although the debt is overdue less than 90 days;
- The creditor for economic or legal reasons relating to the borrower's financial difficulty, granting to borrower a concession that the lender would not otherwise consider;
- It is becoming probable that the borrower will enter bankruptcy or other financial reorganization;
- There are observable data indicating adverse changes in the payment status of the borrower or adverse changes in the industry conditions which the borrower is engaged in, increase in unemployment rate in the geographical area of the borrower, and a decrease in mortgage price in the relevant area; and
- Other objective evidence that an asset or group of similar assets is impaired.

Table 11: Analysis of past due, impaired and provision to loans and advances by industry

2016 (£'000)	Past Due	Impaired	Provision
Accommodation And Food Services Activities	-	-	2
Agriculture, Hunting And Forestry	-	-	6
Education	-	-	18
Electricity, Gas And Water Supply	-	-	37
Financial intermediation	-	-	204
Human Health And Social Work	-	-	15
Individuals and individual trusts	(11,060)	(1,823)	358
Manufacturing	-	-	82
Mining And Quarrying	-	-	32
Real estate, professional services and support activities	-	-	54
Transport, storage and communication	-	-	119
Wholesale and retail trade	-	-	13
Grand Total	(11,060)	(1,823)	940
2015 (£'000)	Past Due	Impaired	Provision
Accommodation and food services activities	(314)	-	5
Agriculture, hunting and forestry	-	-	3
Electricity, gas and water supply	-	-	52
Financial intermediation	-	-	81
Individuals and individual trusts	(8,892)	(1,020)	33
Manufacturing	-	-	83
Mining and quarrying	-	-	33
Real estate, professional services and support activities	-	-	99
Transport, storage and communication	-	-	86
Wholesale and retail trade	-	-	14
Grand Total	(9,205)	(1,020)	490

Table 12: Analysis of past due, impaired and provision by geographical region

2016 (£'000)	Past Due	Impaired	Provision
UK	(11,060)	(1,823)	519
Other European Countries	-	-	116
North America	-	-	46
Rest of the World	-	-	259
Grand Total	(11,060)	(1,823)	940
2015 (£'000)	Past Due	Impaired	Provision
UK	(9,205)	(1,020)	304
Other European Countries	-	-	38
North America	-	-	3
Rest of the World	-	-	145
Grand Total	(9,205)	(1,020)	490

- The impaired amount of £1.82M consisted of 3 residential mortgages which fell into non-performing category and some overdue credit cards.
- The past due balances of £11.06M related to residential mortgages.
- The provision amount increased by £0.45M mainly due to an increase in the collective provisional allowance.

The movement in the impairment provision between 2016 year-end and 2015 year-end is shown in below Table 13. This table is also available in the 2016 annual report.

Table 13: Allowances for impairment: provisions to loans and advances

£'000	Specific		Collective	
	Loans and advances to banks	Loans and advances to customers	Loans and advances to banks	Loans and advances to customers
Balance as at 1 January 2016	-	33	81	376
Increase in impairment	-	83	21	574
Recovery	-	(4)	-	-
Reversal of impairment	-	-	(55)	(60)
Charge (release) in income statement	-	79	(34)	514
Amounts written off (for credit and fraud)	-	(109)	-	-
Balance at 31 December 2016	-	3	47	890
Balance at 1 January 2015	-	5	331	405
Increase in impairment	-	134	29	199
Reversal of impairment	-	-	(279)	(228)
Charge (release) in income statement	-	134	(250)	(29)
Amounts written off (for credit and fraud)	-	(106)	-	-
Balance at 31 December 2015	-	33	81	376

Provisioning for Available-for-Sale Financial Assets

Impairment for available-for-sale financial assets is identified when there is a significant or prolonged decline in the fair value of the assets below its original cost.

If in a subsequent period, the fair value of the asset increases, which can be objectively related to an event occurring after the recognition of the impairment loss, the impairment loss is reversed through the income statement.

Table 14: Allowances for impairment: Available For Sale Financial Investments

£'000	Movement in fair value recognized in equity	Impairment
Balance as at 1 January 2016	210	-
Changes in fair values	189	-
Reversal of impairment	-	-
Amounts written off	-	-
Exchange-rate movements	189	-
Balance as at 31 December 2016	399	-
Balance as at 1 January 2015	(676)	-
Changes in fair values	886	-
Reversal in impairment	-	-
Amounts written off	-	-
Exchange-rate movements	886	-
Balance as at 31 December 2015	210	-

Credit Asset Quality

Table 15: Credit quality of assets

£'000	Gross carrying values ⁹ of		Allowances/ impairment	Net values
	Defaulted exposures ¹⁰	Non-defaulted exposures		
2016				
Loans	1,823	1,183,083	940	1,183,966
Debt Securities	-	40,708	-	40,708
OBS exposures	-	251,468	-	251,468
Total	1,823	1,475,259	940	1,476,142
2015				
Loans	1,020	872,879	490	873,409
Debt Securities	-	35,859	-	35,859
OBS exposures	-	224,342	-	224,342
Total	1,020	1,133,080	490	1,133,610

Table 16: Changes of defaulted loans and debt securities

	Carrying values (£'000)
Defaulted loans and debt securities at 30 June 2016	1,756
Loans and debt securities that have defaulted since the last reporting period	355
Returned to non-defaulted status	(288)
Amounts written off	-
Other changes	-
Defaulted loans and debt securities at 31 December 2016	1,823
Defaulted loans and debt securities at 30 June 2015	1,764
Loans and debt securities that have defaulted since the last reporting period	627
Returned to non-defaulted status	(1,369)
Amounts written off	-
Other changes	(2)
Defaulted loans and debt securities at 31 December 2015	1,020

Movements highlight:

- The above changes defaulted exposures related to retail loans only. There was no default arising from debt securities.
- The defaulted amount £1.76M in June 2016 related to 3 residential mortgages and some credit cards. £0.29M of the total defaulted amount returned to non-defaulted status.

⁹ The amount is the gross exposure of any credit conversion factors (CCF) or credit risk mitigation (CRM) techniques, but after deduction of write-offs.

¹⁰ The defaulted exposure refers to the non-performing exposure.

Credit Quality Step (CQS) Analysis

In the assessment of credit risk under Standardised Approach, the Bank uses ratings assigned by the PRA's recognised External Credit Assessment Institutions to determine risk weight and RWA.

Rated and unrated counterparties under the standardised approach governing rule, each exposure must be assigned to one of the six credit steps if a rating is available. After assignment to a quality step, exposure class and maturity are then used to determine the risk weight percentage. Where a credit rating is not available, a default treatment is applied as specified by regulatory guidance.

The Bank has not used any export credit agencies for rating purposes. The bank follows the provision of the CRD IV where external ratings cannot be obtained.

The breakdown of credit risk exposures under standardised approach by asset class and risk weight, corresponding to the riskiness attributed to the exposure.

Table 17: Credit exposures by asset classes and risk weights

Risk weight										Total credit exposures (post CCF&CRM)
Asset classes	0%	10%	20%	35%	50%	75%	100%	150%	250%	
2016(£'000)										
Central governments or central banks	248,098	-	-	-	-	-	-	-	-	248,098
Corporate	-	-	-	14,753	-	600,494	-	-	-	615,247
Institutions	-	-	-	36,081	-	-	-	-	-	36,081
Retail	-	-	-	-	917	-	-	-	-	917
Secured by mortgages on commercial immovable	-	-	568,886	9,991	621	-	-	-	-	579,498
Short term claims on institutions and corporate	-	21,426	-	2,188	-	-	-	-	-	23,614
Past due items	-	-	-	-	-	-	210	-	-	210
Other items	1,847	-	-	-	-	10,660	-	425	-	12,932
Total	249,945	21,426	568,886	63,013	1,538	611,154	210	425	1,516,597	
2015(£'000)										
Central governments or central banks	196,168	-	-	-	-	-	-	-	-	196,168
Corporate	-	-	-	13,657	-	444,462	-	-	-	458,119
Institutions	-	14,623	-	30,420	2	152	-	-	-	45,197
Retail	-	-	-	-	637	-	-	-	-	637
Secured by mortgages on residential property	-	-	-	5,104	-	-	-	-	-	5,104
Secured by mortgages on commercial real estate	-	-	488,179	-	166	5,398	-	-	-	493,743
Short term claims on institutions and corporate	44,622	139,021	-	1,948	-	-	-	-	-	185,592
Past due items	-	-	-	-	-	-	674	-	-	674
Other items	1,661	-	-	-	-	74,055	-	751	-	76,467
Total	242,451	153,644	488,179	51,129	805	524,067	674	751	1,461,700	

Exposure values for each of the standardised credit risk exposure classes associated with each credit quality step are presented in below tables.

Table 18: Credit risk exposure by CQS

2016 (£'000)	Risk weight	Credit ratings (S&P's)	Exposure values	RWA
CQS for Central governments or central banks				
1	0%	AAA to AA-	248,098	-
CQS for Corporate				
2	50%	A+ to A-	14,753	7,377
3	100%	BBB+ to BBB-	67,488	67,488
4	100%	BB+ to BB-	3,019	3,019
Unrated			529,987	523,105
Total			615,247	600,989
CQS for Institutions				
3	50%	BBB+ to BBB-	24,728	12,364
Unrated			11,353	5,676
Total			36,081	18,040
CQS for Short term claims on institutions and corporate				
Unrated			23,614	5,379
Total			23,614	5,379
CQS for Secured by mortgages on commercial immovable				
Unrated			579,498	203,382
Total			579,498	203,382
Retail			917	629
Past due items				
Unrated			210	314
Total			210	314
Other items			12,932	11,722
Grand Total			1,516,597	840,455

2015 (£'000)	Risk weight	Credit ratings (S&P's)	Exposure values	RWA
CQS for Central governments or central banks				
1	0%	AAA to AA-	196,168	-
CQS for Corporates				
1	50%	A+ to A-	13,657	6,828
2	100%	BBB+ to BBB-	89,269	89,269
3	100%	BB+ to BB-	8,154	8,154
Unrated			347,039	347,039
Total			458,119	451,290
CQS for Institutions				
1	50%	BBB+ to BBB-	29,857	14,928
Unrated			15,341	3,360
Total			45,197	18,289
CQS for Short term claims on institutions and corporate				
Unrated			185,592	28,778
Total			185,592	28,778
CQS for Secured by mortgages on commercial real estate				
Unrated			5,104	2,552
Total			5,104	2,552
Secured by mortgages on residential property			493,743	176,385
Retail			637	478
Past due items				
Unrated			674	1,011
Total			674	1,011
Other items			76,467	75,933
Grand Total			1,461,700	754,715

Note: Exposure value is the amount after applying credit conversion factors (CCF) to off balance sheet exposures in accordance with the PRA regulatory rules.

Credit Risk Mitigation (CRM)

CRM is a key aspect of effective risk management. The Bank uses a range of approaches to mitigate credit risk.

- Collateral: in the Bank's retail residential and commercial real estate businesses, a mortgage over the property is always taken to secure claims. Physical collateral is also taken in various forms of specialized lending, such as aircraft leasing.
- Financial guarantee: for some corporate lending, financial guarantees such as standby letter of credit are taken to cover unforeseen risks.

Table 20 demonstrates the extent of use of CRM techniques on credit exposures.

Table 19: Credit exposure overview of CRM

£'000	Exposures unsecured: carrying amount	Exposures secured by collateral	Exposures secured by collateral of which secured amount	Exposures secured by financial guarantees	Exposures secured by financial guarantees, of which secured amount	Exposures secured by credit derivatives	Exposures secured by credit derivative, of which secured amount
2016							
Loans	581,317	569,713	569,713	32,936	32,936	-	-
Debt securities	40,708	-	-	-	-	-	-
Total	622,025	569,713	569,713	32,936	32,936	-	-
Of Which Defaulted	-	1,817	1,817	-	-	-	-
2015							
Loans	343,429	498,368	498,368	31,612	31,612	-	-
Debt securities	35,859	-	-	-	-	-	-
Total	379,288	498,368	498,368	31,612	31,612	-	-
Of Which Defaulted	-	996	996	-	-	-	-

- The exposures of £570M were mortgages, fully secured by 1st charge over residential properties (£565.37M) and commercial real estate (£4.34M).
- The exposures of £33M consisted of 2 bilateral loans which were 100% guaranteed by standby letter of credit.
- The defaulted exposure of £1.82M related to 3 residential mortgages.
- The defaulted exposure of credit card is not considered here.

The effect of CRM on Standardised Approach capital requirements' calculations is illustrated in below table. RWA density which is the total RWA as a percentage of exposure post CCF and CRM, provides a synthetic metric on riskiness of each portfolio.

Table 20: CRM effects on credit exposures and RWA

Asset classes	Exposure before CCF & CRM		Exposure post CCF & CRM		RWA & RWA density	
	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWA	RWA density
2016(£'000)						
Central governments or central banks	248,098	-	248,098	-	-	0%
Corporate	582,753	251,414	489,540	125,707	600,989	98%
Institutions	34,989	2,371	34,989	1,092	18,040	50%
Retail	917	4,305	917	-	629	69%
Secured by mortgages on immovable property	578,877	1,242	578,877	621	203,382	35%
Short term claims on institutions & corporate	91,988	1,694	23,275	339	5,379	23%
Higher-risk categories	635	-	635	-	1,377	217%
Other items	12,507	-	12,507	-	10,660	85%
Total	1,550,764	261,026	1,388,838	127,759	840,456	55%
2015(£'000)						
Central governments or central banks	196,168	-	196,168	-	-	0%
Corporate	334,159	247,920	334,159	123,960	451,290	99%
Institutions	44,634	1,140	44,634	564	18,289	40%
Retail	637	4,135	637	-	478	75%
Secured by mortgages on residential property	493,577	332	493,577	166	176,385	36%
Secured by mortgages on commercial real estate	5,104	-	5,104	-	2,552	50%
Short term claims on institutions & corporate	185,333	1,290	185,333	258	28,778	16%
Higher-risk categories	1,425	-	1,425	-	2,888	203%
Other items	75,716	-	75,716	-	74,055	98%
Total	1,336,752	254,817	1,336,752	124,948	754,715	52%

Higher-risk categories refer to the assets with the risk weight at 150% or higher reflecting higher risks associated with RWA density of 217% (2015:203%). As required by the Basel Framework, the Bank discloses the higher-risk categories that are not in other regulatory portfolios. As indicated on the above table, all the exposures on past due items (£0.21M) are included in higher-risk category (£0.64M).

6. Counterparty Credit Risk (CCR)

Counterparty credit risk refers to the risk that a counterparty to a transaction may default prior to the satisfactory final settlement of the cash flows of one of the following types of the transactions: derivative instruments, securities or commodities lending, long settlement transactions and margin lending transactions.

The Bank established its credit limit management through BOC Group. Bank of China head office published policy and procedures according to CCR management for the whole BOC group. For BOC UK, Metrics, Murex systems are used for CCR measurement purpose. FX spot and trading limit are divided separately to ensure in depth CCR management.

The Bank holds OTC derivatives and enters into Security financing Transactions (SFTs).

The Bank holds derivative instruments to hedge market risk exposures, including interest rate risk in the banking book and foreign exchange risk. The counterparty credit risk for derivative instruments is subject to credit limits on the same basis as the Bank's other credit exposures.

The derivative portfolio consisted of interest rate swap, FX swap and FX spot. All the transactions of the derivative contracts occurred between internal BOC Group entities. The Bank applies Standardised Approach and Standardised CVA to calculate its total CCR capital charge.

For SFTs, there was no repo trade outstanding at the end of 2016.

Composition of Collateral for CCR Exposure:

The Bank has not received nor provided collateral in respect of derivative contracts. As a result, the impact of a downgrade of the Bank's credit rating and the resulting increase in margin requirements is not expected.

Credit derivatives exposures:

The Bank does not hold any credit default swap (CDS) or total return swap (TRS) in either banking book or trading book. Disclosures for credit derivative transactions are not applicable.

Exposures to central counterparties: the derivative transactions in the Bank's portfolio do not involve any qualifying or non-qualifying central counterparties. Therefore, there is no exposure to central counterparties and no capital allocation is needed.

Wrong-way (correlation) risks:

Wrong-way risk represents the risk of loss that arises when the risk factors driving the exposure to counterparty are positively correlated with the probability of default of that counterparty.

In addition to its usual credit approval and credit authority policies, the Bank manages its exposure to wrong-way risk through regular monitoring under regulatory guidance.

CCR Exposure by Standardised Approach (SA-CCR)

The Bank previously applied Current Exposure Method to calculate the default risk capital charge for CCR. Basel III in a paper issued in January 2015 requires banks to provide a comprehensive view of the methods used to calculate CCR regulatory requirements and the main parameters used within each method. The Standardised Approach (“SA”) for measuring CCR exposure at default (EAD) was introduced by Basel III in March 2015 to replace Current Exposure Method and Standardised Method. The Standardised Approach will be in force from 1 January 2017.

The limitations of Current Exposure Method are that it does not differentiate between margined and unmargined transactions, and the recognition of netting benefits is too simplistic. The weaknesses of Standardised Method are that the relationship misrepresentation between current exposure and potential future exposure, and inadequacy to provide a true non-internal model alternative for calculating EAD.

In order to address the deficiencies of the Current Exposure Method and Standardised Method, the Basel Committee’s formulated the SA-CCR with main objectives to devise an approach that is suitable to be applied to a wide variety of derivatives transactions (both margined and unmargined, as well as bilateral and cleared). The SA-CCR applies to OTC derivatives, exchange-traded derivatives and long settlement transactions. The Bank holds unmargined OTC derivatives only.

SA-CCR takes two components the replacement cost (RC) and the potential future exposure (PFE) to calculate the EAD¹¹. The total SA-CCR EAD is derived from the sum of RC and PFE.

The RC is obtained by marking the contracts to market. The PFE is reflected by add-on factors, which is an estimate of the total notional principle amount split by residual maturity. The PFE consist of a multiplier that allows for the partial recognition of excess collateral and an aggregate add-on, which is derived from add-ons developed for each asset class. The mechanics for calculating add-ons hinges on the key concept of a

¹¹ Mathematically: SA-CCR EAD= $\alpha * (RC+PFE)$, $\alpha=1.4$, which is set by the Basel Committee.

“hedging set”, which is a set of transactions within a single netting set within which partial or full offsetting is recognised.

Table 21: Analysis of CCR exposure under Standardised Approach by contract type

£'000	2016	2015
Interest rate swap	2,907	2,498
FX Swap	675	149
FX Spot	1,046	3
Total	4,628	2,650

There was no repo trade outstanding at the end of 2016. Hence, the EAD post-CRM and RWAs are zero for SFTs.

Table 22: Analysis of CCR exposure by approach

£'000	Replacement cost	Potential future exposure	EEPE	α for regulatory EAD	EAD post-CRM	RWA
2016						
SA-CCR (for derivatives)	1,104	2,202		1.4	4,628	1,798
IMM (for derivatives & SFTs)			-	-	-	-
Simple Approach for CRM (for SFTs)					-	-
Comprehensive Approach for CRM (for SFTs)					-	-
VaR for SFTs					-	-
Total						1,798

Table 23: CCR exposure under Standardised Approach by counterparty and risk weight

Regulatory portfolio £'000	Risk weight								Total credit exposure
	0%	10%	20%	50%	75%	100%	150%	Others	
2016									
Institutions	-	-	1,721	2,907	-	-	-	-	4,628
Total	-	-	1,721	2,907	-	-	-	-	4,628

Credit Valuation Adjustment (CVA)

The CVA capital requirement was introduced by Basel III in December 2010 and then also adopted by CRD IV. In addition to the default capital requirements for CCR based on Standardised or IRB Approaches, Basel III requires banks to add a capital charge to cover

the unexpected risk of mark-to-market losses on the expected counterparty risk to OTC derivatives. In this context, CVA of an OTC derivative portfolio with a given counterparty is the market value of the credit risk due to any failure to perform on agreements with that counterparty.

There are two methodologies for calculating the CVA capital charge, the Advanced Approach and Standardised Approach. The Standardised Approach was adopted by the Bank in 2015, which incorporates the key drivers of the CVA risk weight, effective maturity and discounted EAD. The CVA risk weight¹² is based on the external credit rating of the counterparty. The effective maturity is the notional weighted average maturity. Discounted EAD is the total EAD after applying discounting factor¹³.

The Bank's CVA for derivative portfolio is not hedged. The CVA breakdown is displayed in the table below.

Table 24: CVA breakdown by Advanced and Standardised Approach

£'000	2016		2015	
	EAD post-CRM	RWA	EAD post-CRM	RWA
Portfolio subject to Advanced CVA	-	-	-	-
i) VaR component	-	-	-	-
ii) Stressed VaR component	-	-	-	-
Portfolio subject to Standardised CVA	4,076	2,366	2,366	1,399
Total subject to CVA capital charge	4,076	2,366	2,366	1,399

Total CCR Capital Requirement

According to Basel III, the Bank's total CCR capital charge is determined as the sum of Standardised Approach capital charge and the standardised CVA risk capital charge.

Table 25: Total CCR Capital Requirement

£'000	2016	
	RWA	Capital
Standardised Approach (SA)	1,798	144
CVA	2,366	189
Total	4,164	333

¹² CVA risk weight ranges from 0.7% to 10%.

¹³ Discounting factor is defined as $[1 - \exp(-0.05 * M)] / (0.05 * M)$, M is the effective maturity.

7. Market Risk

Market risk is defined as the risk that movements in market risk factors, including interest rates, foreign exchange rates, commodity prices, credit spreads and equity prices, will reduce the bank's income or the value of its asset portfolio.

The Bank does not undertake any proprietary trading activities. All trading activities are client driven and need to be promptly squared. Main source of market risk trading book relates to foreign exchange risk, little residual position in the trading book and the accrual of interest income in foreign currency.

The Bank has identified Key Risk Indicators (KRIs) for the purpose of monitoring, reporting and managing the market risk in the book.

Table 26: Market risk capital requirement under Standardised Approach

£'000	RWA 2016		RWA 2015	
	December	June	December	June
Outright products				
Interest rate risk (general & specific)	-	-	-	-
Equity risk (general & specific)	-	-	-	-
Foreign exchange risk	11,206	4,807	9,973	7,129
Commodity risk	-	-	-	-
Options				
Simplified approach	-	-	-	-
Delta-plus method	-	-	-	-
Scenario approach	-	-	-	-
Securitisation	-	-	-	-
Total	11,206	4,807	9,973	7,129

Foreign Exchange (FX) Risk

Foreign exchange risk is the risk that movements in various currencies could materially impact on the financial statements. FX is monitored via dedicated FX gross position limits and covers both banking and trading book, excluding the accounting base currency GBP. FX risk arises from the foreign currency Profit/Loss across all business lines and FX financial instruments. In order to manage this risk, the Bank squares the foreign currency Profit/Loss on a regular basis and uses FX financial instruments.

Table 27: Foreign exchange position

£'000	US Dollar	Euro	HK Dollars	YEN	Other
31 December 2016	157	(16)	38	(3)	17
31 December 2015	93	23	34	(1)	7

Interest Rate Risk in Banking Book (IRRBB)

The objective for IRRBB risk management is to minimise the sensitivity of the bank's earnings and economic value to market rate fluctuations.

IRRBB mainly stems from the re-pricing mismatch of assets and liabilities. The sources of interest rate risk include re-pricing risk, yield curve risk, basis risk and embedded option risk. Interest rate risk is managed based on the repricing of the underlying investments. There are no assumptions made on loan prepayments.

The Bank mainly utilizes the interest rate sensitivity gap to analyse the re-pricing risk on a static basis from both in the near term earnings perspective and the long term earnings perspective. Interest-generating assets, interest-bearing liabilities and the positions of off-balance sheet business are classified into different time buckets; interest rate-sensitive liabilities in each time bucket are subtracted from the corresponding interest rate-sensitive assets to produce a re-pricing gap for that time bucket.

The Bank adopts a key risk indicator for the purpose of monitoring, reporting and managing the IRRBB: the NII Movement Ratio¹⁴. The limit is presented as a percentage ratio in terms of net income volatility for an increase in interest rate.

The Bank also monitors the One-year Cumulative Re-pricing Gap Ratio without defining a specific limit for all currencies, expressed in sterling.

The table below shows the sensitivity to a 100bps change in interest rates, with all other variables held constant, of the Bank's income statement.

Table 28: Impact of 100 bps parallel shift on interest risk

£'000	100 bps parallel increase	100 bps parallel decrease
Sensitivity of projected net interest income at 31 December 2016	1,245	1,245
31 December 2015	(1,240)	(1,240)
Sensitivity of reported equity to interest rate movements at 31 December 2016	100	(100)
31 December 2015	89	(89)

Interest rate movements affect reported equity in the following ways: 1) retained earnings; arising from increases or decreases in net interest income and the fair value changes reported in profit or loss and 2) fair value reserves; arising from increases or decreases in fair values of available for sale financial instruments reported directly in equity.

¹⁴ An instrument that measures the maximum level of adverse variation of net interest income affected by a specified interest rate change on the book.

8. Operational Risk

Operational risk is defined as any instance where there is a potential or actual impact to the Bank resulting from inadequate or failed internal process, people, systems, or from an external event. The impact to the Bank can be financial, including losses or an unexpected financial gain, as well as non-financial such as customer detriment, reputational or regulatory consequences.

Operational risks are inherent in the Bank's business activities. It's not cost effective to eliminate all operational risk and in any event it would not be possible to do so. Small losses from operational risks are expected to occur and are accepted as part of the normal course of business activities. The Bank seeks to reduce the likelihood of operational risk in line with the risk appetite.

The Operational Risk comprises the following key risks: fraud, transaction operations, people, premises, system and legal. In practice, the Bank's operational risk management extends beyond the key risks.

The Bank has a comprehensive Operational Risk Framework in line with the CRD IV, Basel guidelines 'Sound Practices for Management and Supervision of Operational Risk 2011'.

The Bank continues to use Basic Indicator Approach to calculate the operational risk capital requirement, which is 15% of the average annual gross income over the previous three years. The losses, stress testing scenarios and effective controls are taken into consideration when calculating capital. The Bank accumulates loss data to build the foundation for more advanced approach.

Table 29: Operational risk capital requirement using BIA

£'000	Capital Allocation
31 December 2016	11,847
31 December 2015	10,298

Operational Risk Management

The Bank is committed to the measurement and management of operational risk. The ORC was set up to monitor and manage operational risk activities. The committee meet quarterly and reports to the BRC.

The Bank uses the following tools to identify, assess, monitor, report and control operational risk:

- Control self-assessment: the Bank assesses all processes underlying in its department/business lines against a library of potential threats and vulnerabilities and considers the potential impact. The Control self-assessment process evaluates inherent risk, the effectiveness of the control environment and residual risk.

The Bank conducts Control self-assessment annually across all departments and remedial actions are derived with cooperation of relevant departments in order to mitigate risk occurrence in future.

- KRIs: are risk metrics and/or statistics that provide regular insights into a Bank's risk exposure. The aim is to ensure that all the major risk exposures are captured by KRIs in each department. The Bank has a well established list of KRIs for different departments which are reviewed annually and approved by the ORC and BRC. KRIs are collected monthly and reported quarterly on a R-A-G flag basis.
- Operational Risk Loss Event/ Data: Operational Risk Loss Data provides meaningful information for assessing the Bank's exposure to operational risk and effectiveness of internal controls. All events are classified in one of the 7 Basel II loss event categories.

The Operational Risk Loss Event data is collected on a monthly basis from all departments irrespective of the amount. The Bank records all losses actual, potential or near miss. Operational Risk team then conduct critical events analysis and recommend actions plan in agreement with the correspondent department. The summary of Operational Risk Loss Event is reported quarterly to the Senior Management, ORC and BRC.

- Control Affirmation Process: where the departments reassess existing controls and affirm the effectiveness in mitigating the risk and review if controls are still applicable. The Bank conducts Control Affirmation Process annually. The findings of Control Affirmation Process are presented annually to the ORC and BRC for recommendations and approvals.
- Stress Testing and Scenario Analysis: a process of obtaining expert opinion of business line/departments to identify potential operational risk events and assess the potential outcome. The Bank has developed various operational risk scenarios that provide potential sources of significant operational risk and the need for additional risk management controls or mitigation solutions.
- The Bank use Group Operational Risk Monitoring & Analysis Platform (ORMIS) for risk reporting purpose

9. Remuneration

Subject to remuneration award publishing.