

Oversea-Chinese Banking Corporation Limited

**Pillar 3 Disclosures
(OCBC Group – As at 31 December 2016)**



Incorporated in Singapore
Company Registration Number: 193200032W

1. INTRODUCTION

The purpose of this document is to provide the information in accordance with Pillar 3 directives under Monetary Authority of Singapore (“MAS”) Notice 637 on Risk Based Capital Adequacy Requirements for banks incorporated in Singapore. MAS Notice 637 mandates a minimum level of public disclosures to be made available to market participants to assist them in assessing the capital adequacy and risk profile of a bank.

For qualitative descriptions of OCBC Group’s (“Group’s”) capital and risk management objectives and policies, and disclosures on remuneration, please refer to the Capital Management, Risk Management and Corporate Governance sections of the Annual Report.

2. ACCOUNTING AND REGULATORY CONSOLIDATION

The consolidation basis used for regulatory capital computation is similar to that used for financial reporting, except for the following:

- Subsidiaries that carry out insurance business are excluded from regulatory consolidation and are treated as investments in major stake companies. The regulatory adjustments applied to these investments are in accordance to MAS Notice 637 paragraphs 6.1.3(p), 6.2.3(e) and 6.3.3(e).
- As at 31 December 2016, the subsidiaries that carry out insurance business are as follows:
 - a. The Great Eastern Life Assurance Company Limited and its insurance entities
 - b. The Overseas Assurance Corporation Limited and its insurance entities
- As at 31 December 2016, the total equity of these insurance subsidiaries was S\$7 billion and total assets were S\$68 billion.

The basis of consolidation for financial reporting can be found in Note 2.2 in the Notes to the Financial Statements in the Annual Report.

3. CAPITAL ADEQUACY

Disclosures on the Group’s capital adequacy ratios and the capital positions for the Group’s significant banking subsidiaries as at 31 December 2016 are presented in the Capital Adequacy Ratios section of the Financial Year 2016 Financial Results (<http://www.ocbc.com/group/investors/index.html>).

Disclosures on the composition of the Group’s regulatory capital, including reconciliation between balance sheet and regulatory capital elements, as well as terms and conditions and main features of capital instruments can be found under the Capital and Regulatory Disclosures sections of the Bank’s Investor Relations website (http://www.ocbc.com/group/investors/Cap_and_Reg_Disclosures.html).

Disclosures on the Group’s leverage ratio are presented in the Leverage Ratio section of the Financial Year 2016 Financial Results (<http://www.ocbc.com/group/investors/index.html>) and under the Capital and Regulatory Disclosures section of the Bank’s Investor Relations website (http://www.ocbc.com/group/investors/Cap_and_Reg_Disclosures.html).

4. CREDIT RISK

4.1 Maximum Exposure to Credit Risk

S\$ million	Period End	Average ⁽³⁾
Credit risk exposure of on-balance sheet assets:		
Net loans and bills receivable	216,830 ⁽¹⁾	206,241
Placements with and loans to banks	39,801	39,524
Government treasury bills and securities	24,364	24,482
Debt securities	20,067	20,030
Assets pledged	1,789 ⁽²⁾	1,805
Others	11,038	9,422
	313,889	301,504
Credit risk exposure of off-balance sheet items:		
Credit commitments	119,152	111,042
Contingent liabilities	11,145	9,404
	130,297	120,446
Total maximum credit risk exposure	444,186	421,950

⁽¹⁾ Net of specific allowances of \$616 million and portfolio allowances of \$2,241 million.

⁽²⁾ Assets pledged comprise net loans and bills receivable of \$465 million, placements with and loans to banks of \$527 million, government treasury bills and securities of \$2 million and debt securities of \$795 million.

⁽³⁾ Computed on a monthly average basis.

4.2 Geographic/Industry Distribution of Major Types of Credit Exposure

Gross Loans and Bills Receivable ⁽¹⁾

Analysed by Geography

	S\$ million
Singapore	93,580
Malaysia	27,948
Indonesia	18,138
Greater China	53,997
Other Asia Pacific	11,988
Rest of the World	14,501
Total	220,152

Distribution by geography is determined based on where the credit risk resides.

⁽¹⁾ Includes assets pledged of \$465 million.

Gross Loans and Bills Receivable ⁽¹⁾ (continued)
Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	8,974
Manufacturing	12,697
Building and construction	35,632
Housing	60,149
General commerce	25,348
Transport, storage and communication	11,520
Financial institutions, investment and holding companies	30,491
Professionals and individuals	26,396
Others	8,945
Total	220,152

⁽¹⁾ Includes assets pledged of \$465 million.

Placements with and Loans to Banks ⁽¹⁾
Analysed by Geography

	S\$ million
Singapore	589
Malaysia	4,722
Indonesia	1,036
Greater China	25,423
Other Asia Pacific	4,110
Rest of the World	3,778
Balances with banks	39,658
Bank balances of life assurance fund	670
Total	40,328

Distribution by geography is determined based on where the credit risk resides.

⁽¹⁾ Includes assets pledged of \$527 million.

Government Treasury Bills and Securities ⁽¹⁾
Analysed by Geography

	S\$ million
Singapore	8,066
Malaysia	2,397
Indonesia	2,731
Greater China	1,680
Other Asia Pacific	5,945
Rest of the World	3,547
Total	24,366

Distribution by geography is determined based on country of the issuer.

⁽¹⁾ Includes assets pledged of \$2 million.

Debt Securities ⁽¹⁾

Analysed by Geography

	S\$ million
Singapore	3,376
Malaysia	1,823
Indonesia	1,019
Greater China	7,723
Other Asia Pacific	4,483
Rest of the World	2,438
Total	20,862

Distribution by geography is determined based on where the borrowers are incorporated.

Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	1,082
Manufacturing	1,296
Building and construction	2,327
General commerce	582
Transport, storage and communication	1,346
Financial institutions, investment and holding companies	12,406
Others	1,823
Total	20,862

⁽¹⁾ Includes assets pledged of \$795 million.

Credit Commitments

Analysed by Geography

	S\$ million
Singapore	89,973
Malaysia	7,010
Indonesia	4,754
Greater China	13,847
Other Asia Pacific	1,655
Rest of the World	1,913
Total	119,152

Distribution by geography is determined based on where the transactions are recorded.

Credit Commitments (continued)
Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	1,362
Manufacturing	8,576
Building and construction	12,415
General commerce	15,742
Transport, storage and communication	3,084
Financial institutions, investment and holding companies	29,254
Professionals and individuals	41,906
Others	6,813
Total	119,152

4.3 Residual Contractual Maturity of Major Types of Credit Exposure
On-Balance Sheet Assets

S\$ million	Within 1 week	1 week to 1 month	1 to 3 months	3 to 12 months	1 to 3 years	Over 3 years	Total
Net loans and bills receivable	15,717	25,724	16,172	24,713	38,003	96,966	217,295 ⁽¹⁾
Placements with and loans to banks	6,756	5,646	10,716	15,388	752	400	39,658 ⁽²⁾
Government treasury bills and securities	260	1,021	3,288	7,441	8,142	4,214	24,366 ⁽³⁾
Debt securities	173	726	1,861	4,377	6,194	7,531	20,862 ⁽⁴⁾

⁽¹⁾ Includes assets pledged of \$465 million.

⁽²⁾ Includes assets pledged of \$527 million and excludes bank balances of life assurance fund.

⁽³⁾ Includes assets pledged of \$2 million.

⁽⁴⁾ Includes assets pledged of \$795 million.

Credit Commitments

	S\$ million
Undrawn credit facilities:	
Term to maturity of one year or less	102,378
Term to maturity of more than one year	16,774
Total	119,152

4.4 Credit Quality of Loan Portfolio, Non-Performing Loans, Past-Due Loans, Impairment Allowances

Total Loans and Advances – Credit Quality

	S\$ million
Neither past due nor impaired	215,778
Not impaired	2,737
Impaired	1,505
Past due loans	4,242
Impaired but not past due	132
Gross loans	220,152
Specific allowances	(616)
Portfolio allowances	(2,241)
Net loans	217,295

Non-Performing Loans

Analysed by Geography

S\$ million	Singapore	Malaysia	Indonesia	Greater China	Rest of the World	Total
Substandard	351	485	433	219	360	1,848
Doubtful	245	78	118	79	28	548
Loss	149	44	138	56	#	387
Total	745	607	689	354	388	2,783

represents amounts less than \$0.5 million.

Distribution by geography is determined based on where the credit risk resides.

Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	152
Manufacturing	254
Building and construction	94
Housing	406
General commerce	376
Transport, storage and communication	608
Financial institutions, investment and holding companies	435
Professionals and individuals	170
Others	288
Total	2,783

Non-Performing Loans (continued)

Analysed by Period Overdue

	S\$ million
Over 180 days	1,484
Over 90 days to 180 days	337
30 days to 90 days	249
Less than 30 days	288
Past due	2,358
No overdue	425
Total	2,783

Past-Due Loans

Analysed by Industry

	S\$ million
Agriculture, mining and quarrying	130
Manufacturing	352
Building and construction	138
General commerce	389
Transport, storage and communication	570
Financial institutions, investment and holding companies	452
Professionals and individuals (include housing)	1,802
Others	409
Total	4,242

Analysed by Geography

	S\$ million
Singapore	1,638
Malaysia	649
Indonesia	890
Greater China	769
Rest of the World	296
Total	4,242

Distribution by geography is determined based on where the credit risk resides.

Loans Past Due but Not Impaired

Certain loans and advances are past due but not impaired as the collateral values of these loans are in excess of the principal and interest outstanding. Allowances for these loans may have been set aside on a portfolio basis.

Past-Due Loans (continued)
Analysed by Period Overdue

	S\$ million
Past due	
Less than 30 days	1,122
30 to 90 days	944
Over 90 days	671
Past due but not impaired	2,737

Impairment Allowances for Loans and Bills Receivable
Analysed by Geography

S\$ million	Specific allowances	Portfolio allowances
Singapore	233	847
Malaysia	121	385
Indonesia	175	288
Greater China	71	521
Other Asia Pacific	16	110
Rest of the World	#	90
Total	616	2,241

represents amounts less than \$0.5 million.

Distribution by geography is determined based on where the credit risk resides.

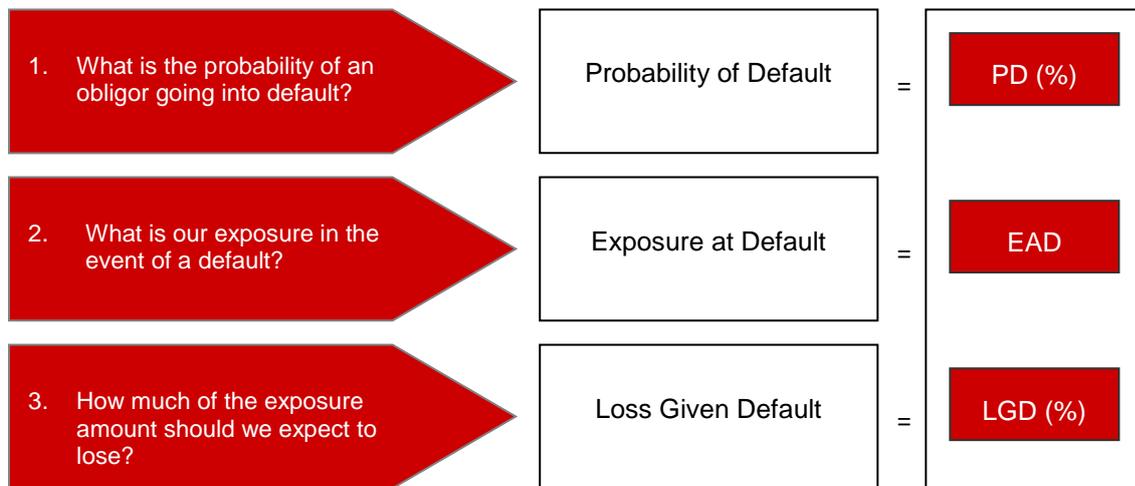
Analysed by Industry

S\$ million	Cumulative specific allowances	Net specific allowances charged to income statements
Agriculture, mining and quarrying	15	22
Manufacturing	83	62
Building and construction	39	11
Housing	44	16
General commerce	99	76
Transport, storage and communication	116	97
Financial institutions, investment and holding companies	87	84
Professionals and individuals	90	77
Others	43	39
Total	616	484

Impairment Allowances for Loans and Bills Receivable (continued)
Reconciliation of Changes in Impairment Allowances

S\$ million	Specific Allowances
At 1 January 2016	360
Currency translation	7
Bad debts written off	(221)
Recovery of amounts previously provided for Allowances for loans	(55)
Net allowances charged to income statements	484
Interest recognition on impaired loans	(18)
Transfer from other assets	4
At 31 December 2016	616

S\$ million	Portfolio Allowances
At 1 January 2016	2,060
Currency translation	9
Allowances charged to income statements	172
At 31 December 2016	2,241

KEY PARAMETERS USED TO QUANTIFY CREDIT RISK

4.5 Exposures and Risk Weighted Assets (“RWA”) by Portfolio

S\$ million	EAD	RWA
Credit Risk		
Standardised Approach		
Corporate	19,411	18,507
Sovereign	36,750	1,971
Bank	7,140	2,466
Retail	5,649	4,243
Residential Mortgage	13,026	5,001
Commercial Real Estate	10,048	10,053
Fixed Assets	3,996	3,996
Others	7,194	6,377
Total Standardised	103,214	52,614
Internal Ratings-Based (IRB) Approach		
Foundation IRB		
Corporate	112,318	75,109
Bank	50,025	8,886
Advanced IRB		
Residential Mortgage	54,779	5,999
Qualifying Revolving Retail	6,247	1,591
Small Business	6,935	2,564
Other Retail	1,208	133
Specialised Lending under Supervisory Slotting Criteria	1,395	1,688
Securitisation	-	-
Equity	1,620	5,600
Total IRB	234,527	101,570
Central Counterparties (CCP)	2,462	330 ⁽¹⁾
Credit Valuation Adjustments (CVA)		1,740 ⁽²⁾
Credit RWA pursuant to paragraph 6.1.3(p)(iii)		8,066 ⁽³⁾
Total Credit Risk	340,203	164,320
Market Risk		
Standardised Approach		20,186
Operational Risk		
Standardised Approach		10,884
Basic Indicator Approach		2,373
Total Operational Risk		13,257
Total RWA		197,763

⁽¹⁾ Refers to Credit RWA for exposures to central clearing houses that act as the intermediary for counterparties of contracts traded in financial markets

⁽²⁾ Refers to Credit RWA for adjustments to the mark-to-market valuation of the Over-the-Counter (OTC) derivatives with a counterparty

⁽³⁾ Refers to Credit RWA for investments in the ordinary shares of Unconsolidated Major Stake Companies within the prescribed threshold amount in accordance with MAS Notice 637 paragraph 6.1.3 (p)(iii)

4.6 Credit Exposures under Standardised Approach

Credit exposures under the standardised approach comprise mainly exposures to sovereigns, exposures from major subsidiaries such as OCBC Wing Hang, OCBC NISP and Bank of Singapore, as well as fixed assets. Rated exposures relate mainly to debt securities, corporate and sovereign portfolios while unrated exposures relate mainly to individuals and fixed assets.

Risk Weight	EAD S\$ million	RWA S\$ million
0%	34,032	-
10% - 40%	17,995	5,426
50% - 99%	11,124	7,079
100%	39,971	39,971
>100%	92	138
Total	103,214	52,614
Rated exposures	54,916	15,156
Unrated exposures	48,298	37,458

4.7 Credit Exposures subject to Supervisory Risk Weights under Internal Ratings-Based Approach

Equity Exposures under IRB Approach

Equities for regulatory capital computation are risk weighted and/or deducted from capital in accordance with MAS Notice 637 under IRB Approach. Equity exposures of S\$3 million have been deducted from regulatory capital.

	IRB Approach			
	(SRW)		(PD/LGD)	
	EAD S\$ million	Average Risk Weight %	EAD S\$ million	Average Risk Weight %
Listed securities	1,249	318%	-	-
Other equity holdings	276	424%	95	483%
Total	1,525	337%	95	483%

Specialised Lending Exposures under Supervisory Slotting Criteria

Specialised lending exposures include project, object and commodity financing.

	EAD S\$ million	Average Risk Weight
Strong	-	NA
Good	-	NA
Satisfactory	1,203	122%
Weak	83	265%
Default	109	NA
Total	1,395	121%

4.8 Credit Exposures under Foundation Internal Ratings-Based Approach (F-IRBA)

Corporate exposures are mainly exposures to corporate and institutional customers, major non-bank financial institutions, as well as financing of income-producing real estate. Bank exposures are exposures to banks and eligible public sector entities.

Corporate Exposures

PD Range	EAD S\$ million	Average Risk Weight
up to 0.05%	14,413	17%
> 0.05 to 0.5%	41,702	44%
> 0.5 to 2.5%	41,610	85%
> 2.5 to 9%	10,263	138%
> 9%	2,415	189%
Default	1,915	NA
Total	112,318	67%

Bank Exposures

PD Range	EAD S\$ million	Average Risk Weight
up to 0.05%	38,724	10%
> 0.05 to 0.5%	8,457	41%
> 0.5 to 2.5%	2,745	55%
> 2.5 to 9%	73	145%
> 9%	26	212%
Default	#	NA
Total	50,025	18%

represents amounts less than \$0.5 million

4.9 Credit Exposures under Advanced Internal Ratings Based Approach (A-IRBA)

Residential Mortgages are loans that are granted to individuals and secured by residential properties. Qualifying Revolving Retail exposures are revolving unsecured loans to individuals e.g. credit cards. Small Business exposures include lending to small businesses and commercial property loans to individuals in Singapore and Malaysia. Other Retail exposures are mainly auto loans in Singapore.

Residential Mortgages

PD Range	EAD S\$ million	Undrawn Commitment S\$ million	EAD Weighted Average	
			LGD	Risk Weight
up to 0.5%	41,141	3,674	11%	6%
> 0.5 to 3%	10,957	963	11%	18%
> 3 to 10%	1,122	42	12%	48%
> 10%	1,146	23	12%	64%
Default	413	17	15%	79%
Total	54,779	4,719	11%	11%

Qualifying Revolving Retail Exposures

PD Range	EAD S\$ million	Undrawn Commitment S\$ million	EAD Weighted Average	
			LGD	Risk Weight
up to 0.5%	4,521	7,632	81%	6%
> 0.5 to 3%	1,064	1,079	79%	39%
> 3 to 10%	495	265	83%	115%
> 10%	140	62	85%	234%
Default	27	-	82%	0%
Total	6,247	9,038	81%	25%

Small Business Exposures

PD Range	EAD S\$ million	Undrawn Commitment S\$ million	EAD Weighted Average	
			LGD	Risk Weight
up to 0.5%	4,068	1,051	32%	17%
> 0.5 to 3%	1,783	143	38%	46%
> 3 to 10%	473	26	44%	69%
> 10%	439	12	43%	94%
Default	172	9	52%	194%
Total	6,935	1,241	36%	37%

Other Retail Exposures

PD Range	EAD S\$ million	Undrawn Commitment S\$ million	EAD Weighted Average	
			LGD	Risk Weight
up to 0.5%	1,090	36	14%	5%
> 0.5 to 3%	46	9	50%	61%
> 3 to 10%	60	8	39%	62%
> 10%	10	#	47%	110%
Default	2	-	44%	35%
Total	1,208	53	17%	11%

represents amounts less than \$0.5 million

4.10 Actual Loss and Expected Loss for Exposures under Foundation and Advanced IRB Approach

Actual loss refers to net impairment loss allowance and direct write-off to the income statement during the year. Expected loss ("EL") represents model derived and/or regulatory prescribed estimates of future loss on potential defaults over a one-year time horizon. Comparison of the two measures has limitations because they are calculated using different methods. EL computations are based on LGD and EAD estimates that reflect downturn economic conditions and regulatory minimums, and PD estimates that reflect long run through-the-cycle approximation of default rates. Actual loss is based on accounting standards and represents the point-in-time impairment experience for the financial year.

S\$ million	Actual Loss for the 12 months ended 31 December 2016	Regulatory Expected Loss (Non-defaulted) as at 31 December 2015
Corporate	289	436
Bank	-	33
Small Business	30	83
Retail	49	145
Total	368	697

4.11 Exposures Covered by Credit Risk Mitigation ⁽¹⁾

S\$ million	Eligible Financial Collateral	Other Eligible Collateral	Amount by which exposures have been reduced by eligible credit protection
Standardised Approach			
Corporate	6,949	-	231
Sovereign and Bank	980	-	27
Retail and Residential Mortgage	470	-	425
Others	7,295	-	1
Total	15,694	-	684
Foundation IRB Approach			
Corporate	3,284	14,422	1,542
Bank	2,991	-	27
Total	6,275	14,422	1,569

⁽¹⁾ Note:

- i) Not all forms of collateral or credit risk mitigation are included for regulatory capital calculations.
- ii) Does not include collateral for exposures under Advanced IRB Approach and Specialised Lending.

4.12 Counterparty Credit Risk Exposures

Net Derivatives Exposure

	S\$ million
Replacement Cost	6,037
Potential Future Exposure	5,364
Less: Effects of Netting	5,357
EAD under Current Exposure Method	6,044
Analysed by type:	
Foreign Exchange Contracts	4,762
Interest Rate Contracts	926
Equity Contracts	140
Gold and Precious Metals Contracts	#
Other Commodities Contracts	3
Credit Derivative Contracts	213
Less: Eligible Financial Collateral	1,215
Other Eligible Collateral	-
Net Derivatives Credit Exposure	4,829

represents amounts less than \$0.5 million

Credit Derivatives Exposure

	S\$ million	
	Notional Amount	
	<u>Bought</u>	<u>Sold</u>
Credit Default Swaps		
for own credit portfolio	7,912	7,120
for intermediation activities	65	65
Total	7,977	7,185

4.13 Securitisation Exposures

There is no securitisation and re-securitisation exposure in the banking and trading books as at 31 December 2016.

5. MARKET RISK

Capital Requirement by Market Risk Type under Standardised Approach

	S\$ million
Interest rate risk	772
Equity position risk	41
Foreign exchange risk	801
Commodity risk	1
Total	1,615

6. EQUITY EXPOSURES IN BANKING BOOK

Disclosures on valuation and accounting treatment of equity holdings can be found in Notes 2.2.3, 2.6.2 and 2.23.3 in the Notes to the Financial Statements in the Annual Report.

Equity exposures comprise equity securities categorised as “Available-for-sale” (AFS) and investments in associates. AFS securities are carried at fair value in the balance sheet of the Group while investments in associates are carried at cost and adjusted for post-acquisition changes of the Group’s share of the net assets of the associates.

Equity exposures categorised and measured in accordance with Singapore Financial Reporting Standards differ from the regulatory definition under MAS Notice 637 in the following key areas:

1. Equity investments held by insurance subsidiaries (included below) are not consolidated for regulatory computation.
2. Debt instruments approved for inclusion as Tier 1 capital are treated as equity exposures under MAS Notice 637.

Carrying Value of Equity Exposures

	S\$ million
Quoted equity exposure - AFS	1,866
Unquoted equity exposure - AFS	798
Quoted equity exposure - Associates	1,893
Unquoted equity exposure - Associates	502
Total	5,059

Realised and Unrealised Gains and Losses

	S\$ million
Gains/(losses) from disposal of AFS equities	78
Unrealised gains/(losses) included in fair value reserves	238
Total	316

7. INTEREST RATE RISK IN THE BANKING BOOK

A description of the nature of interest rate risk in the banking book and key assumptions made by the Group can be found in Note 39.3 in the Notes to the Financial Statements in the Annual Report.

Based on a 100 bp parallel rise in yield curves on the Group's exposure to major currencies i.e. Singapore Dollar, US Dollar, Hong Kong Dollar and Malaysian Ringgit, net interest income is estimated to increase by \$580 million, or approximately +11.5% of reported net interest income. The corresponding impact from a 100 bp decrease is an estimated reduction of \$522 million in net interest income, or approximately –10.3% of reported net interest income.